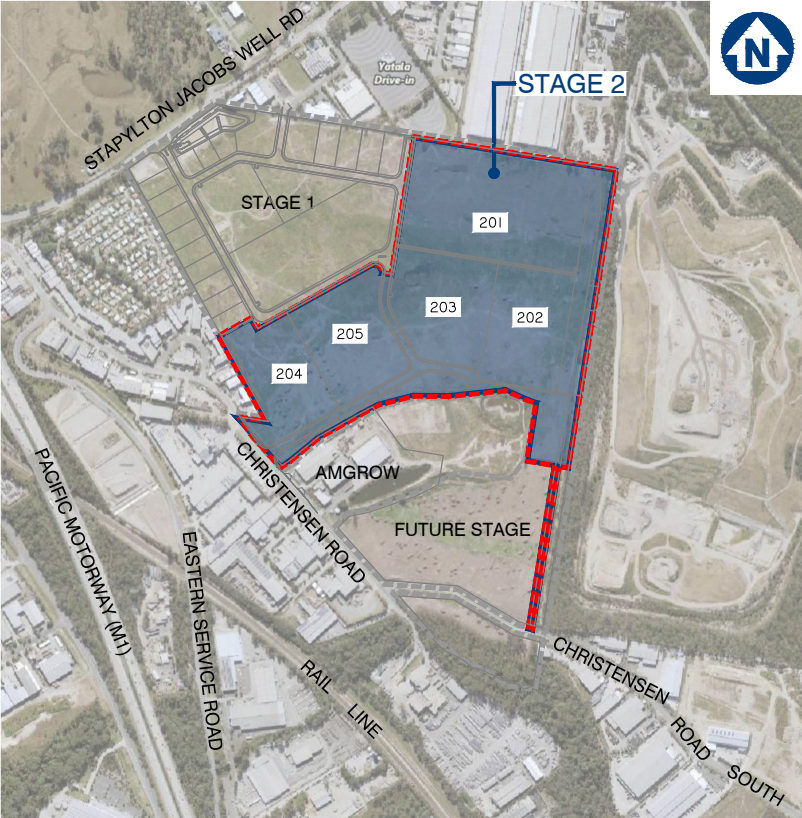


CIVIL OPERATIONAL WORKS VANTAGE YATALA - STAGE 2

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594I ENG OPW2 052	F	SEDIMENT AND EROSION CONTROL PLAN SHEET 3 OF 8
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594I ENG OPW2 402	F	ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 3 OF 7
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594I ENG OPW2 551	D	STORMWATER DRAINAGE CALCULATION TABLES SHEET 2 OF 6
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594I ENG OPW2 553	D	STORMWATER DRAINAGE CALCULATION TABLES SHEET 4 OF 6
594I ENG OPW2 554	D	STORMWATER DRAINAGE CALCULATION TABLES SHEET 5 OF 6
594I ENG OPW2 555	D	STORMWATER DRAINAGE CALCULATION TABLES SHEET 6 OF 6
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594I ENG OPW2 600	G	SEWER RETICULATION LAYOUT PLAN SHEET 1 OF 8
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594I ENG OPW2 603	F	SEWER RETICULATION LAYOUT PLAN SHEET 4 OF 8
594I ENG OPW2 604	H	SEWER RETICULATION LAYOUT PLAN SHEET 5 OF 8
594I ENG OPW2 605	F	SEWER RETICULATION LAYOUT PLAN SHEET 6 OF 8
594I ENG OPW2 606	E	SEWER RETICULATION LAYOUT PLAN SHEET 7 OF 8
594I ENG OPW2 607	E	SEWER RETICULATION LAYOUT PLAN SHEET 8 OF 8
594I ENG OPW2 610	C	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 1 OF 10
594I ENG OPW2 611	D	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 2 OF 10
594I ENG OPW2 612	C	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 3 OF 10
594I ENG OPW2 613	C	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 4 OF 10
594I ENG OPW2 614	E	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 5 OF 10
594I ENG OPW2 615	E	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 6 OF 10
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594I ENG OPW2 617	E	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 8 OF 10
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594I ENG OPW2 703	E	WATER RETICULATION LAYOUT PLAN SHEET 4 OF 4
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594I ENG OPW2 711	A	WATER RETICULATION TYPICAL DETAILS SHEET 2 OF 2
594I ENG OPW2 800	F	LINEMARKING AND SIGNAGE PLAN SHEET 1 OF 3
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594I ENG OPW2 900	E	A-DOUBLE SWEEP PATH ANALYSIS MASTER PLAN
594I ENG OPW2 901	D	A-DOUBLE SWEEP PATH ANALYSIS SHEET 1 OF 5
594I ENG OPW2 902	D	A-DOUBLE SWEEP PATH ANALYSIS SHEET 2 OF 5
594I ENG OPW2 903	D	A-DOUBLE SWEEP PATH ANALYSIS SHEET 3 OF 5
594I ENG OPW2 904	C	A-DOUBLE SWEEP PATH ANALYSIS SHEET 4 OF 5
594I ENG OPW2 905	E	A-DOUBLE SWEEP PATH ANALYSIS SHEET 5 OF 5

STANDARD DRAWINGS			
DRAWING No.	REV.	ASSOCIATION	DRAWING TITLE
DS-010	F	IPWEA	ACCESS CHAMBER – STORMWATER ACCESS CHAMBER DETAILS – 1050 TO 2100 DIA
DS-015	C	IPWEA	ACCESS CHAMBER – MANHOLE FRAME – ROADWAY AND NON ROADWAY – 1050 TO 2100 DIA
DS-018	C	IPWEA	ACCESS CHAMBER – MANHOLE RISER DETAILS
DS-019	C	IPWEA	ACCESS CHAMBER – MANHOLE ROVER (ROADWAY)
DS-020	C	IPWEA	ACCESS CHAMBER – MANHOLE ROVER (NON ROADWAY)
DS-021	C	IPWEA	ACCESS CHAMBER – MANHOLE COVER CONCRETE INFILL (PEDESTRIAN TRAFFIC) 1050 TO 2100 DIA
DS-030	F	IPWEA	EXCAVATION, BEDDING & BACKFILL – RIGID & FLEXIBLE DRAINAGE PIPES
DS-031	D	IPWEA	EXCAVATION, BEDDING & BACKFILL PRECAST – BOX CULVERTS
DS-040	E	IPWEA	SEDIMENT CONTROL – SEDIMENT CONTROL DEVICES – SEDIMENT FENCE, ENTRY/EXIT SEDIMENT TRAP
DS-041	E	IPWEA	SEDIMENT CONTROL – SEDIMENT CONTROL DEVICES – KERB AND FIELD INLET, CHECK DAMS & STRAW BALES
DS-050	E	IPWEA	DRAINAGE PITS – FIELD INLET TYPE 1 AND TYPE 2
DS-061	B	IPWEA	DRAINAGE PITS – KERB INLET – PRECAST LINTEL DETAILS
DS-062	D	IPWEA	DRAINAGE PITS – KERB INLET – GRATE AND FRAME
DS-063	C	IPWEA	DRAINAGE PITS – KERB INLET – LIP IN LINE – GENERAL ARRANGEMENT
DS-065	I	IPWEA	PATHWAYS – CONCRETE PATHWAY CONSTRUCTION DETAILS
DS-073	A	IPWEA	BIORETENTION DRAINAGE PROFILE – TYPE 3 – CONVENTIONAL
DS-075	A	IPWEA	LARGE BIORETENTION SEDIMENT FOREBAY
DS-076	A	IPWEA	BIORETENTION WEIR
DS-078	A	IPWEA	BIORETENTION STANDARD NOTES
GS-041	D	IPWEA	FENCING – CHAIN WIRE SECURITY FENCING
RS-049	E	IPWEA	VEHICLE CROSSING – RESIDENTIAL DRIVEWAYS – PLAN 1 OF 2
RS-050	G	IPWEA	VEHICLE CROSSING – RESIDENTIAL DRIVEWAYS – PLAN 2 OF 2
RS-080	F	IPWEA	KERB AND CHANNEL – PROFILES AND DIMENSIONS – INCLUDING EDGE RESTRAINTS, MEDIAN & CHANNEL
RS-090	J	IPWEA	KERB RAMPS – RAMPED PEDESTRIAN
RS-091	F	IPWEA	KERB RAMPS – RAMPED AND CUT THROUGH TREATMENTS – FOR PEDESTRIAN CROSSINGS, SLIP LANES AND MEDIANS
RS-094	F	IPWEA	KERB RAMPS – LOCATIONS AND CONFIGURATIONS
RS-130	F	IPWEA	ROAD FURNITURE – STREET NAME SIGN AND LOCATION (FINGERBOARD)
RS-131	G	IPWEA	ROAD FURNITURE – TRAFFIC SIGN INSTALLATION DETAILS
RS-140	F	IPWEA	SUBSOIL DRAINS – DETAILS AND LOCATION
RS-142	F	IPWEA	SUBSOIL DRAINS – ACCESS POINTS
SDI033	K	DTMR	KERB AND CHANNEL
SDI304	N	DTMR	PIPE CULVERTS – WINGWALLS, HEADWALLS AND APRON FOR PIPE DIA 750 TO 2400
02-003	2	CoGC	TYPICAL CROSS SECTIONS – COLLECTOR STREETS – PLAN 2 OF 2
02-005	I	CoGC	PUBLIC UTILITY PLANT CORRIDOR ALLOCATIONS IN PUBLIC ROAD VERGES
02-601	I	CoGC	NEW ROADS – SERVICE CONDUIT CROSSINGS
02-602	I	CoGC	ROAD CROSSING – TRENCH RESTORATION – FLEXIBLE PAVEMENTS
03-008	I	CoGC	FIELD INLET AND INTER-ALLOTMENT DRAINAGE PIT
03-101	I	CoGC	STORMWATER ACCESS CHAMBER 1050 DIA TO 1500 DIA
03-102	I	CoGC	STORMWATER ACCESS CHAMBER 1050 DIA TO 1500 DIA ROOF SLABS
03-201	I	CoGC	EXCAVATION AND BEDDING OF CONCRETE STORMWATER PIPES
05-014	I	CoGC	CHAIN WIRE FENCING – 1.8m HIGH



LOCALITY PLAN
SCALE 1:8000 (A1)

CLIENT



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

VantageYatala

SITE ADDRESS

LOT 501 on SP295994
60 STAPYLTON JACOBS WELL ROAD
STAPYLTON QLD 4207

DWG No. 594I ENG OPW2 001 – REV K

APRIL 2023

GENERAL NOTES

1. **CONTRACT DOCUMENTATION**
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION AND CoGC STANDARD DRAWINGS AND SPECIFICATIONS.
2. **DATUM**
LEVELS SHOWN ON THE PLANS ARE A.H.D.
3. **SURVEY SETOUT**
THE SURVEY SET OUT INFORMATION TO ALLOW THE CONTRACTOR TO ACCURATELY SET OUT THE WORKS HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL’S SURVEYOR. THE CONTRACTOR IS NOT TO SCALE FROM THESE PLANS AS A MEANS OF OBTAINING SETOUT INFORMATION.
4. **EXISTING SURVEY CONTROL STATIONS**
IT IS THE CONTRACTOR’S RESPONSIBILITY TO ENSURE THAT EXISTING SURVEY CONTROL STATIONS ARE NOT DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR IDENTIFY ANY CONFLICT BETWEEN EXISTING SURVEY CONTROL AND THE REQUIRED CONSTRUCTION ACTIVITIES THE SUPERINTENDENT IS TO BE NOTIFIED IMMEDIATELY.
5. **EXISTING SERVICES**
THE LOCATION OF EXISTING SERVICES WHERE SHOWN ON THE PLANS ARE INDICATIVE ONLY. IT IS THE CONTRACTOR’S RESPONSIBILITY TO CONTACT THE RELEVANT SERVICE AUTHORITIES TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS AND TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING SERVICES.
6. **SITE ACCESS**
THE CONTRACTOR SHALL ONLY GAIN ACCESS TO THE SITE VIA ACCESS LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
7. **PROVISION FOR TRAFFIC**
PROVISION FOR TRAFFIC ON LOCAL ROADS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND CoGC COUNCIL REQUIREMENTS.
8. **WORK EXTENT**
THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORKS AREAS UNDER THE CONTRACT. AT NO TIME IS THE CONTRACTOR TO ENTER ADJOINING PROPERTIES OR CONTRACT AREAS WITHOUT THE WRITTEN AUTHORISATION OF THE SUPERINTENDENT.
9. **TESTING**
ALL TESTING IS TO BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND REQUIREMENTS OF CoGC COUNCIL.
10. **"AS CONSTRUCTED" SURVEY**
"AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL’S SURVEYOR AS WORK PROCEEDS. THE CONTRACTOR IS TO PROVIDE ADEQUATE NOTICE TO THE PRINCIPAL’S SURVEYOR ON WHEN THIS IS REQUIRED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF CoGC COUNCIL.
11. **MAINTENANCE OF SITE CONDITION**
AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT AND CoGC.

EARTHWORKS

1. **PRECEDENCE**
EARTHWORKS SPECIFICATION PREPARED BY PROJECT GEOTECHNICAL ENGINEER TO TAKE PRECEDENCE OVER STANDARD COUNCIL EARTHWORKS NOTES.
2. **TOPSOIL STRIPPING**
TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.
3. **EARTHWORKS LEVELS**
EARTHWORKS LEVELS SHOWN ON THE DRAWING ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL. THE CONTRACTOR SHALL VERIFY BENCH MARK LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCY BEFORE COMMENCEMENT OF CONSTRUCTION.
4. **UNDESIRABLE MATERIAL**
THE ENTIRE SITE/WORK AREAS SHALL BE CLEARED OF ALL UNDESIRABLE MATTER. THIS SHALL INCLUDE DEAD TIMBER, GRASS, OLD FOUNDATIONS, CONCRETE, MASONRY REMAINS, GARBAGE, DEBRIS AND ALL OTHER OBSTRUCTIONS TO THE WORKS UNLESS NOTED OTHERWISE. HOLES LEFT BY THE REMOVAL OF ANY OF THE ABOVE SHALL BE FILLED WITH APPROVED COMPACTED MATERIAL WITH PROPERTIES AT LEAST SIMILAR TO INSITU SOILS.
5. **COMPACTION STANDARD**
FILL MATERIAL SHALL BE COMPACTED TO THE FOLLOWING STANDARD, WHERE DRY DENSITY RATIO IS DETERMINED IN ACCORDANCE WITH AS 1289 USING STANDARD COMPACTION METHODS.

a. 100% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 80% IN COHESIONLESS MATERIAL FOR ROAD SUBGRADE.

b. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 65% IN COHESIONLESS MATERIAL FOR ALL AREAS OTHER THAN THE ROADWAY AND BUILDING PADS.

c. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 70% IN COHESIONLESS MATERIAL FOR BUILDING PADS.
5. **PAVEMENT DEPTHS**
EARTHWORKS VOLUMES DO NOT INCLUDE DESIGN PAVEMENT DEPTHS AS INDICATED ON THE TYPICAL BULK EARTHWORKS ROAD SECTION.
6. **TESTING**
ALL EARTHWORKS TO BE CARRIED OUT UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3798 UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY.
7. **ROCK**
THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT DOCUMENT.

8. **DAMS AND PONDS**
WHERE POSSIBLE, WATER FROM DAMS AND PONDS SHALL BE MAINTAINED AND UTILISED FOR CONSTRUCTION PURPOSES AND DUST SUPPRESSION. DAMS AND PONDS NOT TO BE RETAINED SHALL BE DEWATERED, CLEARED OF ANY FOREIGN MATTER AND ORGANIC MATERIAL WITH THIS MATERIAL TO BE REMOVED OFF SITE.
9. **RETAINING STRUCTURES**
THE DESIGN AND STRUCTURAL CERTIFICATION OF RETAINING STRUCTURES SHALL BE UNDERTAKEN BY THE CONTRACTOR’S STRUCTURAL ENGINEER (RPEQ) IN CONSULTATION WITH THE PROJECT’S CIVIL ENGINEER AND LANDSCAPE CONSULTANT. THE CONTRACTOR IS RESPONSIBLE FOR THE SUBMISSION AND APPROVAL COORDINATION OF THE ASSOCIATED DRAWINGS AND CERTIFICATION TO CoGC. A COPY OF THIS SUBMISSION IS TO BE PROVIDED TO THE SUPERINTENDENT.
10. **TOPSOIL REPLACEMENT**
ALL BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOP SOILED FROM ONSITE STOCKPILES. IF DIRECTED BY THE SUPERINTENDENT THE TOPSOIL SHALL BE SCREENED PRIOR TO PLACING. THE CONTRACTOR SHALL ALLOW IN THEIR RATE FOR SCREENING AND THE DISPOSAL OF REJECT MATERIAL TO TIP OFFSITE INCLUDING ALL FEES. THE CONTRACTOR MUST ENSURE THAT THE STRIPPING SHALL BE UNDERTAKEN IN SUCH A MANNER AS TO AVOID CONTAMINATION BY OVER CUTTING. IF TOPSOIL IS CONTAMINATED BY OVER CUTTING AND DETERMINED NOT SUITABLE FOR REUSE BY THE SUPERINTENDENT, THE CONTRACTOR SHALL BEAR THE COST OF REMOVAL FROM SITE OF ALL CONTAMINATED TOPSOIL AND THE COST TO SUPPLY AND IMPORT SUITABLE TOPSOIL FOR RE–SPREADING.
11. **GRASSING / SEEDING**
ALL CUT & FILL AREAS AND DISTURBED AREAS SHALL BE GRASSED OR SEEDDED TO THE SATISFACTION OF THE SUPERINTENDENT.
12. **STOCKPILES**
ALL MATERIAL/SPOIL ARISING FROM WORKS ON SITE SHALL BE COMPACTED TO AN APPROPRIATE STANDARD WITHIN THE FILL AREAS OF FUTURE STAGES AS NOMINATED BY THE SUPERINTENDENT. THE CONTRACTOR IS NOT TO CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE SUPERINTENDENT.

SEDIMENT AND EROSION

1. THE OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL PROGRAM ARE:

a. ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AT NON–EROSIVE FLOW VELOCITIES.

b. MINIMISE SOIL EROSION FROM WATER AND WIND

c. MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF.

d. MINIMISE OR PREVENT ENVIRONMENTAL HARM ASSOCIATED WITH DISCHARGE FROM THE CONSTRUCTED SITE.

e. ENSURE THAT THE VALUE AND USE OF RESIDENTIAL AND INDUSTRIAL PROPERTIES ADJACENT TO THE DEVELOPMENT ARE NOT DIMINISHED AS A RESULT OF THE MIGRATION OF SEDIMENT FROM THE DEVELOPMENT.
2. THE EROSION AND SEDIMENT CONTROL PROGRAM SHALL COMPLY WITH THE ENVIRONMENTAL BEST ENGINEERING GUIDELINES FOR QUEENSLAND CONSTRUCTION SITES. THE CURRENT INSTITUTION OF ENGINEERS AUSTRALIA AND LOCAL AUTHORITY GUIDELINES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTIONS INCLUDING THE MAINTENANCE PERIOD. NOTWITHSTANDING THE FINISHED EARTHWORK DESIGN SHOWN ON THE DRAWINGS THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AND DEVICES USING BEST PRACTICES AS NECESSARY TO MINIMISE THE QUANTITY LEAVING THE SITE DURING CONSTRUCTION AND UPON COMPLETION OF EARTHWORKS.
3. THE CONTRACTOR IS TO FOLLOW CONSTRUCTION PHASE AS OUTLINED IN THE CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM. ALL SEDIMENT CONTROL DEVICES SHALL BE MONITORED, CLEANED AND/OR REPLACED WHENEVER THE ACCUMULATED SEDIMENT REDUCES THE CAPACITY BY 50%. ALL PERIMETER BANK/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS. INLETS TO HAVE SILT PROTECTION IN ACCORDANCE WITH KERB INLET PROTECTION DETAIL AT LOCATIONS SHOWN OR AS INDICATED BY THE ENGINEER.
4. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, THE CONTRACTOR IS TO CARRY OUT SOIL TESTING (IF REQUIRED BY SUPERINTENDENT) TO DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL AND RESULTS TO BE GIVEN TO THE ENGINEERS SO THE FINALIZATION OF THE EROSION AND SEDIMENT CONTROL PLAN CAN BE COMPLETE.
5. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS AGREED WITH THE SUPERINTENDENT. CLEARING OF SITE AND STOCKPILE AREAS TO BE AS DIRECTED BY THE SUPERVISING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AT ALL TIMES INCLUDING WEEKENDS AND PUBLIC HOLIDAYS.
6. SUITABLE ACCESS SHALL BE PROVIDED TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES (IT IS TO BE NOTED THAT CLEARING SHALL ONLY OCCUR IN AREAS WHERE THERE IS NO OTHER ALTERNATIVE TO GAIN ACCESS TO THE LOCATION OF THE SEDIMENT CONTROL DEVICES). APPROVAL FOR REMOVAL OF PROTECTED SIZE VEGETATION MUST BE OBTAINED PRIOR TO CLEARING.
7. ROCK BUNDS TO BE PLACED AROUND ALL HEADWALLS DURING CONSTRUCTION.
8. 0.8m TURF IS TO BE PLACED BEHIND ON ALL BATTERS WITHIN PRIVATE OPEN SPACE STEEPER THAN 1:4 UNLESS OTHERWISE NOTED. THE EXTENT OF GRASSING SHALL BE DETERMINED BY THE ENGINEER AND SHALL BE SEEDDED, AS SPECIFIED, WITHIN 7 DAYS OF FINAL TRIMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRASS STRIKE RATES ARE ACHIEVED AT ON AND OFF MAINTENANCE INSPECTION IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
9. TURF IS TO BE PLACED FROM BACK OF KERB TO ROAD RESERVE BOUNDARY ON ALL ROADS AFTER EARTHWORKS ARE COMPLETE.
10. GEO–FABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
11. FILLING AND OR MAINTENANCE OF EXISTING AND OR SEDIMENT BASINS MAY REQUIRE FLOCCULATION.
12. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH THE APPROVED OPEN SPACE MANAGEMENT PLAN (OSMP).
13. IT IS THE CONTRACTOR’S RESPONSIBILITY TO CLEAN OUT GPT’S, SEDIMENT FOREBAYS AND ALL OTHER SEDIMENT CONTROL DEVICES DURING CONSTRUCTION AND PRIOR BOTH ON AND OFF MAINTENANCE INSPECTIONS WITH CoGC. THE CONTRACTOR SHALL ALLOW FOR THE COST OF THESE WORKS WITHIN THEIR SUBMITTED TENDER PRICE.

CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM

1. **PRE START**

a. ERECT SITE SIGNAGE, CONSTRUCT ENTRY AND EXIT POINT AS INDICATED CONSTRUCT VEHICLE WASH–DOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.

b. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA

c. ERECT SILT FENCE AT LOW POINTS OF THE SITE AS DEMONSTRATED

d. ERECT TEMPORARY TREE PROTECTION FENCING FOR VEGETATION TO BE RETAINED IN ACCORDANCE WITH AN OPW (TREE CLEARING) APPROVAL OR IN ACCORDANCE WITH AS4970 PROTECTION OF TREES ON DEVELOPMENT SITE.

e. CONSTRUCT ROCK CHECK DAMS AND SILT FENCE DOWN STREAM OF BASIN.

f. CONSTRUCT BASIN TO FULL DEPTH.

g. CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS.

h. BASIN TO BE UTILISED AS A TEMPORARY SEDIMENT BASIN. DO NOT FILL IN FILTRATION MATERIAL UNTIL CONSTRUCTION OF DEVELOPMENT IS COMPLETE.
2. **CLEARING AND BULK EARTHWORKS**
THERE SHALL BE NO CLEARING OF PROTECTED SITE VEGETATION WITHOUT AN APPROVED TREE CLEARING PLAN WHICH SHALL BE IN ACCORDANCE WITH AS4970. SILT FENCE, SAND BAGS AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED DURING CLEARING & EARTHWORKS. SUPERINTENDENT TO CONFIRM THE EXTENT OF CLEARING PRIOR TO COMMENCEMENT OF WORKS.
3. **CONSTRUCTION OF SEWER/ROOFWATER / STORMWATER /SERVICES**
EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS. TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION. DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
4. **CONSTRUCTION – SEDIMENT BASINS**
SEDIMENT BASIN TO BE CONSTRUCTED TO THE EARTHWORK PROFILES SHOWN. STORMWATER OUTLET PIPES TO BE TEMPORARY BLOCKED OFF UNTIL DECOMMISSIONING OF SEDIMENT BASIN (SUBSEQUENT TO CONSTRUCTION OF ALL STAGES). PLACE SPOIL FROM SEDIMENT BASIN INTO ALLOCATED AREAS AS ENGINEERED FILL IN ACCORDANCE WITH THE STAGING ORDER. SEDIMENT BASIN SHALL ONLY BE REMOVED AFTER APPROVAL BY SUPERINTENDENT AND COUNCIL.
5. **CONSTRUCTION – STOCKPILING**
TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEARED OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE DRIP ZONE OR STRUCTURAL ROOT ZONE OF ANY RETAINED VEGETATION.
6. **CONSTRUCTION – ROADWORKS**
SILT FENCES TO ALLOTMENTS TO BE ERECTED. KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.
7. **CONSTRUCTION – ALLOTMENTS**
TOPSOIL AND SEED ALLOTMENTS. SILT FENCES TO ALLOTMENTS TO BE RE–ERECTED. COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATE THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT RIMMING).
8. **POST CONSTRUCTION – ALLOTMENTS**
TOPSOIL AND GRASS SEED ALL ALLOTMENTS. COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATES THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING).
9. **POST CONSTRUCTION – BASIN**
BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL COMPLETION OF ALL STAGES.
10. **POST CONSTRUCTION – ROAD RESERVES**
TOPSOIL AND TURFING IS TO BE PROVIDED BEHIND KERB.
11. **MAINTENANCE (PRE TO POST CONSTRUCTION)**
THE SILT FENCES ARE TO BE INSPECTED WEEKLY. ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY. SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE–OCCURRENCE OF THE FAILURE.
12. **BASIN CONSTRUCTION**
PRIOR TO COMMENCING CONSTRUCTION OF THE DETENTION BASIN THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORK AREAS, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DE–WATERING. BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL 85% OF CATCHMENT CONSTRUCTION IS COMPLETE. THE CLAY FILLING FOR THE BASIN WALLS SHALL BE PLACED IN HORIZONTAL LAYERS OF 200mm THICKNESS AND COMPACTED TO DENSITY RATIO WITHIN THE RANGE 98%–102% STANDARD COMPACTION (AS 1289.5.1.1). PLACEMENT MOISTURE CONTENT SHOULD BE WITHIN THE RANGE OMC –1% TO OMC –2% (WHERE OMC = OPTIMUM MOISTURE CONTENT FOR STANDARD COMPACTION). CONTRACTOR TO PROVIDE SAFETY FENCING TO BASIN DURING CONSTRUCTION AND APPROPRIATE SIGNAGE (PERMANENT OR TEMPORARY).



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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

GENERAL NOTES
SHEET 1 OF 2

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
ISSUR	Date	Description	DRN	CHK	

Scale at A1:	NTS
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

HES BASIN GENERAL NOTES

AUTO DOSER

1. PROVIDED AS EITHER 'FLOC BOX' OR 'IFOD–RAIN' DOSING UNIT OR APPROVED EQUIVALENT TO MANUFACTURERS SPECIFICATION.
2. DOSER AND SUPPLY OF FLOCCULANT TO BE PROVIDED ON LEVEL PAD 4mX4m WITHIN 10m OF DOSING POINT.
3. ALL–WEATHER ACCESS TRACK TO BE PROVIDED TO DOSER.
4. FLOCCULANT PROVIDED AS TURBICLEAR (ACH) OR APPROVED EQUIVALENT. IF ALTERNATIVE FLOCCULANT USED THEN THE BASIN SIZE IS TO BE INCREASED ACCORDING TO JAR SETTLEMENT TEST (REFER TO TABLE BELOW).

JAR SETTLEMENT AFTER 15 MINS	MULTIPLICATION FACTOR TO SETTLING ZONE
(mm)	VOLUME
50	x3.0
75	x2.0
100	x1.5
150	x1.0

BASIN CONSTRUCTION

MATERIALS

5. EARTH FILL: CLEAN SOIL WITH EMERSION CLASS 2(1), 3, 4 OR 5 AND FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER UNSUITABLE MATERIAL. SOIL WITH EMERSION CLASS 4 AND 5 MAY NOT BE SUITABLE DEPENDING ON PARTICLE SIZE DISTRIBUTION AND DEGREE OF DISPERSION. CLASS 2 (1) SHOULD ONLY BE USED UPON RECOMMENDATION FROM GEOTECHNICAL SPECIALIST.
6. SPILLWAY ROCK: HARD, ANGULAR, DURABLE, WEATHER RESISTANT AND EVENLY GRADED ROCK WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED NOMINAL (D50) ROCK SIZE. LARGE ROCK SHOULD DOMINATE, WITH SUFFICIENT SMALL ROCK TO FILL THE VOIDS BETWEEN LARGER ROCK. THE DIAMETER OF THE LARGEST ROCK SHOULD BE NO LARGER THAN 1.5 TIMES THE NOMINAL ROCK SIZE. THE SPECIFIC GRAVITY SHOULD BE AT LEAST 2.5.
7. GEOTEXTILE FABRIC: HEAVY DUTY, NEEDLE–PUNCHED, NON–WOVEN CLOTH, MINIMUM 'BIDIM' A24 OR EQUIVALENT.

CONSTRUCTION

8. NOTWITHSTANDING ANY DESCRIPTION CONTAINED WITH APPROVED PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING THEMSELVES AS TO THE NATURE AND EXTENT OF THE SPECIFIED WORKS AND THE PHYSICAL AND LEGAL CONDITIONS UNDER WHICH THE WORKS WILL BE CARRIED OUT. THIS SHALL INCLUDE MEANS OF ACCESS, EXTENT OF CLEARING, NATURE OF THE MATERIALS TO BE EXCAVATED, TYPE AND SIZE OF MECHANICAL PLANT REQUIRED, LOCATION AND SUITABILITY OF WATER SUPPLY FOR CONSTRUCTION AND TESTING PURPOSES, AND ANY OTHER LIKELY MATTERS AFFECTING THE CONSTRUCTION OF THE WORKS.
9. REFER TO APPROVED PLANS FOR LOCATION, DIMENSIONS, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON–SITE OFFICER FOR ASSISTANCE.
10. BEFORE STARTING ANY CLEARING OR CONSTRUCTION, ENSURE ALL THE NECESSARY MATERIALS AND COMPONENTS ARE ON THE SITE TO AVOID DELAYS IN COMPLETING THE SEDIMENT BASIN ONCE WORKS BEGIN.
11. INSTALL REQUIRED SHORT TERM SEDIMENT CONTROL MEASURES DOWNSTREAM OF THE PROPOSED EARTHWORKS TO CONTROL SEDIMENT RUNOFF DURING CONSTRUCTION OF THE BASIN.
12. THE AREA TO BE COVERED BY THE EMBANKMENT, BORROW PITS AND INCIDENTAL WORKS, TOGETHER WITH AN AREA EXTENDING BEYOND THE LIMITS OF EACH FOR A DISTANCE NOT EXCEEDING FIVE (5) METRES ALL AROUND MUST BE CLEARED OF ALL TREES, SCRUB, STUMPS, ROOTS, DEAD TIMBER AND RUBBISH AND DISPOSED OF IN A SUITABLE MANNER. DELAY CLEARING THE MAIN BASIN AREA UNTIL THE EMBANKMENT IS COMPLETE.
13. ENSURE ALL HOLES MADE BY GRUBBING WITHIN THE EMBANKMENT FOOTPRINT ARE FILLED WITH SOUND MATERIAL, ADEQUATELY COMPACTED, AND FINISHED FLUSH WITH THE NATURAL SURFACE.

CUT–OFF TRENCH

14. BEFORE CONSTRUCTION OF THE CUT–OFF TRENCH OR ANY ANCILLARY WORKS WITHIN THE EMBANKMENT FOOTPRINT, ALL GRASS GROWTH AND TOPSOIL MUST BE REMOVED FROM THE AREA TO BE OCCUPIED BY THE EMBANKMENT AND MUST BE DEPOSITED CLEAR OF THIS AREA AND RESERVED FOR TOPDRESSING THE COMPLETED EMBANKMENT.

15. EXCAVATE A CUT–OFF TRENCH ALONG THE CENTRE LINE OF THE EARTH FILL EMBANKMENT. CUT THE TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 600mm DEEP. THE CUT–OFF TRENCH MUST EXTEND INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE OUTLET SPILLWAY CREST. MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF THE EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN 600mm. MAKE THE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1: 2 (H: V).
16. ENSURE ALL WATER, LOOSE SOIL, AND ROCK ARE REMOVED FROM THE TRENCH BEFORE BACKFILLING COMMENCES. THE CUT–OFF TRENCH MUST BE BACKFILLED WITH SELECT EARTH–FILL OF THE TYPE SPECIFIED FOR THE EMBANKMENT, AND THIS SOIL MUST HAVE A MOISTURE CONTENT AND DEGREE OF COMPACTION THE SAME AS SPECIFIED FOR THE CORE ZONE.
17. MATERIAL EXCAVATED FROM THE CUT–OFF TRENCH MAY BE USED IN THE CONSTRUCTION OF THE EMBANKMENT PROVIDED IT IS SUITABLE AND IT IS PLACED IN THE CORRECT ZONE ACCORDING TO ITS CLASSIFICATION.

EMBANKMENT

18. SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL.
19. ENSURE ALL FILL MATERIAL USED TO FORM THE EMBANKMENT MEETS THE SPECIFICATIONS CERTIFIED BY A SOIL SCIENTIST OF GEOTECHNICAL SPECIALIST.
20. THE FILL MATERIAL MUST CONTAIN SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN 150 TO 200mm CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND THEN COMPACT BEFORE PLACEMENT OF FURTHER FILL.
21. UNLESS SPECIFIED ON THE APPROVED PLANS, COMPACT THE SOIL AT ABOUT 1% TO 2% WET OPTIMUM AND TO 95% MODIFIED OR 100% STANDARD COMPACTION.
22. WHERE BOTH DISPERSIVE AND NON–DISPERSIVE CLASSIFIED EARTH–FILL MATERIALS ARE AVAILABLE, NON–DISPERSIVE EARTH–FILL MUST BE USED IN THE CORE ZONE. THE REMAINING CLASSIFIED EARTH–FILL MATERIALS MUST ONLY BE USED AS DIRECTED BY THE SITE SUPERINTENDENT.
23. WHERE SPECIFIED, CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING; OTHERWISE FINISHED DIMENSIONS OF THE EMBANKMENT AFTER SPREADING OF TOPSOIL MUST CONFORM TO THE DRAWING WITH A TOLERANCE OF 75mm FROM SPECIFIED DIMENSIONS.
24. ENSURE DEBRIS AND OTHER UNSUITABLE BUILDING WASTE IS NOT PLACED WITHIN THE EARTH EMBANKMENT.
25. AFTER COMPLETION OF THE EMBANKMENT ALL LOOSE UNCOMPACTED EARTH–FILL MATERIAL ON THE UPSTREAM AND DOWNSTREAM BATTER MUST BE REMOVED PRIOR TO SPREADING TOPSOIL.
26. TOPSOIL AND RE–VEGETATE/STABILISE ALL EXPOSED EARTH AS DIRECTED WITHIN THE APPROVED PLANS.

ESTABLISHING THE SETTLING POND

27. THE AREA TO BE COVERED BY THE STORED WATER OUTSIDE OF THE LIMITS OF THE BORROW PITS MUST BE CLEARED OF RUBBISH. TREES MUST BE CUT DOWN STUMP HIGH AND REMOVED FROM THE IMMEDIATE VICINITY OF THE WORK.
28. ESTABLISH ALL REQUIRED INFLOW CHUTES AND INLET BAFFLES IF SPECIFIED TO ENABLE WATER TO DISCHARGE INTO THE BASIN IN A MANNER THAT WILL NOT CAUSE SOIL EROSION OR THE RE–SUSPENSION OF SETTLED SEDIMENT.
29. INSTALL A SEDIMENT STORAGE LEVEL MARKER POST WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED PLANS). USE AT LEAST A 75mm WIDE POST FIRMLY SET INTO THE BASIN FLOOR.
30. IF SPECIFIED, INSTALL INTERNAL SETTLING POND BAFFLES. ENSURE THE CREST OF THESE BAFFLES IS SET LEVEL WITH, OR JUST BELOW, THE ELEVATION OF THE EMERGENCY SPILLWAY.
31. INSTALL ALL APPROPRIATE MEASURES TO MINIMISE SAFETY RISK TO ON–SITE PERSONNEL AND THE PUBLIC CAUSED BY THE PRESENCE OF THE SETTLING POND. AVOID STEEP, SMOOTH INTERNAL SLOPES. APPROPRIATELY FENCE THE SETTLING POND AND POST WARNING SIGNS IF UNSUPERVISED PUBLIC ACCESS IS LIKELY OR THERE IS CONSIDERED TO BE AN UNACCEPTABLE RISK TO THE PUBLIC.

SPILLWAY CONSTRUCTION

32. THE SPILLWAY MUST BE EXCAVATED AS SHOWN ON THE PLANS, AND THE EXCAVATED MATERIAL IF CLASSIFIED AS SUITABLE, MUST BE USED IN THE EMBANKMENT, AND IF NOT SUITABLE IT MUST BE DISPOSED OF INTO SPOIL HEAPS.
33. ENSURE EXCAVATED DIMENSIONS ALLOW ADEQUATE BOXING–OUT SUCH THAT THE SPECIFIED ELEVATIONS, GRADES, CHUTE WIDTH, AND ENTRANCE AND EXIT SLOPES FOR THE EMERGENCY SPILLWAY WILL BE ACHIEVED AFTER PLACEMENT OF THE ROCK OR OTHER SCOUR PROTECTION MEASURES AS SPECIFIED IN THE PLANS.
34. PLACE SPECIFIED SCOUR PROTECTION MEASURES ON THE EMERGENCY SPILLWAY. ENSURE THE FINISHED GRADE BLENDS WITH THE SURROUNDING AREA TO ALLOW A SMOOTH FLOW TRANSITION FROM SPILLWAY TO DOWNSTREAM CHANNEL.
35. IF A SYNTHETIC FILTER FABRIC UNDERLAY IS SPECIFIED, PLACE THE FABRIC DIRECTLY ON THE PREPARED FOUNDATION. IF MORE THAN 1 SHEET OF FILTER FABRIC IS REQUIRED, OVERLAP THE EDGES BY AT LEAST 300mm AND PLACE ANCHOR PINS AT MINIMUM 1m SPACING ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE FILTER FABRIC A MINIMUM 300mm BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE FABRIC OR OVERLAP A MINIMUM 300mm OVER THE NEXT DOWNSTREAM SECTION AS REQUIRED. ENSURE THE FILTER FABRIC EXTENDS AT LEAST 1000mm UPSTREAM OF THE SPILLWAY CREST.
36. TAKE CARE NOT TO DAMAGE THE FABRIC DURING OR AFTER PLACEMENT. IF DAMAGE OCCURS, REMOVE THE ROCK AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FABRIC WITH A MINIMUM OVERLAP OF 300mm AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET.
37. WHERE LARGE ROCK IS USED, OR MACHINE PLACEMENT IS DIFFICULT, A MINIMUM 100mm LAYER OF FINE GRAVEL, AGGREGATE, OR SAND MAY BE NEEDED TO PROTECT THE FABRIC.
38. PLACEMENT OF ROCK SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER FABRIC. PLACE ROCK SO THAT IT FORMS A DENSE, WELL GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF ROCK THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY AND CONTROLLED DUMPING DURING FINAL PLACEMENT.
39. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF ROCK SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE ROCK SHOULD BLEND WITH THE SURROUNDING AREA. NO OVER FALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.
40. ENSURE THAT THE FINAL ARRANGEMENT OF THE SPILLWAY CREST WILL NOT PROMOTE EXCESSIVE FLOW THROUGH THE ROCK SUCH THAT THE WATER CAN BE RETAINED WITHIN THE SETTLING BASIN AT THE ELEVATION NO LESS THAN 50mm ABOVE OF BELOW THE NOMINATED SPILLWAY CREST ELEVATION.



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Project:

VANTAGE YATALA
STAGE 2

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THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

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GENERAL NOTES
SHEET 2 OF 2

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B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

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Scale at A1: NTS

Designed: IG

Drafted: LAB / IG

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RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 003

Rev. No:
B

	OVERLAND FLOW PATH/SWALE
	CATCH DRAIN (NOT LINED)
	DIVERSION CHANNEL
	TABLE DRAIN
	STREAM INVERT
	CATCH DRAIN (CONCRETE LINED)
	SUBSOIL DRAINAGE
	SAWCUT
	SEDIMENT FENCE
	CHAINWIRE FENCE
	WOODEN FENCE
	BRIFEN WIRE SAFETY BARRIER
	GUARDRAIL (STANDARD)
	RETAINING WALL (PILED)
	RETAINING WALL (WITH FOOTINGS)
	RETAINING WALL
	ROCKBLOCK RETAINING WALL
	TOP OF BATTER / BERM
	NOISE WALL
	EDGE OF VEGETATION
	PROPERTY LINE
	PROPERTY LINE WITH FENCE
	PROPOSED KERB, FOOTPATH
	CONTROL LINE / CENTER OF ROAD
	RAILWAY (MAJOR)
	RAILWAY (MINOR)
	EXISTING PROPERTY LINE
	EXISTING PROPERTY LINE WITH FENCE
	EXISTING KERB, FOOTPATH
	EXISTING EDGE OF BITUMEN
	EXISTING RAILWAY (MAJOR)
	EXISTING RAILWAY (MINOR)
	LIMIT OF WORKS
	LIMIT OF SITE
	CATCHMENT BOUNDARY
	EXISTING CONTOURS
	DESIGN CONTOURS

RM	RM	RM		PROPOSED RISING MAIN
S	S	S	S	PROPOSED SEWER
SW	SW	SW	SW	PROPOSED STORMWATER
SW	SW	SW	SW	PROPOSED ROOFWATER
SS	SS	SS	SS	PROPOSED ROOFWATER
SS	SS	SS	SS	PROPOSED SUBSOIL
W	W	W	W	PROPOSED WATER
W	W	W	W	PROPOSED RECYCLED WATER
OIL	OIL	OIL	OIL	PROPOSED OIL
F	F	F	F	PROPOSED FUEL
G	G	G	G	PROPOSED GAS
P	P	P	P	PROPOSED PIPELINE
HV	HV	HV	HV	PROPOSED HIGH VOLTAGE ELECTRICITY
E	E	E	E	PROPOSED UNDERGROUND ELECTRICITY
E	E	E	E	PROPOSED OVERHEAD ELECTRICITY
L	L	L	L	PROPOSED LIGHTING
T	T	T	T	PROPOSED TELSTRA
C	C	C	C	PROPOSED COMMUNICATIONS
GE	GE	GE	GE	PROPOSED GAS, ELECT
GT	GT	GT	GT	PROPOSED GAS, TELSTRA
ET	ET	ET	ET	PROPOSED ELECT, TELSTRA
GET	GET	GET	GET	PROPOSED GAS, ELECTRICITY, TELSTRA
RM	RM	RM		EXISTING RISING MAIN
S	S	S	S	EXISTING SEWER
SW	SW	SW	SW	EXISTING STORMWATER
SW	SW	SW	SW	EXISTING ROOFWATER
SS	SS	SS	SS	EXISTING SUBSOIL
W	W	W	W	EXISTING WATER
W	W	W	W	EXISTING RECYCLED WATER
OIL	OIL	OIL	OIL	EXISTING OIL
F	F	F	F	EXISTING FUEL
G	G	G	G	EXISTING GAS
P	P	P	P	EXISTING PIPELINE
HV	HV	HV	HV	EXISTING HIGH VOLTAGE ELECTRICITY
E	E	E	E	EXISTING UNDERGROUND ELECTRICITY
E	E	E	E	EXISTING OVERHEAD ELECTRICITY
L	L	L	L	EXISTING LIGHTING
T	T	T	T	EXISTING TELSTRA
C	C	C	C	EXISTING COMMUNICATIONS
GE	GE	GE	GE	EXISTING GAS, ELECT
GT	GT	GT	GT	EXISTING GAS, TELSTRA
ET	ET	ET	ET	EXISTING ELECT, TELSTRA
GET	GET	GET	GET	EXISTING GAS, ELECTRICITY, TELSTRA

— RM — ✕ — RM — ✕ — RM — ✕ — RM — ✕ —	DEMOLISH RISING MAIN
— S — ✕ — S — ✕ — S — ✕ — S — ✕ —	DEMOLISH SEWER
— SW — ✕ — SW — ✕ — SW — ✕ — SW — ✕ —	DEMOLISH STORMWATER
— SS — ✕ — SS — ✕ — SS — ✕ — SS — ✕ —	DEMOLISH SUBSOIL
— W — ✕ — W — ✕ — W — ✕ — W — ✕ — W — ✕ —	DEMOLISH WATER
— OIL — ✕ — OIL — ✕ — OIL — ✕ — OIL — ✕ —	DEMOLISH OIL
— F — ✕ — F — ✕ — F — ✕ — F — ✕ — F — ✕ —	DEMOLISH FUEL
— HV — ✕ — HV — ✕ — HV — ✕ — HV — ✕ —	DEMOLISH HIGH VOLTAGE ELECTRICITY
— E — ✕ — E — ✕ — E — ✕ — E — ✕ — E — ✕ —	DEMOLISH UNDERGROUND ELECTRICITY
— E — ✕ — E — ✕ — E — ✕ — E — ✕ — E — ✕ —	DEMOLISH OVERHEAD ELECTRICITY
— L — ✕ — L — ✕ — L — ✕ — L — ✕ — L — ✕ —	DEMOLISH LIGHTING
— G — ✕ — G — ✕ — G — ✕ — G — ✕ — G — ✕ —	DEMOLISH GAS
— P — ✕ — P — ✕ — P — ✕ — P — ✕ — P — ✕ —	DEMOLISH PIPELINE
— T — ✕ — T — ✕ — T — ✕ — T — ✕ — T — ✕ —	DEMOLISH TELSTRA
— C — ✕ — C — ✕ — C — ✕ — C — ✕ — C — ✕ —	DEMOLISH COMMUNICATIONS

BK(A)	BARRIER KERB (A)
BK(B)	BARRIER KERB (B)
BK(G)	BARRIER KERB (G)
MK(D)	MOUNTABLE KERB (D)
SMK(C)	SEMI MOUNTABLE KERB (C)
ER(E)	EDGE RESTRAINT (E)
KER(F)	KERB EDGE RESTRAINT (F)
RK&C(H)	ROLL TOP KERB & CHANNEL (H)
BK&C(J)	BARRIER KERB & CHANNEL (J)
ERH	KERB EDGE RESTRAINT (HIGH)
ERL	KERB EDGE RESTRAINT (LOW)
CS(K/L)	CHANNEL SECTION (K/L)
PMB	PRECAST MOTOR BED
DD	DISH DRAIN
K&G	KERB AND GUTTER
K&T	KERB AND TOE
KO	KERB ONLY
MK	MOUNTABLE KERB
RK	ROLL KERB
	EXISTING SIGN
	PROPOSED SIGN
	PROPOSED ROAD EDGE GUIDE POST
	EXISTING BIN
	POST BOX
	TELEPHONE BOX
	TELSTRA PIT
	TELSTRA MARKER POST
	WATER METER
	WATER VALVE
	FIRE HYDRANT
	WATER TAP
	WATER HYDRANT
	WATER TEE
	WATER REDUCER
	WATER ENDCAP
	WATER CONNECTION
	WATER CROSSING
	WATER DIEL
	SEWER MAINTENANCE HOLE
	SEWER RODDING END
	SEWER BEND
	SEWER MAINTENANCE SHAFT
	SEWER "11" END
	SEWER SLUICE VALVE
	SEWER PIT

	SEWER PUMP STATION
	TEMPORARY SEWER PUMP STATION
	SEWER / STORMWATER PIT NO/LINE
	SETOUT POINT
	OFFSET PIT WITH GRATE
	IN LINE PIT WITH GRATE
	JUNCTION PIT
	LETTERBOX PIT
	GRATED INLET PIT
	MANHOLE
	GULLY PIT (LIP INLINE) BARRIER KEY
	GULLY PIT (LIP INLINE) BARRIER KEY
	GULLY PIT (LIP INLINE) ROLL TOP KEY
	GULLY PIT (LIP INLINE) ROLL TOP KEY
	GULLY PIT (KERB INLINE) – GRADE
	GULLY PIT (KERB INLINE) – SAG
	INFILTRATION TRENCH
	HEADWALL
	GROSS POLLUTANT TRAP
	STORMWATER CHAMBER

	POWER POLE
	POWER POLE WITH LIGHT
	LIGHT POLE
	STAY POLE
	LIGHT POLE WITH EXTENSION
	ELECTRICAL INSPECTION BOX
	ELECTRICAL POLE
	ELECTRICAL TURRET
	TRAFFIC SIGNAL
	MAIN ROADS PIT
	TANGENT POINT
	KERB RETURN NO.
	PRAM RAMP
	GRAVEL ROCK CHECK DAM
	MESH & GRAVEL INLET FILTER
	STORMWATER INLET FILTER
	DIRECTION OF OVERLAND FLOW
	VEHICLE SHAKEDOWN
	GATE
	NOT IN SCOPE OF WORKS
	DEMOLITION
	PROPOSED CONCRETE FOOTPATH
	SCOUR PROTECTION
	TREES
	TADPOLE

Client:



Project:

VANTAGE YATALA STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

LEGEND

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MC	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MC	
B	1/09/21	INFORMATION REQUEST RESPONSE	LAB	MC	
A	30/07/21	ORIGINAL ISSUE	LAB	MC	
Issue	Date	Description	DRN	CH	

NOT APPLICABLE

Scale at A1:

NTS

Designed:

IG

Drafted:

LAB / IG

Approved

MG

RPEQ:

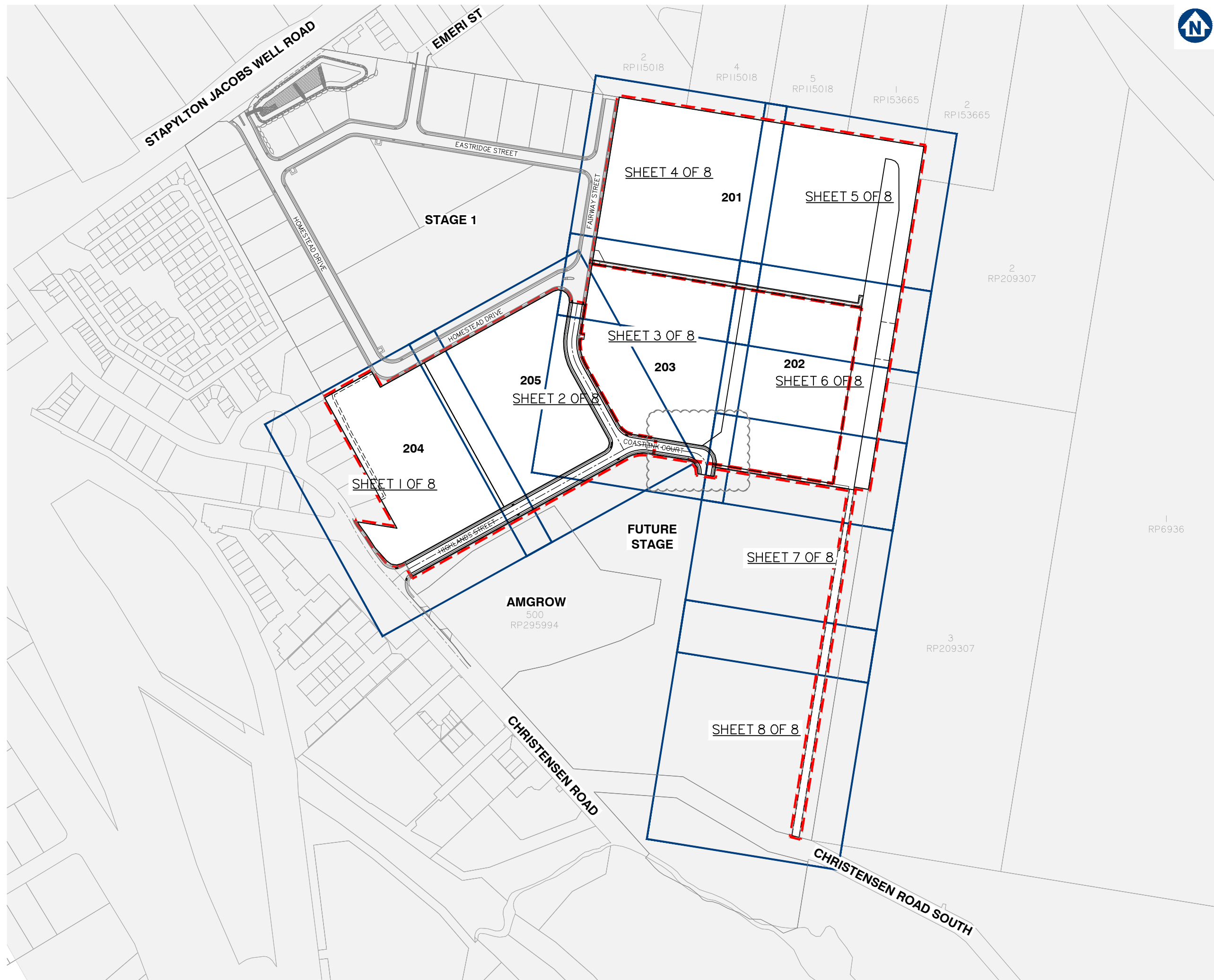
16939

Signed:

W. H. Kellogg

Drawing No:
5941 ENG OPW2 004

Rev. No:
B



Client:



Project:

VANTAGE YATALA STAGE 2

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60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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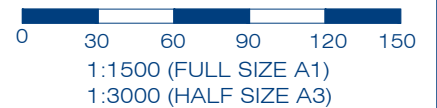
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DRAWING TITLE

KEY PLAN LAYOUT

E	06/04/23	LAYOUT UPDATED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG		
C	05/07/22	LOT NUMBER AND BOUNDARY UPDATED	LAB	MG		
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE				
Issue	Date	Description	DRN	CHK		

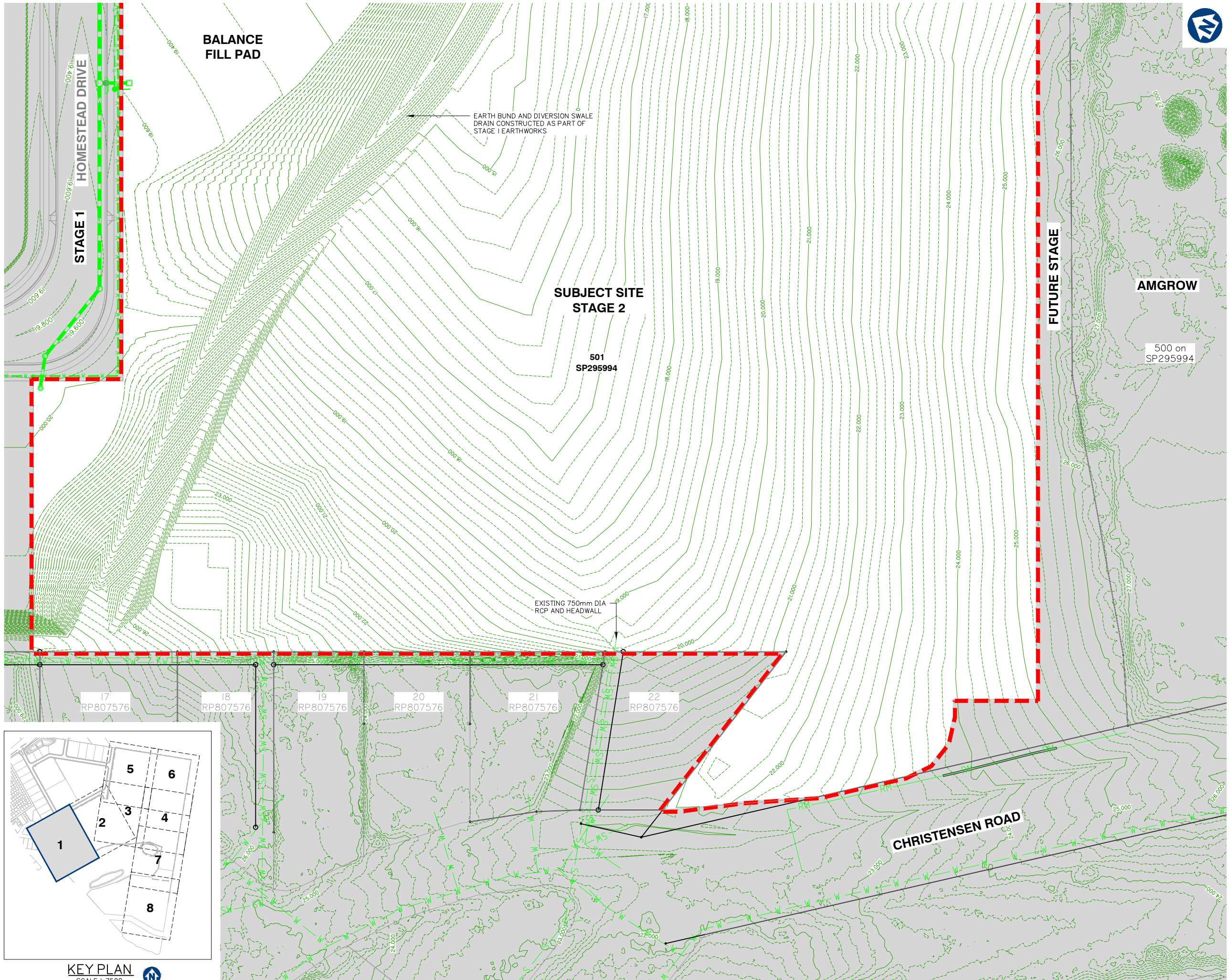
SCALE IN METRES



Scale at A1: 1:1500

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Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
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Project:

VANTAGE YATALA
STAGE 2

Site Address:

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DRAWING TITLE
EXISTING SURFACE
AND FEATURES PLAN
SHEET 1 OF 8

Issue	Date	Description	LAB	MG	CHK
C	06/04/23	LOT BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

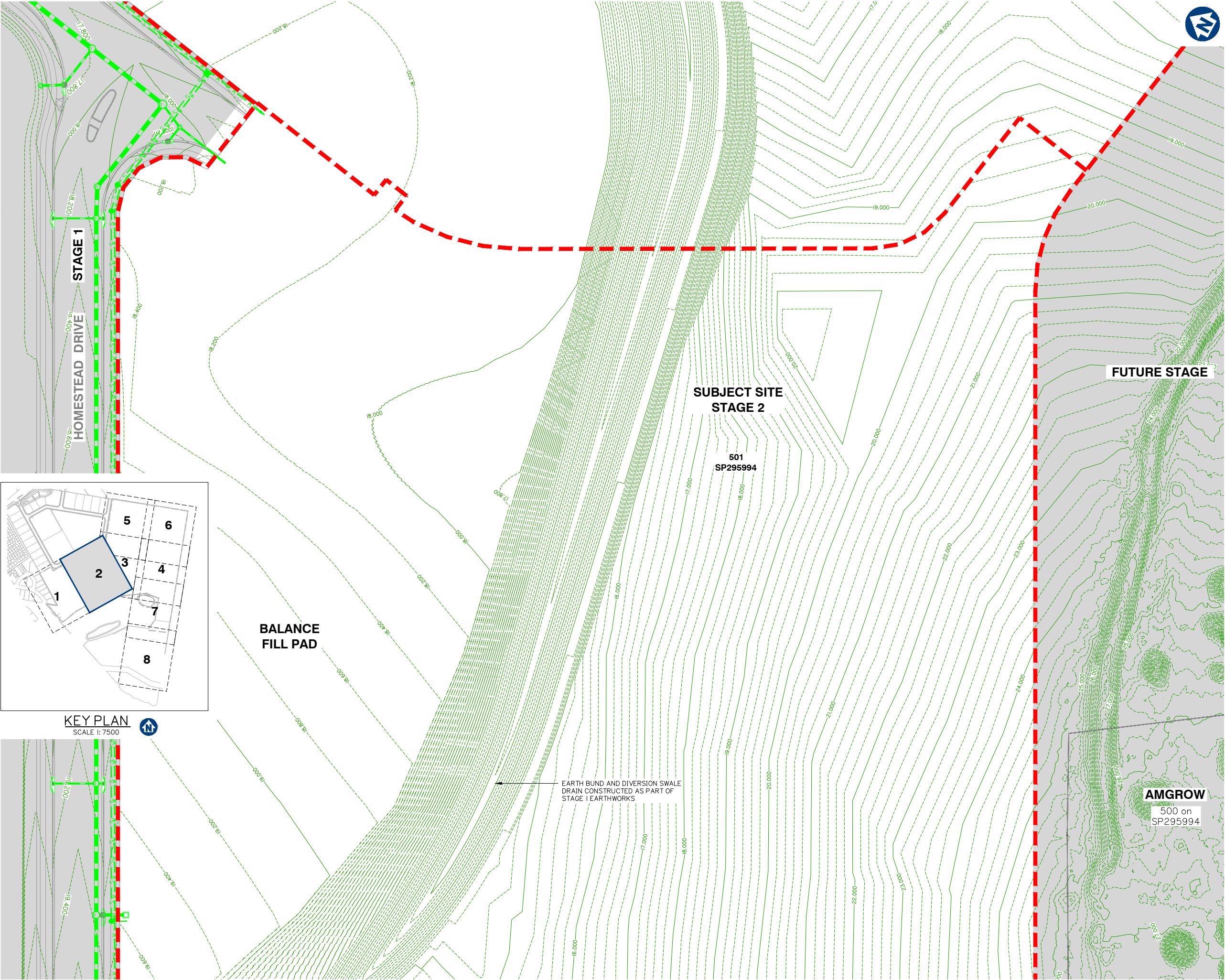


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1:1000 (HALF SIZE A3)

Scale at A1: 1:500

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RPEQ:	16939
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Project:

VANTAGE YATALA
STAGE 2

Site Address:

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DRAWING TITLE
EXISTING SURFACE
AND FEATURES PLAN
SHEET 2 OF 8

Issue	Date	Description	LAB	MG	CHK
C	06/04/23	LOT BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

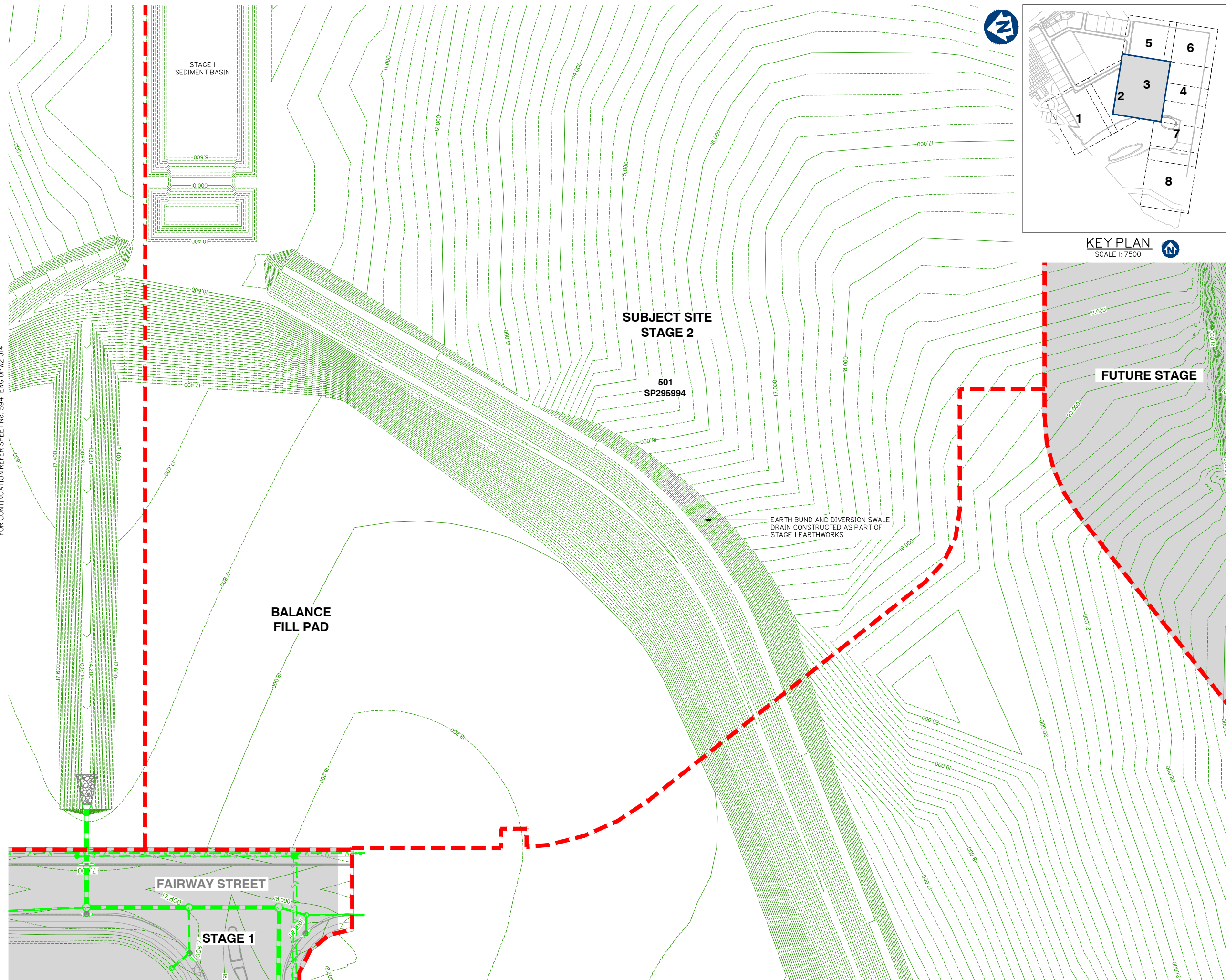
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Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
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DRAWING TITLE
EXISTING SURFACE
AND FEATURES PLAN
SHEET 3 OF 8

C	06/04/23	LOT BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
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Drafted:	LAB / IG
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Approved:	MG
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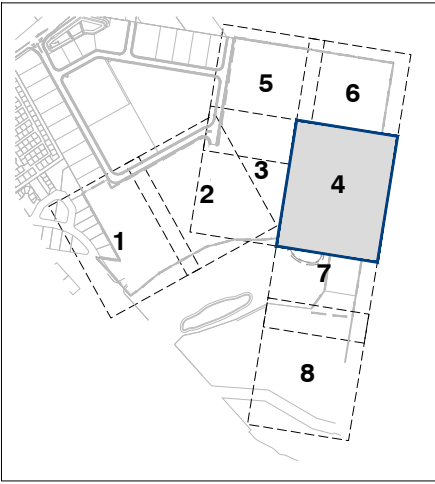
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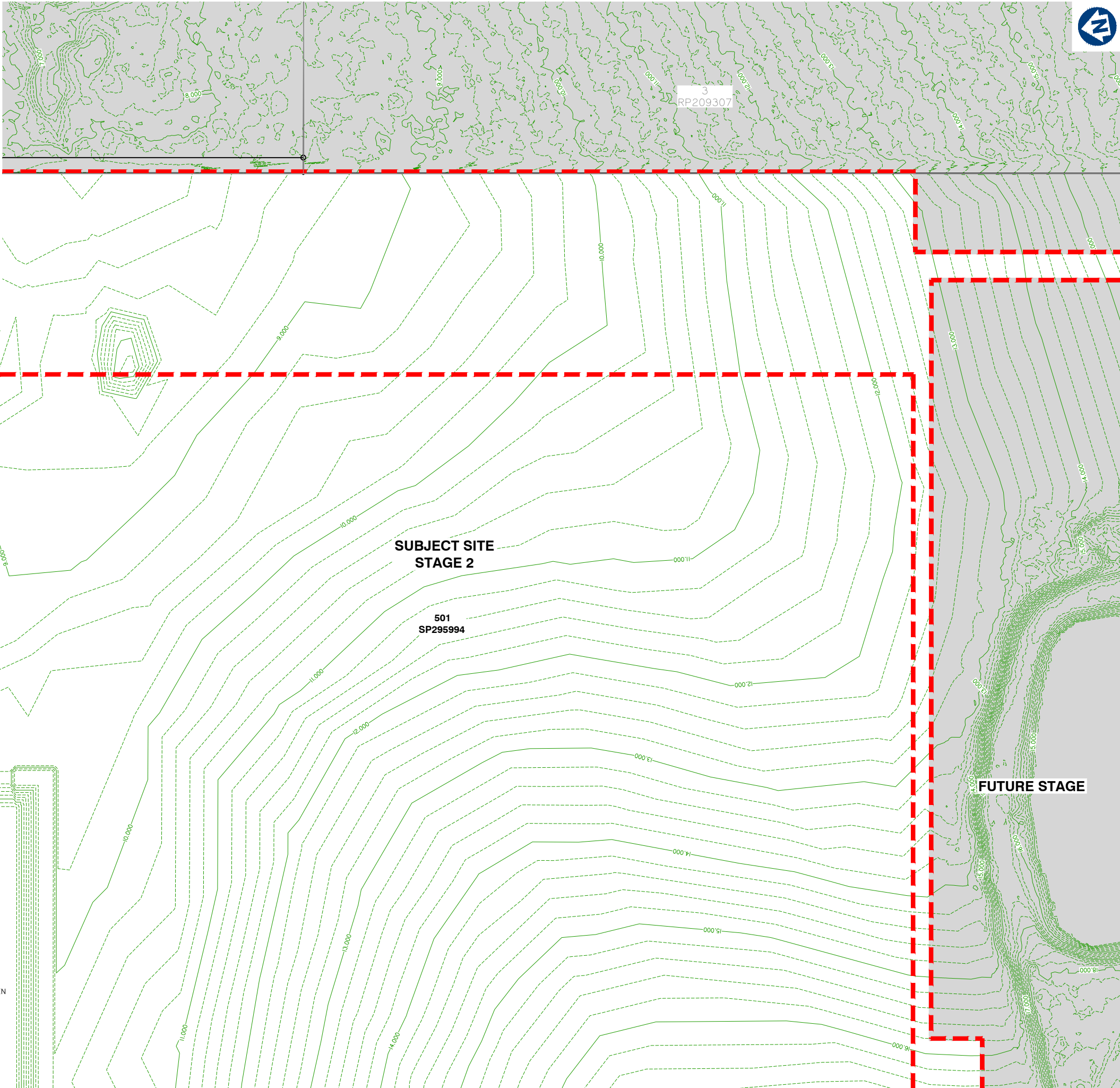
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5941 ENG OPW2 012

Rev. No:
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KEY PLAN
SCALE 1: 7500



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VANTAGE YATALA
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DRAWING TITLE
EXISTING SURFACE
AND FEATURES PLAN
SHEET 4 OF 8

Issue	Date	Description	LAB	MG	CHK
C	06/04/23	LOT BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

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FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 015

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 016

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 012

EXISTING SURFACE AND FEATURES PLAN SHEET 4 OF 8

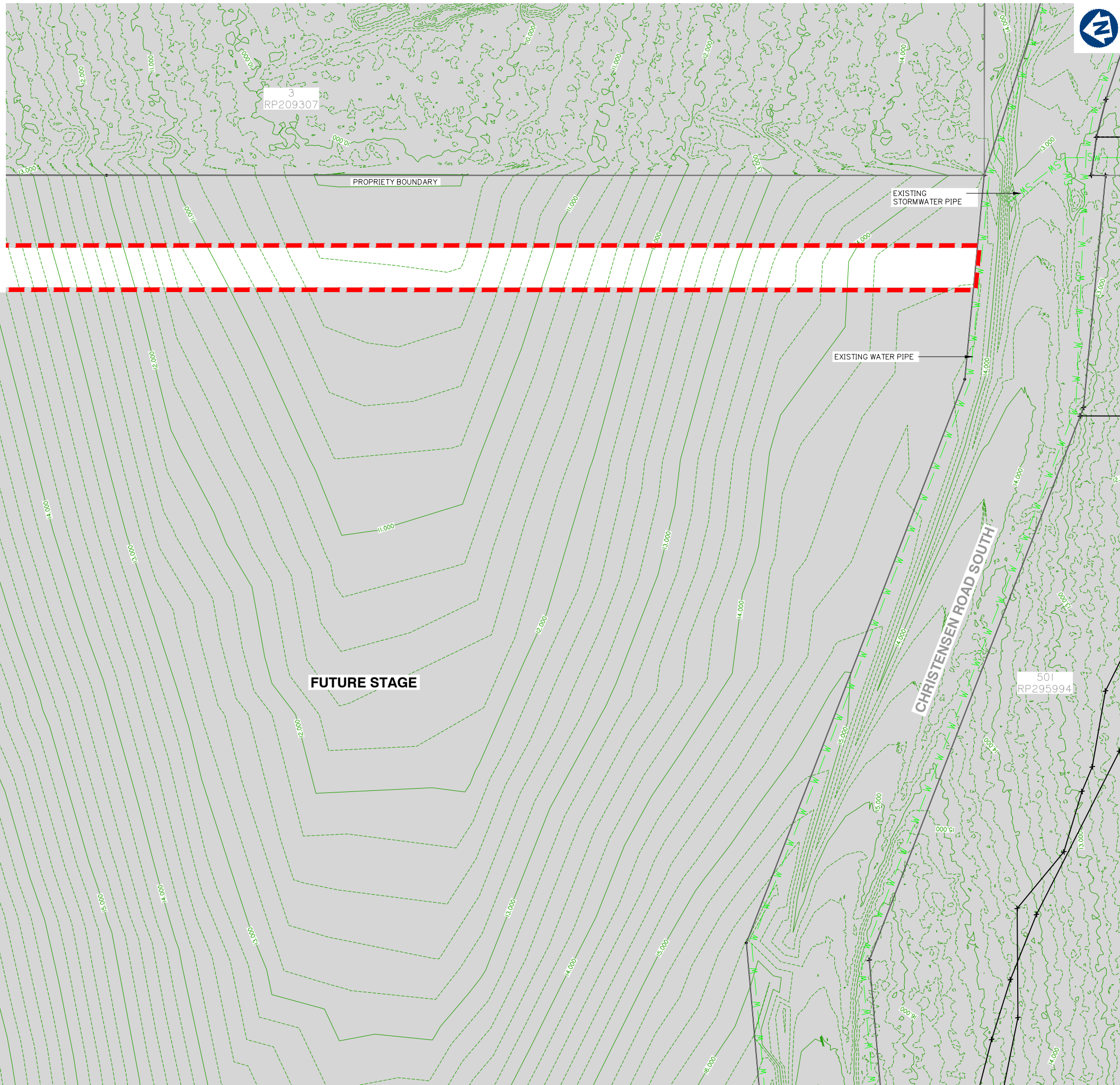
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5941 ENG OPW2 014	C



Drawing No:	Rev. No:
5941 ENG OPW2 015	C



Drawing No:	Rev. No:
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VANTAGE YATALA STAGE 2

Site Address:
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ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
EXISTING SURFACE
AND FEATURES PLAN
SHEET 8 OF 8

C	06/04/23	LOT BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue#	Date	Description	DRN	CHK	

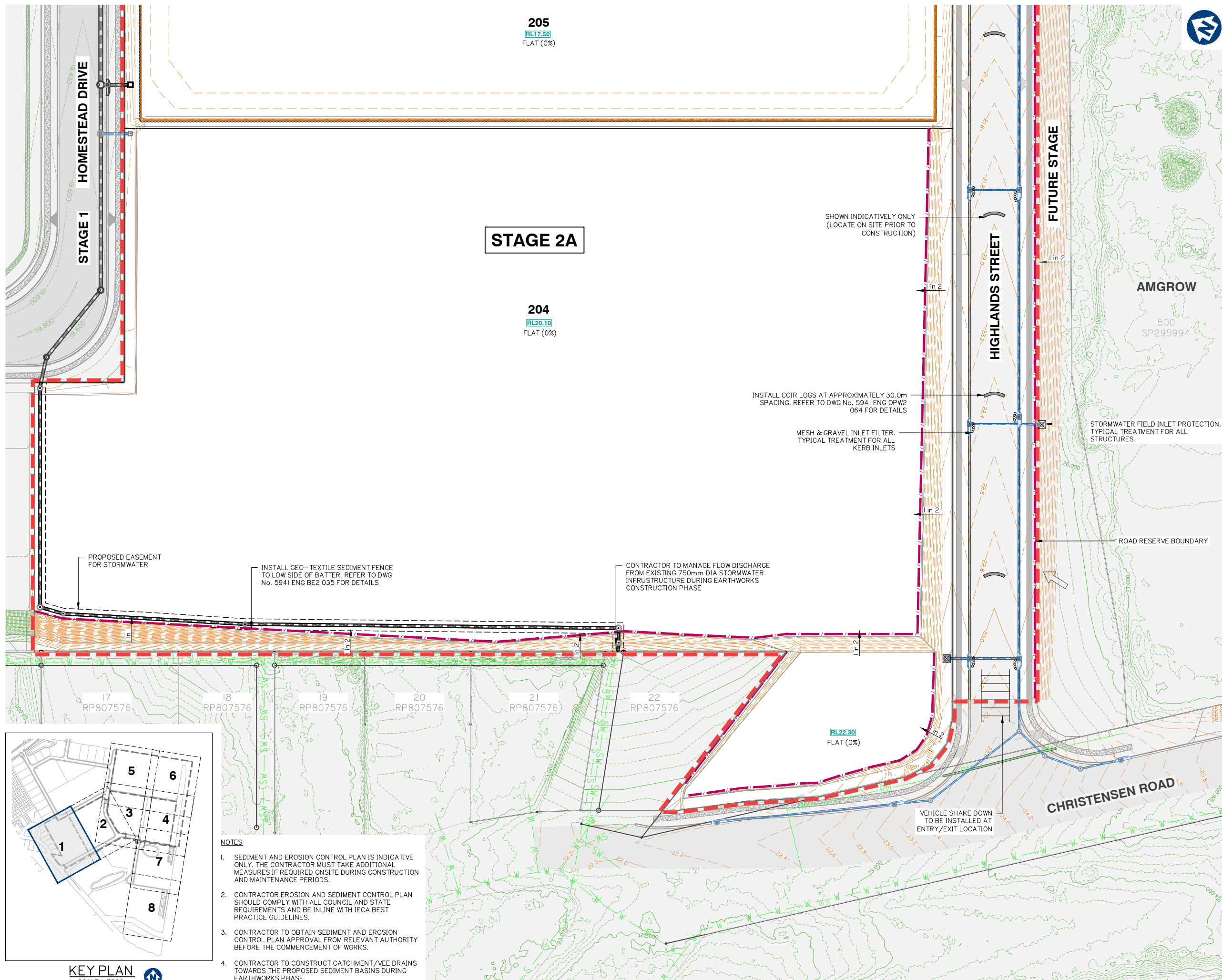
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Approved:	MG
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STAGE 2

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DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 1 OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	19/07/22	LOT BOUNDARY, LOT NUMBER CONTOURS UPDATED	LAB	MG		
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



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1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

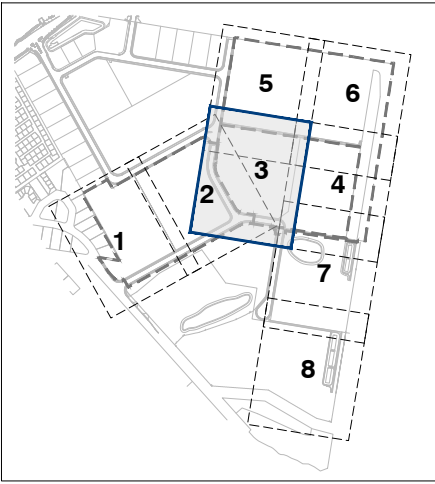
RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 050

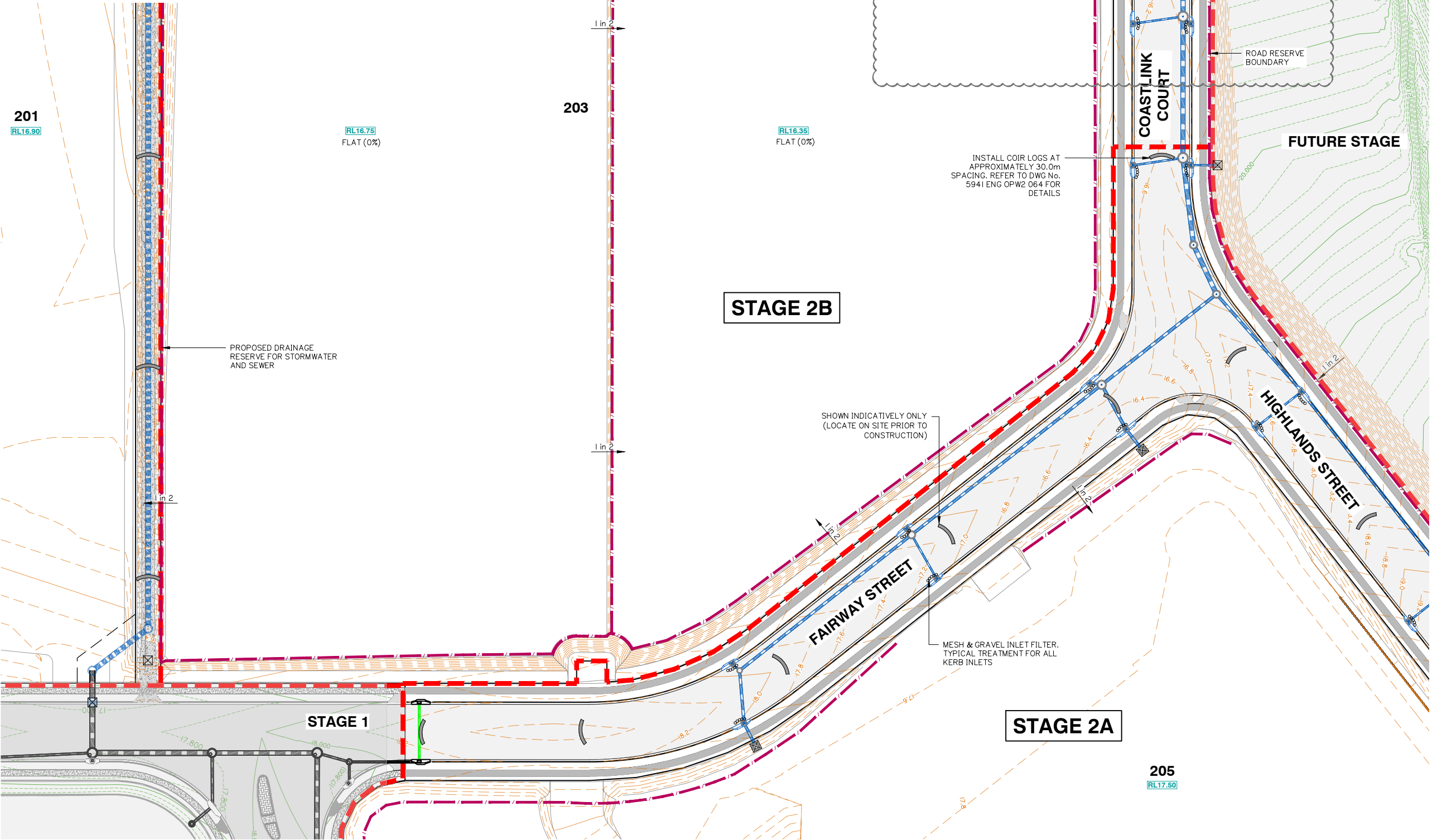
Rev. No:
E



KEY PLAN
SCALE 1: 7500

NOTES

1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ONSITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
2. CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL COUNCIL AND STATE REQUIREMENTS AND BE IN LINE WITH IECA BEST PRACTICE GUIDELINES.
3. CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.
4. CONTRACTOR TO CONSTRUCT CATCHMENT / VEE DRAINS TOWARDS THE PROPOSED SEDIMENT BASINS DURING EARTHWORKS PHASE.



Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

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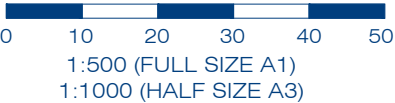
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DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 3 OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
F	06/04/23	LAYOUT AMENDED	JH	MG		
E	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	19/07/22	LOT BOUNDARY, LOT NUMBER, STORMWATER UPDATED	LAB	MG		
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
G	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



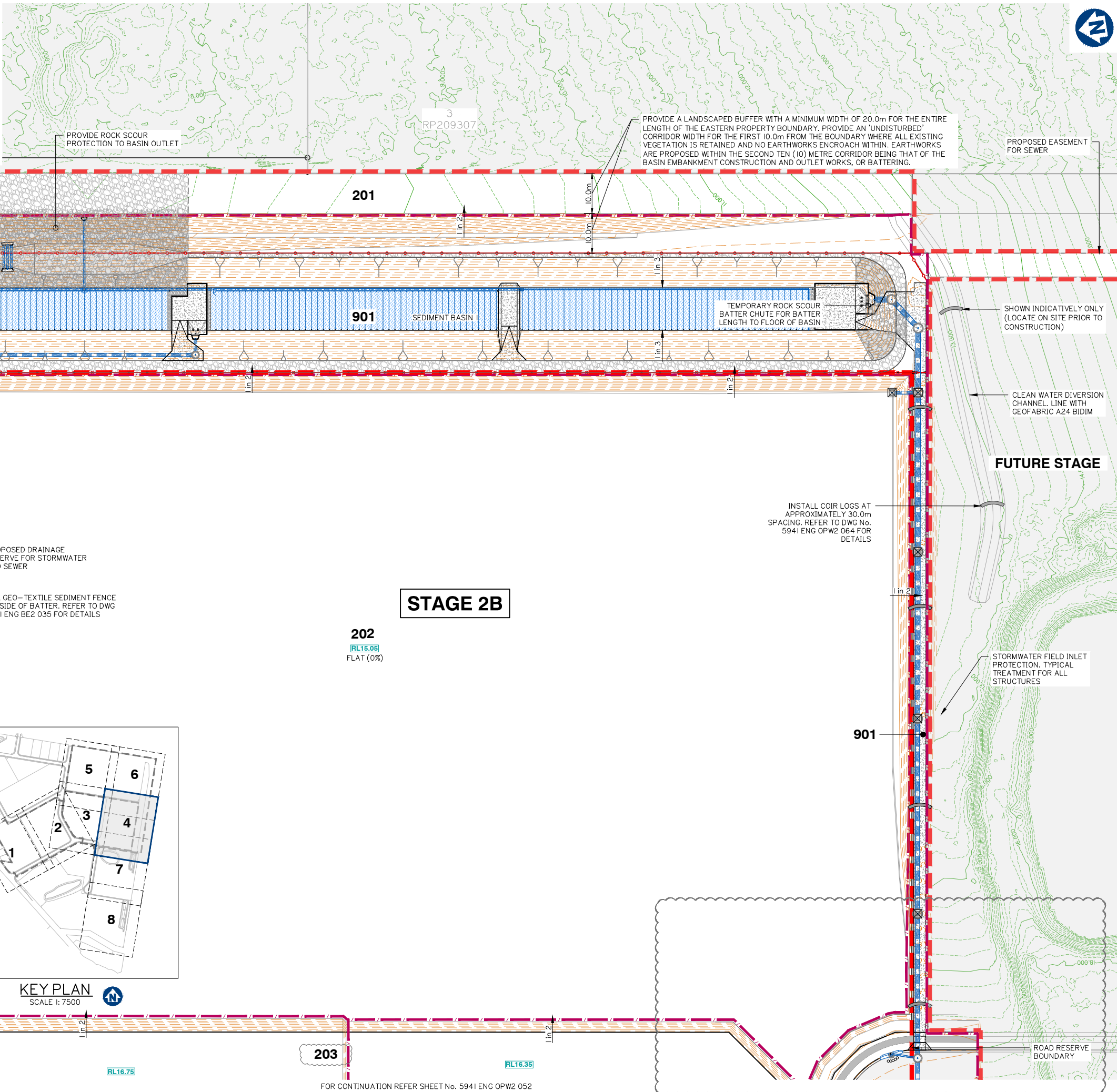
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 052
Rev. No: F

NOTES

1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ON SITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
2. CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL COUNCIL AND STATE REQUIREMENTS AND BE IN LINE WITH IECA BEST PRACTICE GUIDELINES.
3. CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.
4. CONTRACTOR TO CONSTRUCT CATCHMENT/VEE DRAINS TOWARDS THE PROPOSED SEDIMENT BASINS DURING EARTHWORKS PHASE.



FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 055

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 056

Client:



Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

ISSUED FOR
CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 4 OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
D	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
C	19/07/22	LOT BOUNDARY, LOT NUMBER CONTOURS UPDATED	LAB	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

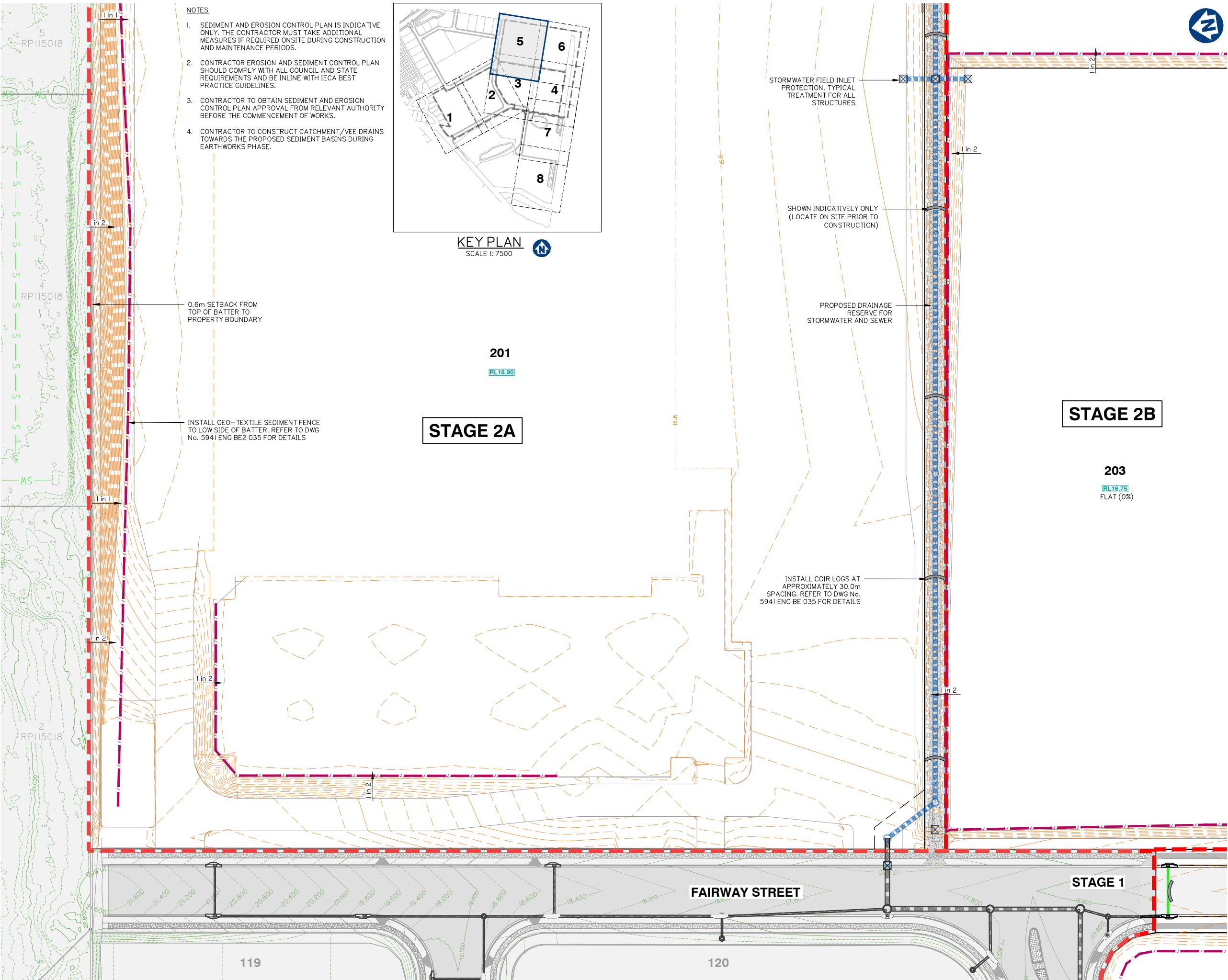
SCALE IN METRES



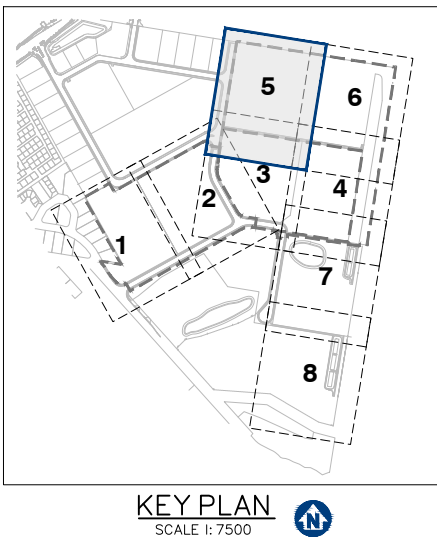
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 053
Rev. No: D



- NOTES
1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ONSITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
 2. CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL COUNCIL AND STATE REQUIREMENTS AND BE IN LINE WITH IECA BEST PRACTICE GUIDELINES.
 3. CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.
 4. CONTRACTOR TO CONSTRUCT CATCHMENT/VEE DRAINS TOWARDS THE PROPOSED SEDIMENT BASINS DURING EARTHWORKS PHASE.



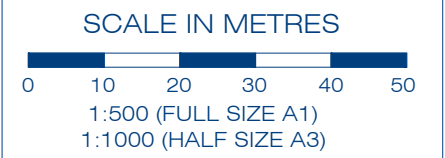
201
RL16.90

STAGE 2A

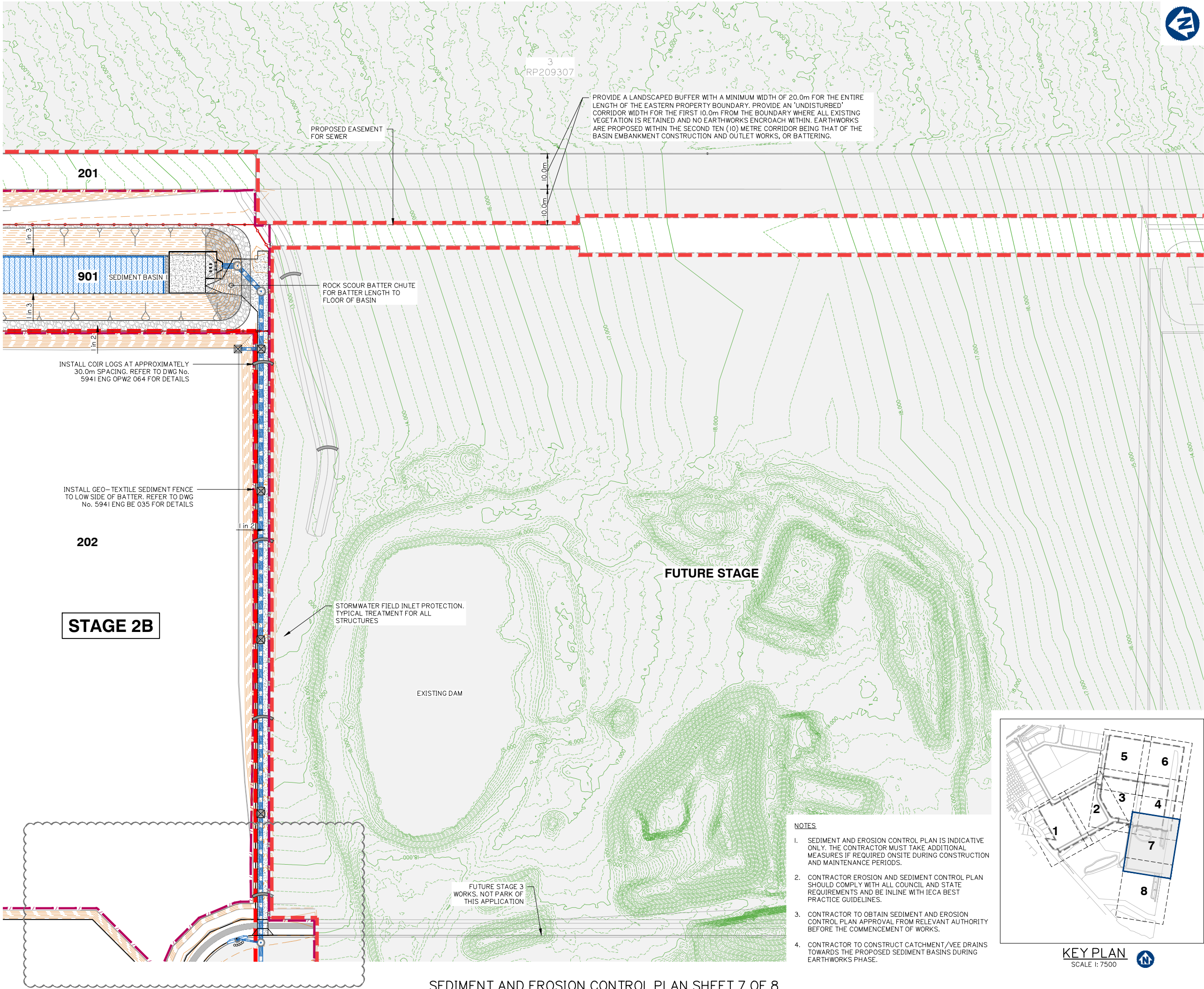
203
RL16.75
FLAT (0%)

STAGE 2B

Issue	Date	Description	LAB	MG	DRN	CHK
G	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
F	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG		
E	18/07/22	LOT BOUNDARY AND STORMWATER UPDATED	LAB	MG		
D	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
D	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
C	15/09/21	CONTOURS AMENDED	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		



Scale at A1:	1:500
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

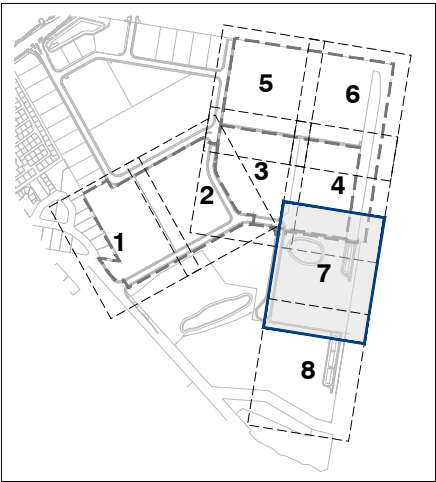


FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 053

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 057

NOTES

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4. CONTRACTOR TO CONSTRUCT CATCHMENT/VEE DRAINS TOWARDS THE PROPOSED SEDIMENT BASINS DURING EARTHWORKS PHASE.



KEY PLAN
SCALE 1: 7500

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed: *[Signature]*

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 056

Rev. No:
C

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RL: -

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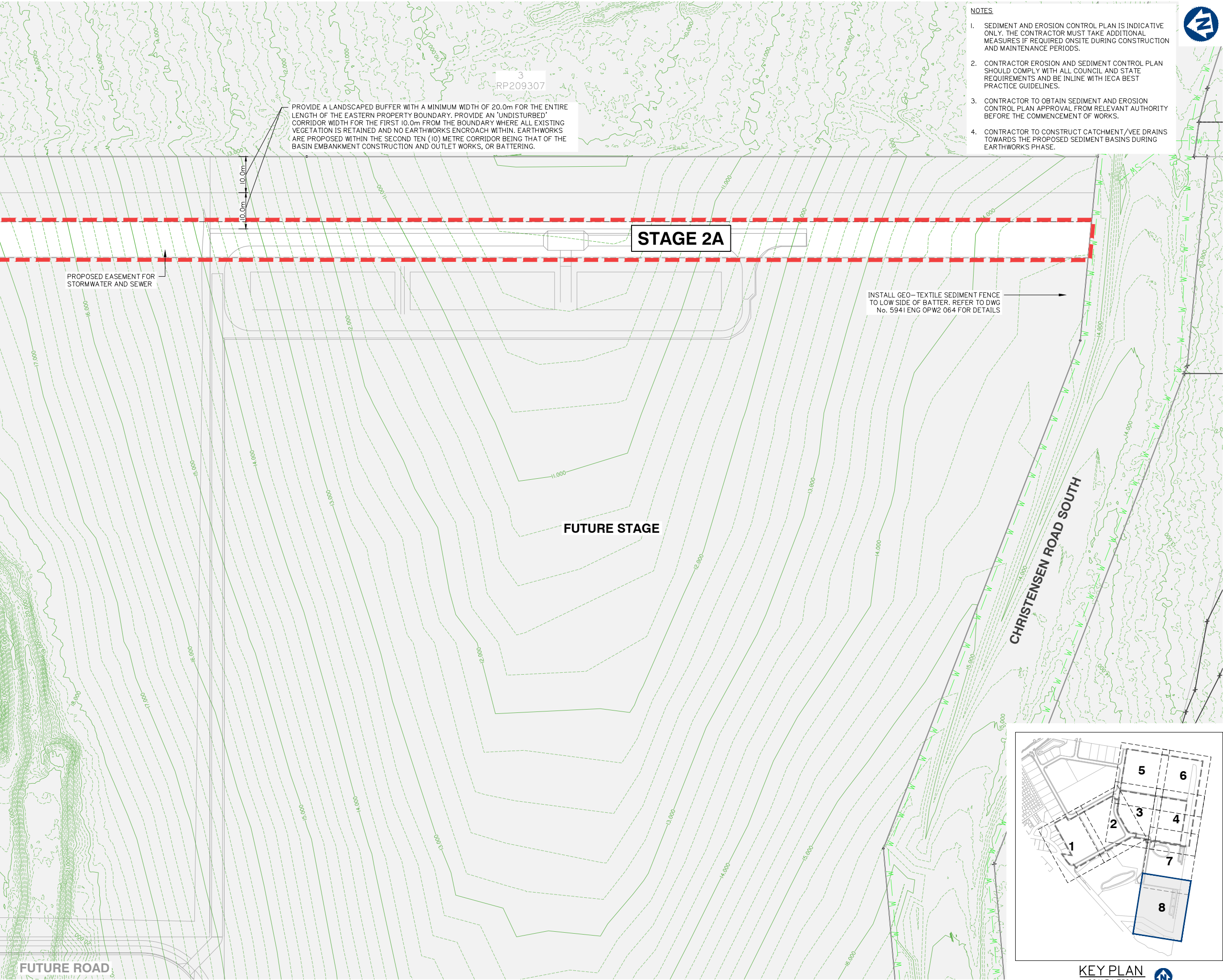
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DRAWING TITLE

SEDIMENT AND
EROSION CONTROL
PLAN SHEET 7 OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
C	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 056



NOTES

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planning | environment | landscape | engineering | survey
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 8 OF 8

C	06/04/23	LAYOUT AMENDED	LAB	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES



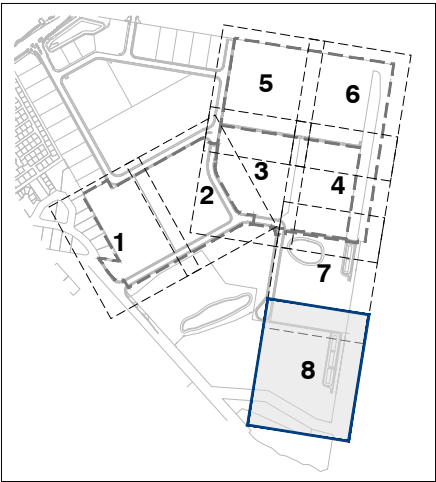
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 057

Rev. No:
C

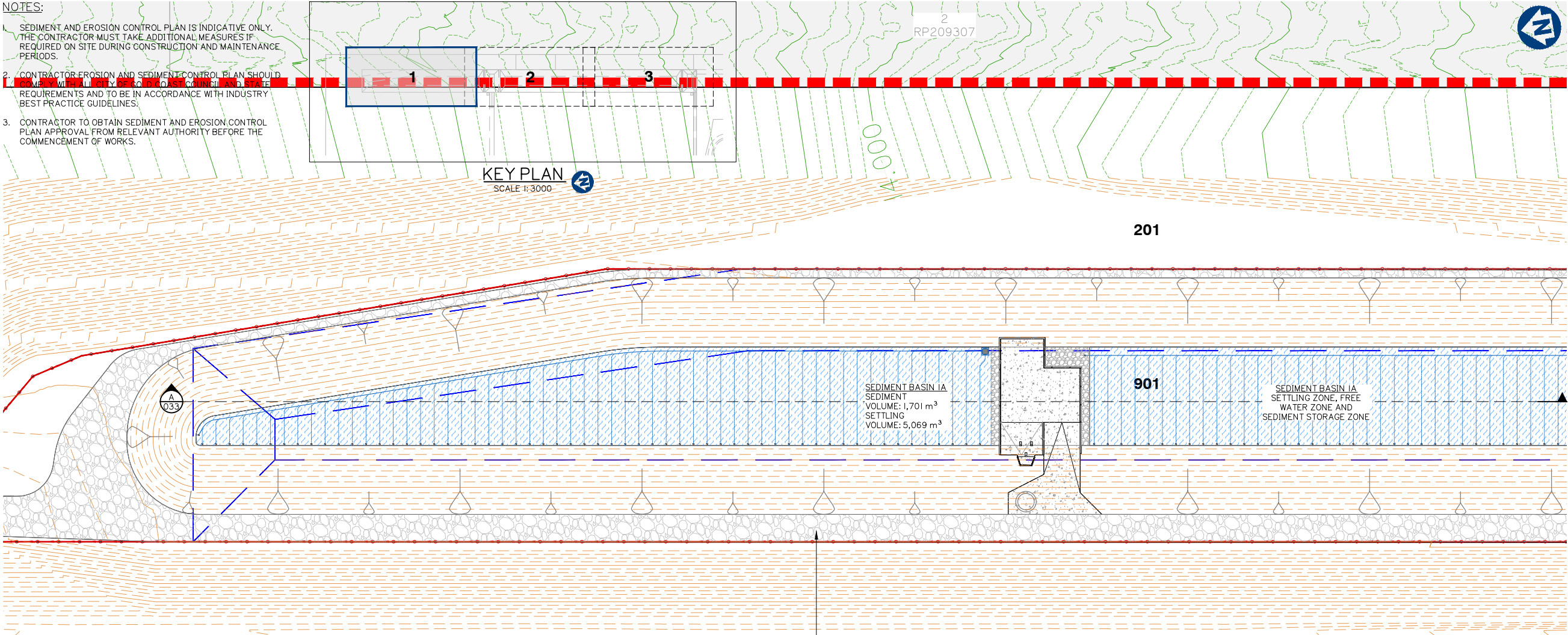


KEY PLAN
SCALE 1: 7500



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SEDIMENT BASIN DESIGN								
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT	DEWATERING EQUIPMENT
LPoD-IA	> 12 MONTHS	NO	LEASE	> 5Ha	YES	TYPE A	IFOD-FLOW	

BASIN ID	CATCHMENT AREA	DESIGN EVENT	I_x yr, 24 hr	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW-FLOW DECAN RATE	SELECTED LOW-FLOW DECAN RATE (Q_d)	MIN SETTLING ZONE VOLUME (Min V_s)	MIN SETTLING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(1: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(1: X)	(L/s/Ha)	(L/s/Ha)	(m³)	(m²)	
LPoD-IA	23.067	1	4.53	20	11150	1.9	5.1	9	9	5669	2315	VOLUME

BASIN ID	SETTLING ZONE		SCOUR VELOCITY	FREE WATER ZONE		SEDIMENT STORAGE ZONE		OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY)			
	ACTUAL SETTLING ZONE VOLUME (V_s)	ACTUAL SETTLING ZONE AREA (A_s)		DEPTH OF FREE WATER ZONE	VOLUME OF FREE WATER ZONE	SEDIMENT STORAGE VOLUME	SEDIMENT STORAGE DEPTH (APPROX.)	BATTER	WIDTH	LENGTH	DEPTH
	(m³)	(m²)	(m/s)	(m)	(m³)	(m³)	(m)	(1: X)	(m)	(m)	(m)
LPoD-IA	5669	2984	0.014	0.34	567	1701	0.76	3	29.89	152.42	3.00

SPILLWAY											
BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C_{10}	C	t_c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m³/s)	(m)	(m)	(m)	(m)
LPoD-IA	> 12 MONTHS	1:50	0.80	0.92	25.00	143.00	8.43	0.20	25.00	11.64	12.29

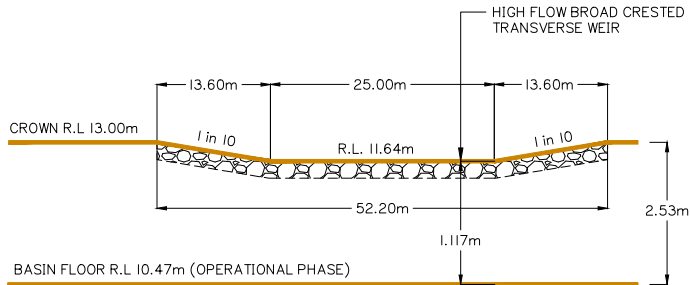
BASIN ID	FLOW RATE		FLUME DESIGN PARAMETERS				VELOCITY CHECK			OUTPUT PARAMETERS		
	BASIN DESIGN FLOW (m³/s)	FLUME DESIGN FLOW (m³/s)	BASE WIDTH (m)	SLIDE SLOPE (1: x)	LONGITUDINAL SLOPE (m/m)	FLUME LINING	MAX ALLOWABLE VELOCITY (m/s)	MANNINGS ROUGHNESS	VELOCITY (m/s)	FLOW DEPTH (m)	FLUME DEPTH (m)	CALCULATED FLOW (m³/s)
			b	x	s					d	y	
LPoD-IA	8.43	12.65	6.00	2.00	0.01	CONCRETE	5.00	0.013	4.419	0.42	0.57	12.70

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS						
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	CREST (RL)	FLUME BASE WIDTH (m)	FLUME BATTERS (X: 1)	FLUME DEPTH (m)
LPoD-IA	7369.3	152.4	29.9	3.00	1366.63	15.2	29.9	3.00	25.0	11.64	12.29	11.84	6.0	2.0	0.6

3.0m WIDE MAINTENANCE ACCESS TRACK TO BASIN WHERE IMMEDIATELY ADJACENT TO THE DEVELOPMENT LOTS. 2.5m WIDE TO REMAINING PERIMETER OF BASIN.

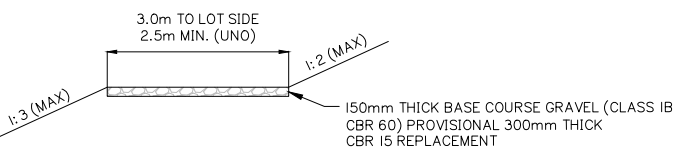
201

STAGE 2A



WEIR / SPILLWAY – TYPICAL ELEVATION

N.T.S



MAINTENANCE ACCESS TRACK – TYPICAL SECTION

N.T.S

UNO DENOTES 'UNLESS NOTED OTHERWISE'

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN 1
LAYOUT SHEET 1 OF 4

Issue	Date	Description	LAB	MG	CHK
D	06/04/23	STAGE BOUNDARY AMENDED	LAB	MG	
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	LAYOUT UPDATES	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

Scale at A1: 1:250

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

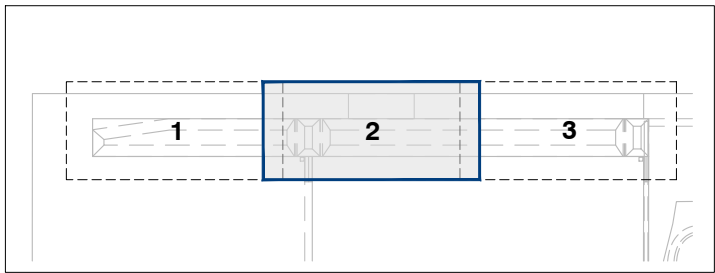
Date: 20/09/2022

Drawing No:
5941 ENG OPW2 058

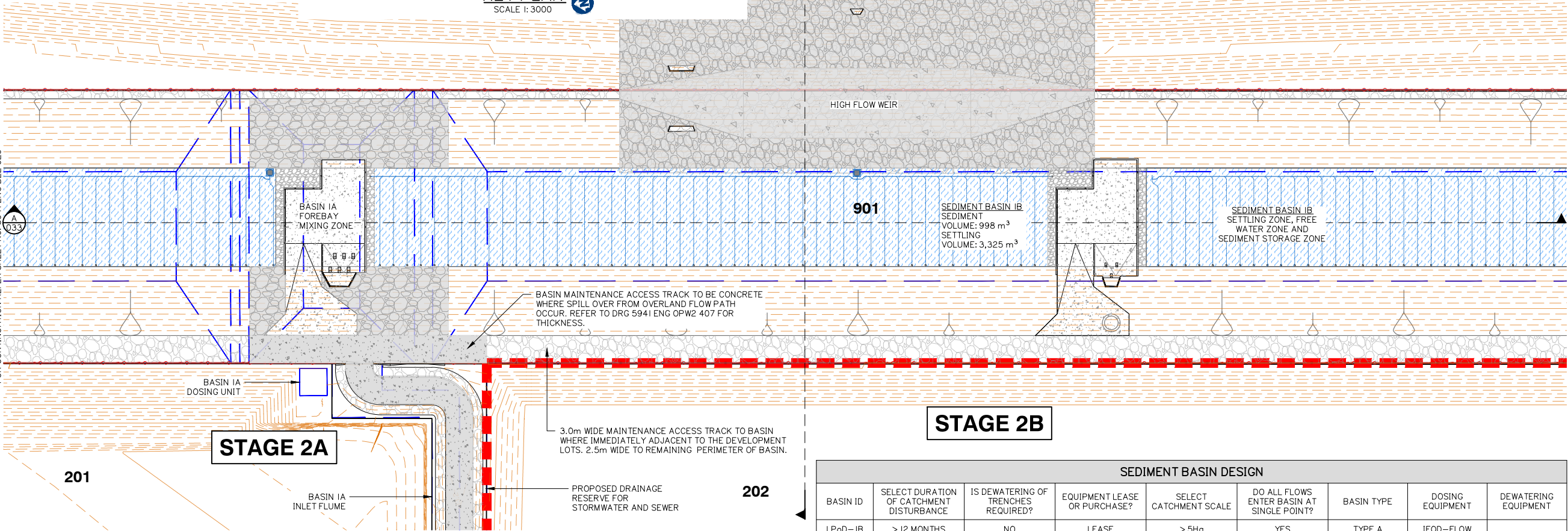
Rev. No:
D

NOTES:

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KEY PLAN
SCALE 1:3000



STAGE 2A

STAGE 2B

SEDIMENT BASIN DESIGN								
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT	DEWATERING EQUIPMENT
LPoD-IB	> 12 MONTHS	NO	LEASE	> 5Ha	YES	TYPE A	IFOD-FLOW	

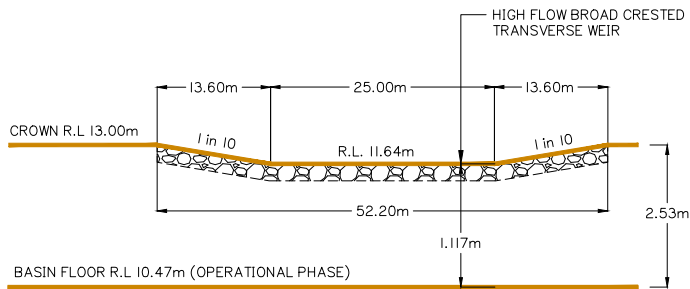
BASIN ID	CATCHMENT AREA	DESIGN EVENT	$I_{x \text{ yr, 24 hr}}$	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW-FLOW DECANT RATE	SELECTED LOW-FLOW DECANT RATE (Q_d)	MIN SETTLING ZONE VOLUME (Min V_s)	MIN SETTLING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(1: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(1: X)	(L/s/Ha)	(L/s/Ha)	(m³)	(m²)	
LPoD-IB	13.352	I	4.53	20	11150	1.82	3.1	9	9	3325	1358	VOLUME

	SETTLING ZONE			FREE WATER ZONE		SEDIMENT STORAGE ZONE		OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY)			
BASIN ID	ACTUAL SETTLING ZONE VOLUME (V _s)	ACTUAL SETTLING ZONE AREA (A _s)	SCOUR VELOCITY	DEPTH OF FREE WATER ZONE	VOLUME OF FREE WATER ZONE	SEDIMENT STORAGE VOLUME	SEDIMENT STORAGE DEPTH (APPROX.)	BATTER	WIDTH	LENGTH	DEPTH
	(m³)	(m²)	(m/s)	(m)	(m³)	(m³)	(m)	(1: X)	(m)	(m)	(m)
LPoD—IB	3325	1827	0.008	0.35	333	998	0.83	3	29.74	92.19	3.00

SPILLWAY											
BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C_{10}	C	t_c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m³/s)				
LPoD-IB	> 12 MONTHS	1: 50	0.80	0.92	25.00	143.00	4.95	0.20	25.00	11.64	12.29

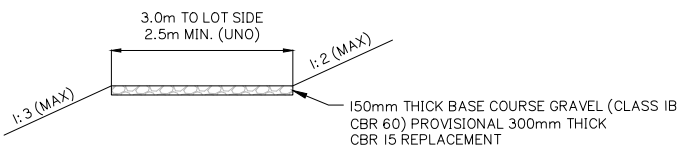
BASIN ID	FLOW RATE		FLUME DESIGN PARAMETERS				VELOCITY CHECK			OUTPUT PARAMETERS		
	BASIN DESIGN FLOW (m³/s)	FLUME DESIGN FLOW (m³/s)	BASE WIDTH (m)	SLIDE SLOPE (1: x)	LONGITUDINAL SLOPE (m/m)	FLUME LINING	MAX ALLOWABLE VELOCITY (m/s)	MANNINGS ROUGHNESS	VELOCITY (m/s)	FLOW DEPTH (m)	FLUME DEPTH (m)	CALCULATED FLOW (m³/s)
			b	x	s					d	y	
LPoD-IB	4.95	7.43	4.00	2.00	0.01	CONCRETE	5.00	0.013	3.817	0.42	0.57	7.76

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS						
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	CREST (RL)	FLUME BASE WIDTH (m)	FLUME BATTERS (X: 1)	FLUME DEPTH (m)
LPoD-IB	4323.1	92.2	29.7	3.00	822.44	9.2	29.7	3.00	25.0	11.64	12.29	11.84	4.0	2.0	0.6



WEIR / SPILLWAY – TYPICAL ELEVATION

N.T.S



MAINTENANCE ACCESS TRACK – TYPICAL SECTION

N.T.S

UNO DENOTES 'UNLESS NOTED OTHERWISE'

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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN 1
LAYOUT SHEET 2 OF 4

Issue	Date	Description	DRN	CHK
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C	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	19/07/22	STORMWATER ALIGNMENT UPDATED	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG

SCALE IN METRES



1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

Scale at A1: 1:250

Designed: IG

Drafted: LAB / IG

Approved: MG

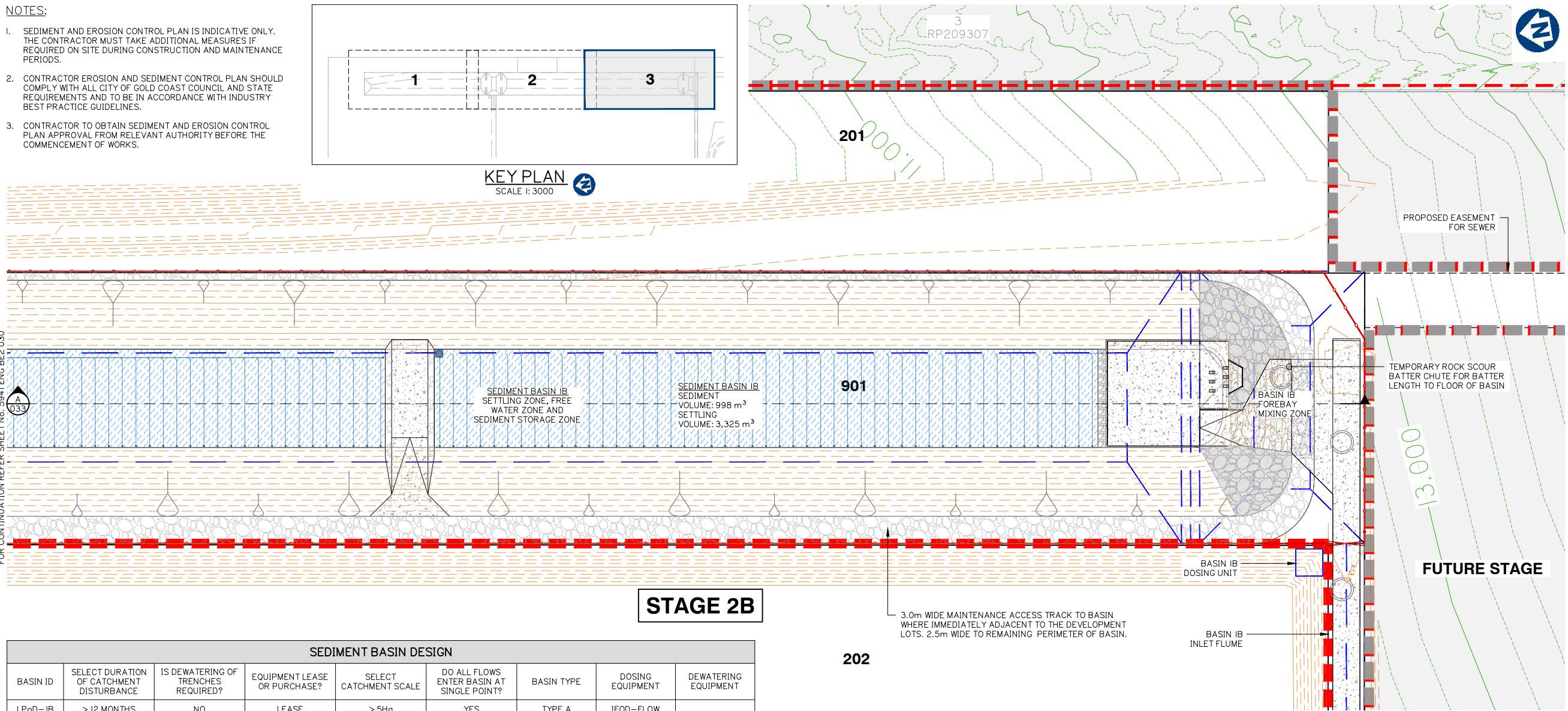
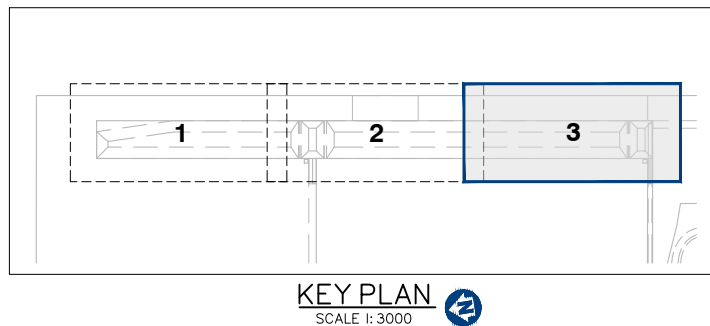
RPEQ: 16939

Signed:

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Drawing No: 5941 ENG OPW2 059
Rev. No: D

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3. CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.



SEDIMENT BASIN DESIGN								
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT	DEWATERING EQUIPMENT
LPoD-IB	> 12 MONTHS	NO	LEASE	> 5Ha	YES	TYPE A	IFOD-FLOW	

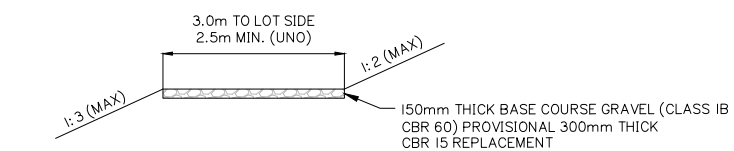
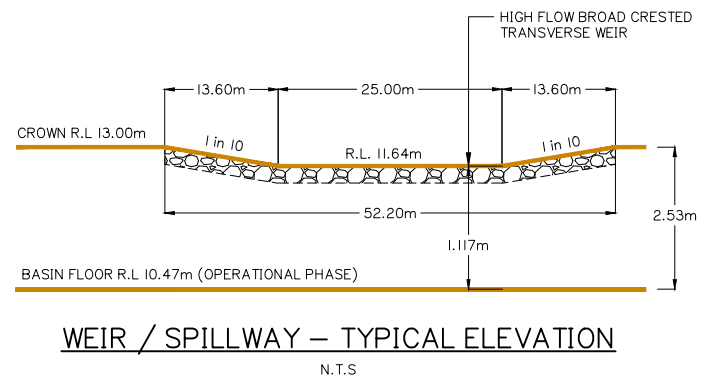
BASIN ID	CATCHMENT AREA	DESIGN EVENT	$i_{x\text{ yr}, 24\text{ hr}}$	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W:L	OPTIMUM LOW-FLOW DECAT RATE	SELECTED LOW-FLOW DECAT RATE (Q_d)	MIN SETTLLING ZONE VOLUME (Min V_s)	MIN SETTLLING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(1: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(1: X)	(L/s/Ha)	(L/s/Ha)	(m^3)	(m^2)	
LPoD-IB	13.352	1	4.53	20	11150	1.82	3.1	9	9	3325	1358	VOLUME

	SETTLING ZONE			FREE WATER ZONE		SEDIMENT STORAGE ZONE		OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY)			
BASIN ID	ACTUAL SETTLING ZONE VOLUME (V _s)	ACTUAL SETTLING ZONE AREA (A _s)	SCOUR VELOCITY	DEPTH OF FREE WATER ZONE	VOLUME OF FREE WATER ZONE	SEDIMENT STORAGE VOLUME	SEDIMENT STORAGE DEPTH (APPROX.)	BATTER	WIDTH	LENGTH	DEPTH
	(m ³)	(m ²)	(m/s)	(m)	(m ³)	(m ³)	(m)	(1: X)	(m)	(m)	(m)
LPoD – IB	3325	1827	0.008	0.35	333	998	0.83	3	29.74	92.19	3.00

BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C ₁₀	C	t _c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m ³ /s)	(m)	(m)	(m)	(m)
LPoD-IB	> 12 MONTHS	1: 50	0.80	0.92	25,00	143.00	4.95	0.20	25.00	11.64	12.29

BASIN ID	FLOW RATE		FLUME DESIGN PARAMETERS				VELOCITY CHECK			OUTPUT PARAMETERS		
	BASIN DESIGN FLOW (m³/s)	FLUME DESIGN FLOW (m³/s)	BASE WIDTH (m)	SLIDE SLOPE (1: x)	LONGITUDINAL SLOPE (m/m)	FLUME LINING	MAX ALLOWABLE VELOCITY (m/s)	MANNINGS ROUGHNESS	VELOCITY (m/s)	FLOW DEPTH (m)	FLUME DEPTH (m)	CALCULATED FLOW (m³/s)
			b	x	s					d	y	
LPoD-IB	4.95	7.43	4.00	2.00	0.01	CONCRETE	5.00	0.013	3.817	0.42	0.57	7.76

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS						
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	CREST (RL)	FLUME BASE WIDTH (m)	FLUME BATTERS (X: 1)	FLUME DEPTH (m)
LPoD-IB	4323.1	92.2	29.7	3.00	822.44	9.2	29.7	3.00	25.0	11.64	12.29	11.84	4.0	2.0	0.6



MAINTENANCE ACCESS TRACK – TYPICAL SECTION
N.T.S. UNO DENOTES 'UNLESS NOTED OTHERWISE'



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VANTAGE YATALA STAGE 2

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN 1
LAYOUT SHEET 3 OF 4

C	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	11/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHN	

SCALE IN METRES



1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

1:250

IG

LAB / IG

MG

16939

Witchell

5941 ENG OPW2 060

C

Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN
SECTIONS

C	06/04/23	SECTIONS C AND D REMOVED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

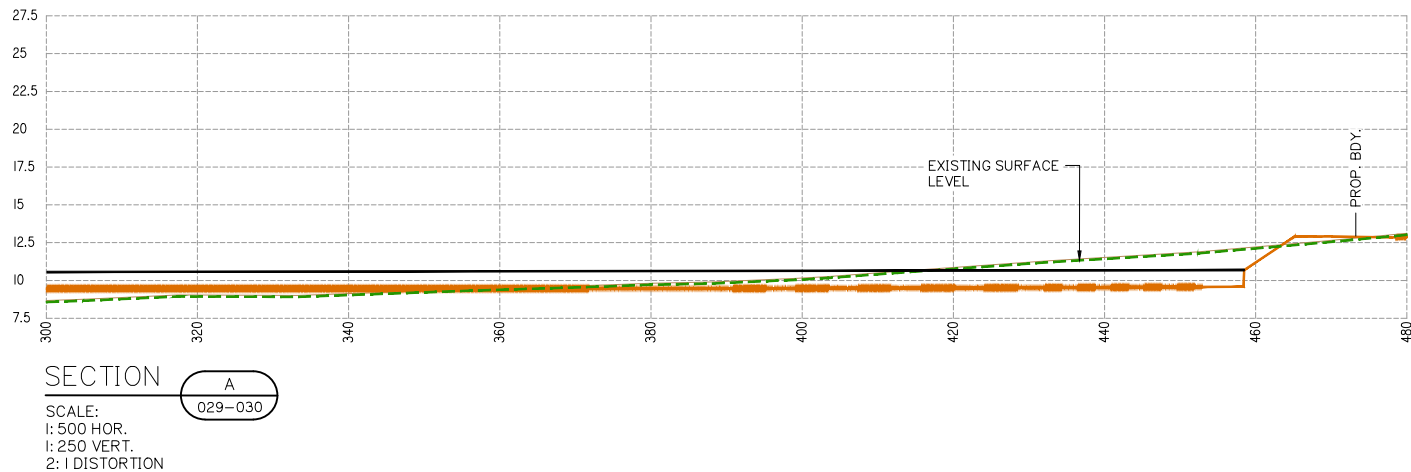
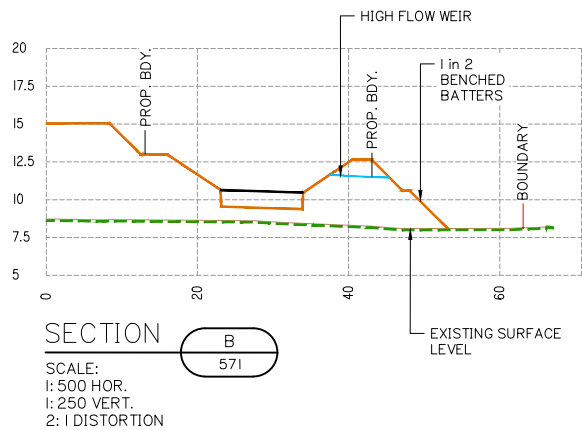


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1:500 (HALF SIZE A3)

Scale at A1: 1:250

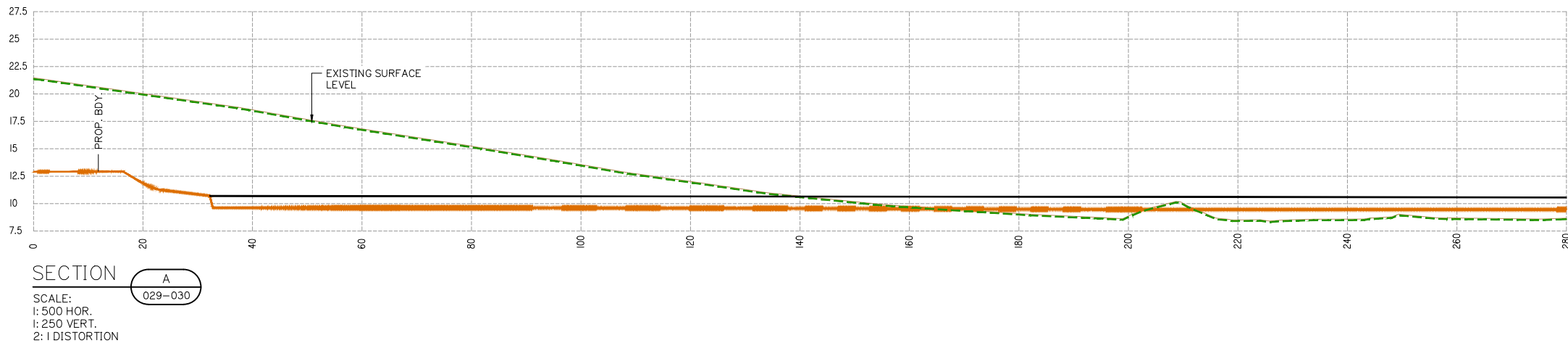
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Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

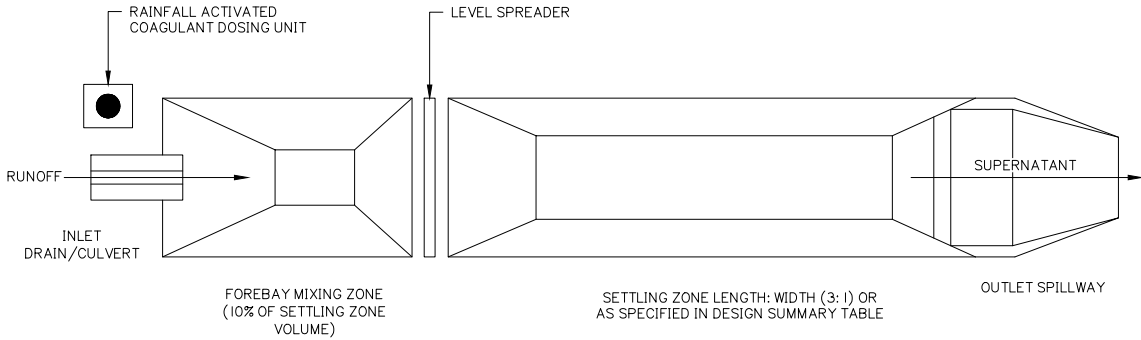
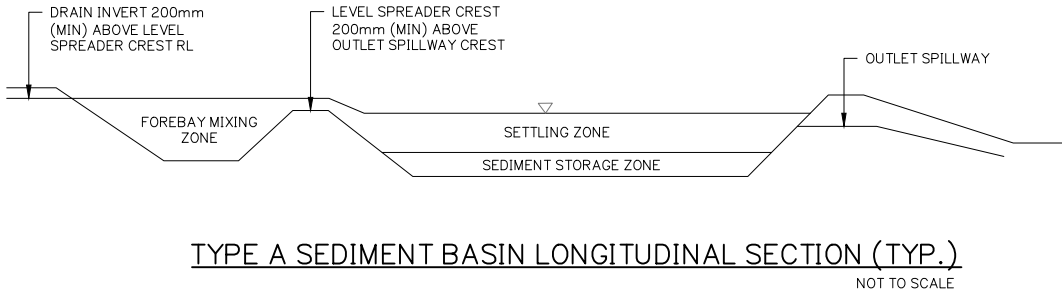
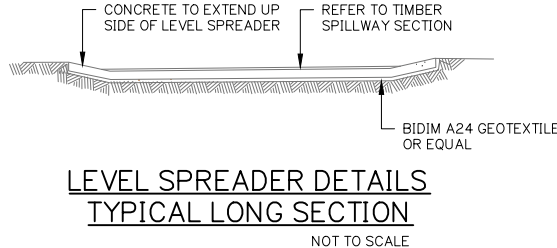
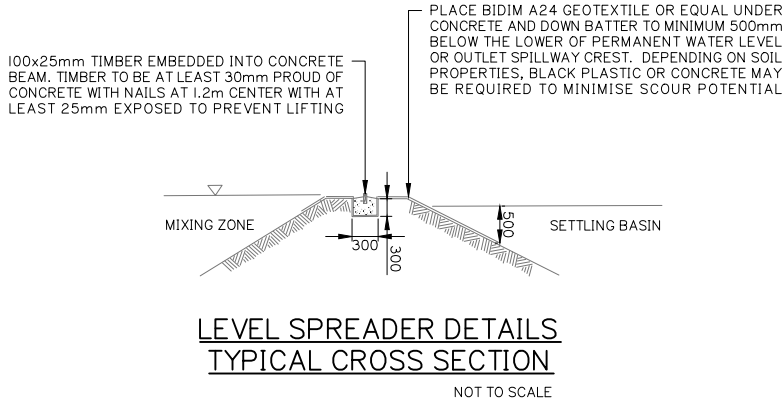
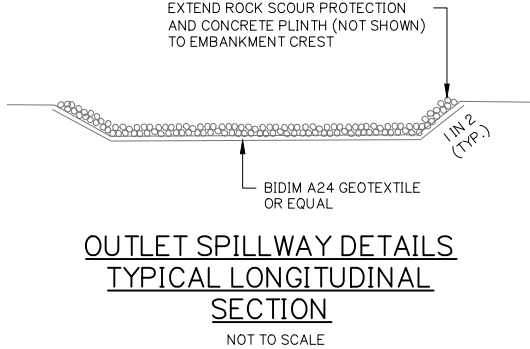
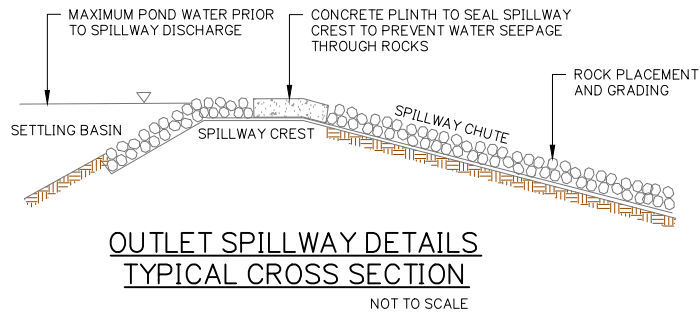
Drawing No: 5941 ENG OPW2 062 Rev. No: C



NOTE:

- SEDIMENT ACCUMULATION DEPTHS, FREE WATER ZONES, AND SETTLEMENT DEPTHS ARE OMITTED FROM CROSS SECTIONS FOR CLARITY. REFER TO CALCULATION TABLES ON DRAWINGS 5941 ENG OPW2 058-061





CONSTRUCTION PHASE SEDIMENT BASIN TYPICAL SECTIONS

Client:



Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN TYPICAL
SECTIONS

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

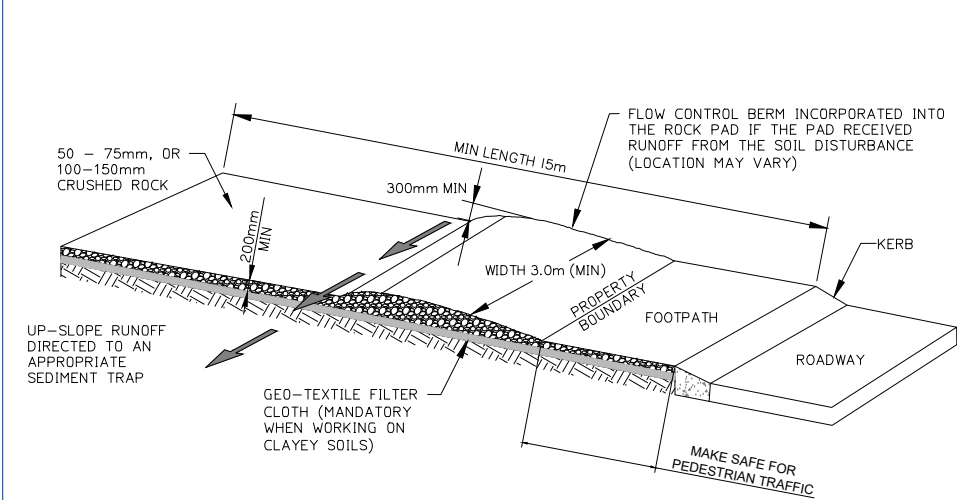


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1:500 (HALF SIZE A3)

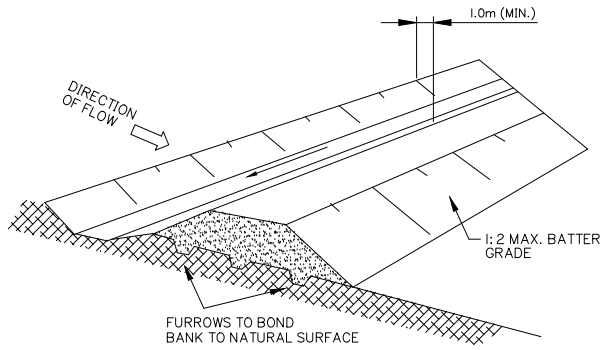
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

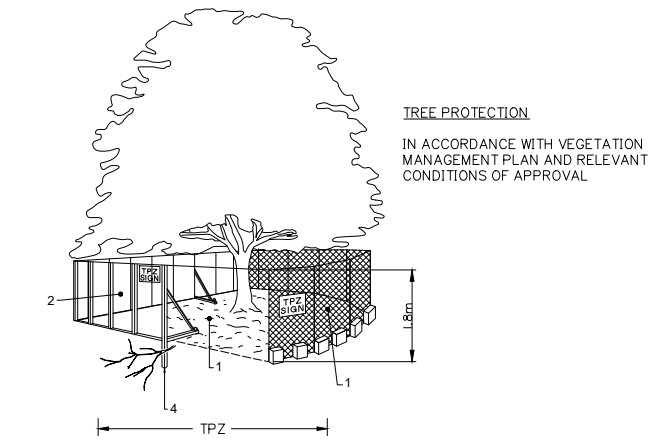
Drawing No: 5941 ENG OPW2 063
Rev. No: B



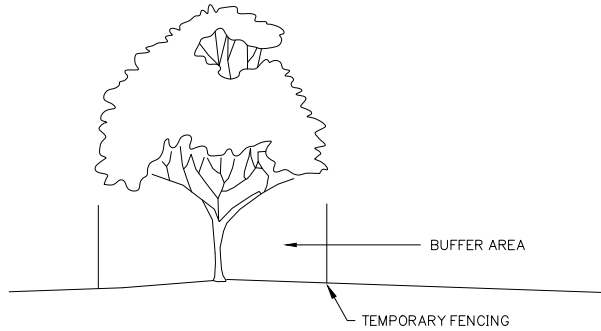
ENTRY/EXIT PAD FOR CONSTRUCTION SITE
NOT TO SCALE



DIVERSION DRAIN
NOT TO SCALE



TREE PROTECTION
IN ACCORDANCE WITH VEGETATION
MANAGEMENT PLAN AND RELEVANT
CONDITIONS OF APPROVAL



FENCING AS PER AS: 4970

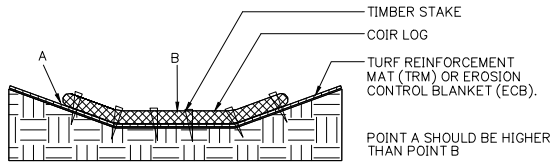
1. CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
2. ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
3. MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST.) NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
4. BRACING IS PERMITTED WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.
5. THE CONSTRUCTION CONTRACTOR IS NOT TO UNDERTAKE ANY PRUNING OF TREES. TREE MANAGEMENT IS TO BE UNDERTAKEN BY A SUITABLY QUALIFIED ARBORIST.
6. NO STOCKPILE/S ARE PERMITTED WITHIN THE ZONE OF ANY RETAINED VEGETATION WITHOUT SUPERVISION AND AUTHORIZATION OF THE SUPERVISING ARBORIST.
7. NO CLEARING OF PROTECTED SIZE VEGETATION IS TO OCCUR WITHOUT APPROVAL FROM LOGAN CITY COUNCIL.

DETERMINING THE TPZ

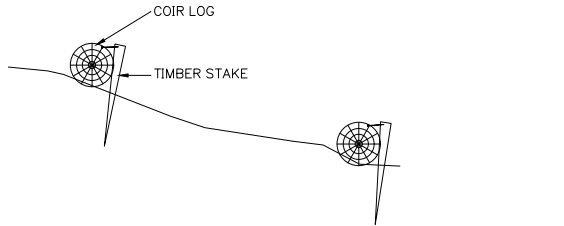
THE RADIUS OF THE TPZ IS CALCULATED FOR EACH TREE BY MULTIPLYING ITS DBH X 12 = TRUNK DIAMETER MEASURED AT 1.4M ABOVE GROUND. RADIUS IS MEASURED FROM THE CENTRE OF THE STEM AT GROUND LEVEL.

A TPZ SHOULD NOT BE LESS THAN 2M NOR GREATER THAN 15M (EXCEPT WHERE CROWN PROTECTION IS REQUIRED).
THE TPZ OF PALMS, OTHER MONOCOTS, CYCADS AND TREE FERNS SHOULD NOT BE LESS THAN 1M OUTSIDE THE CROWN PROJECTION.

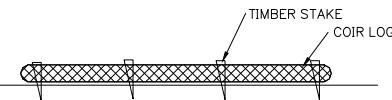
PROTECTIVE FENCING
NOT TO SCALE



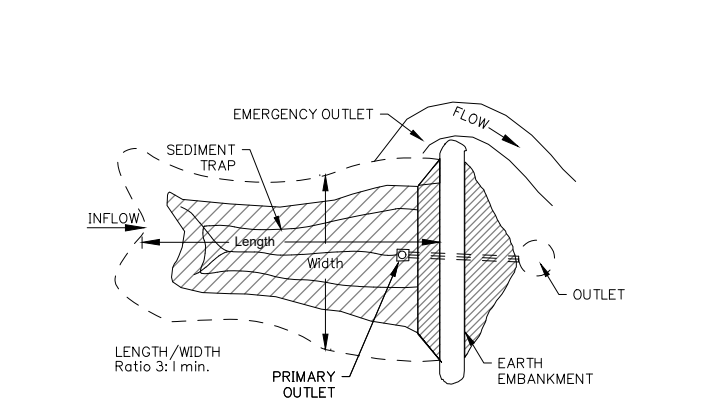
PROPER PLACEMENT OF COIR LOG IN DRAINAGE PATH
NOT TO SCALE



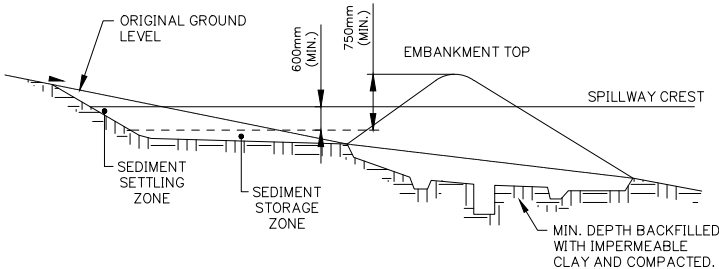
COIR LOG AND TIMBER STAKES STABILISING SLOPE
NOT TO SCALE



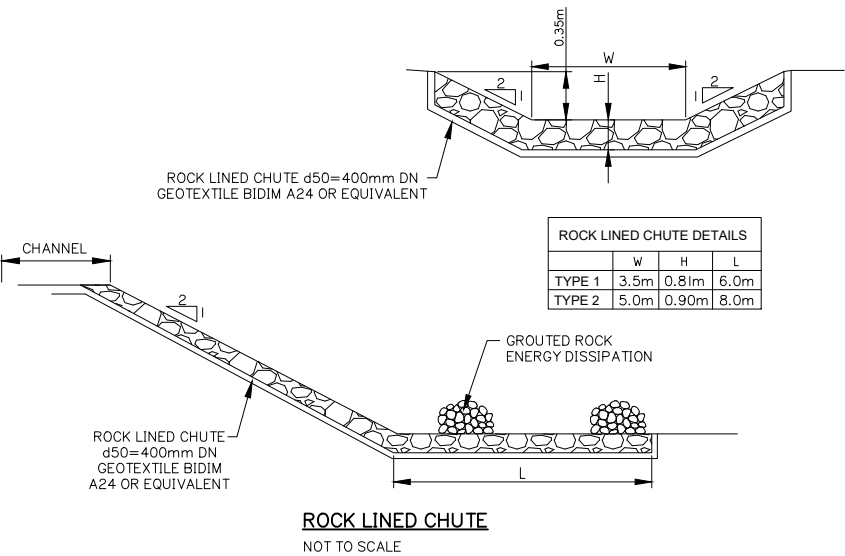
PROPER PLACEMENT OF COIR LOG IN SLOPE
NOT TO SCALE



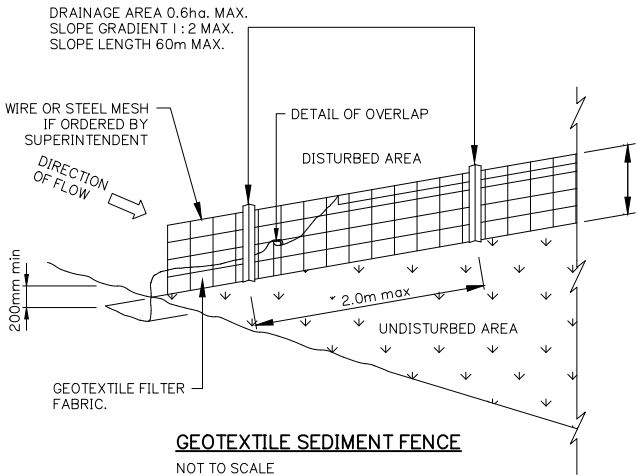
TYPICAL SEDIMENT BASIN
NOT TO SCALE



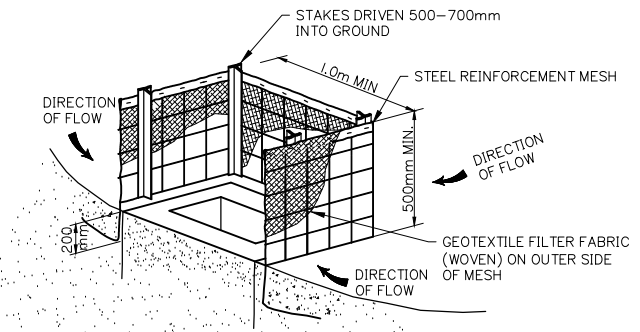
TYPICAL SECTION VEE DRAIN
NOT TO SCALE



ROCK LINED CHUTE
NOT TO SCALE



GEOTEXTILE SEDIMENT FENCE
NOT TO SCALE



STORMWATER INLET - SEDIMENT TRAP
NOTE:
FOURTH SIDE OF TRAP NOT SHOWN FOR CLARITY

SEDIMENT AND EROSION TYPICAL DETAILS

Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

SEDIMENT AND EROSION
TYPICAL DETAILS

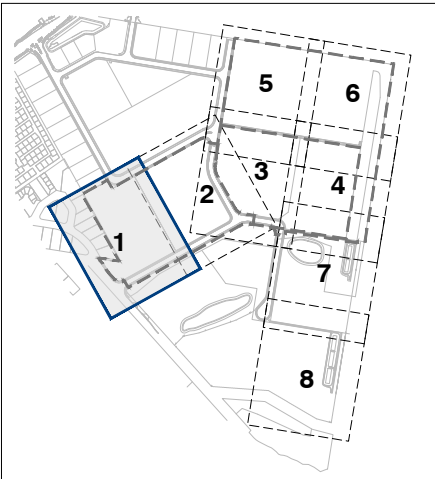
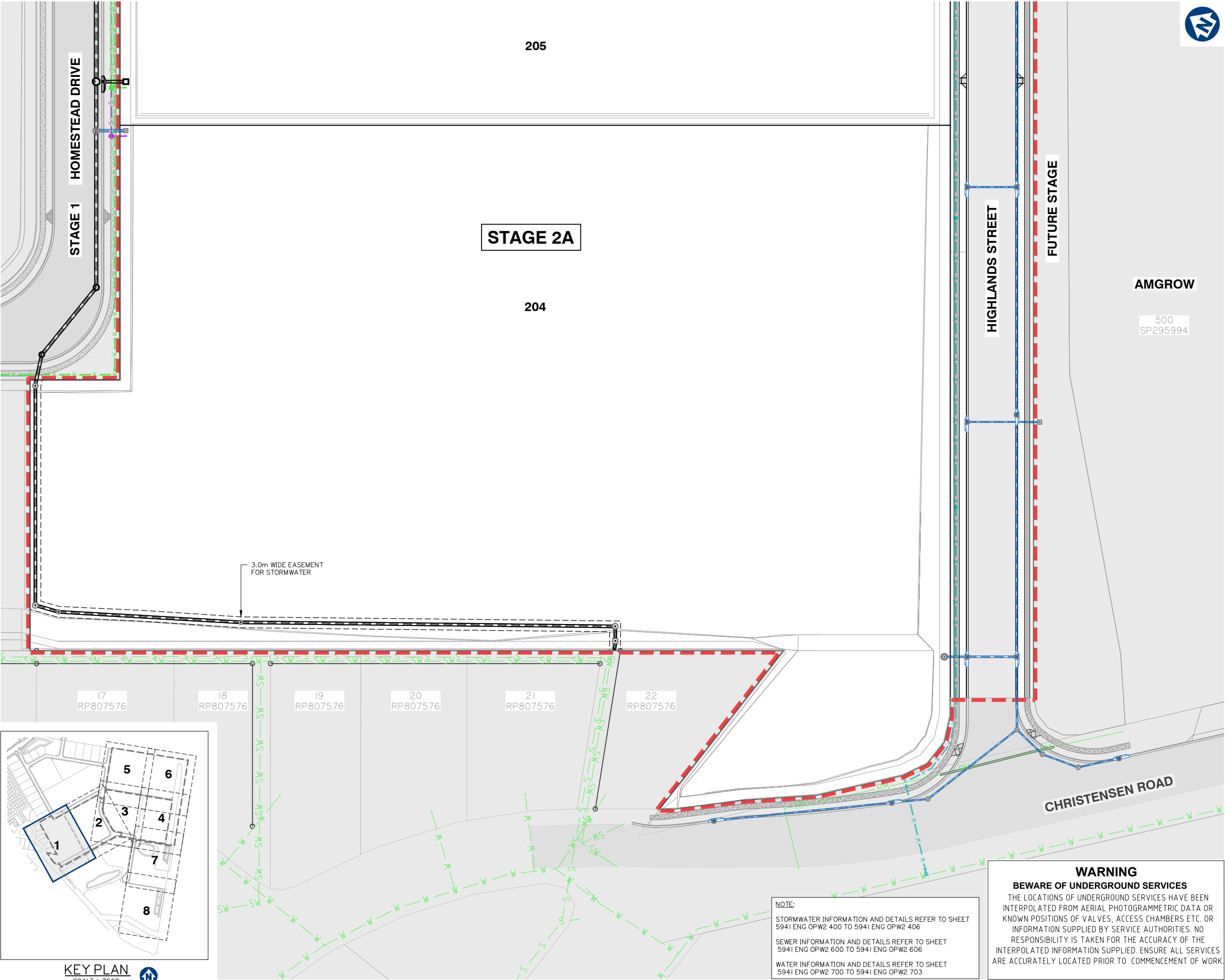
Rev	Date	Description	LAB	MG
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	LAB	MG

SCALE NOT
APPLICABLE

Scale at A1:

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 064
Rev. No: B



KEY PLAN
SCALE 1: 7500



NOTE:
STORMWATER INFORMATION AND DETAILS REFER TO SHEET
5941 ENG OPW2 400 TO 5941 ENG OPW2 406
SEWER INFORMATION AND DETAILS REFER TO SHEET
5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET
5941 ENG OPW2 700 TO 5941 ENG OPW2 703

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN
INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR
KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR
INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO
RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE
INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES
ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
OVERALL SERVICES
LAYOUT PLAN
SHEET 1 OF 8

Issue	Date	Description	LAB	MG	CHK
E	06/04/23	STAGE BOUNDARIES AMENDED	JH	MG	
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	19/07/22	LOT BOUNDARY, STORMWATER AND SEWER UPDATED	LAB	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

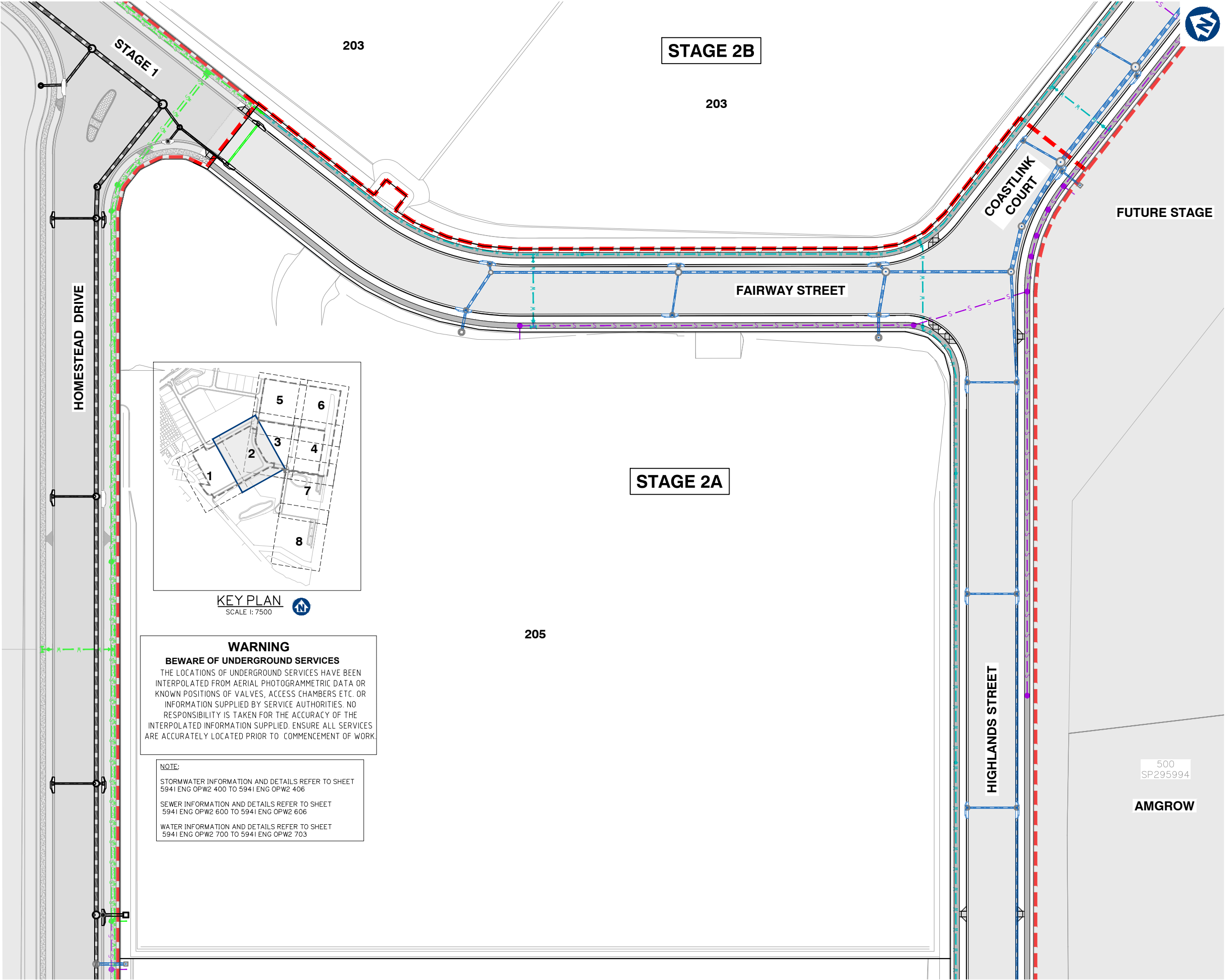
RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 300

Rev. No:
E



Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

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ROAD, STAPYLTON QLD 4207

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Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
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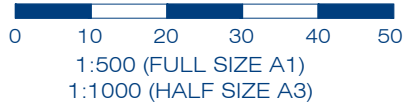
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DRAWING TITLE
OVERALL
SERVICES LAYOUT
PLAN SHEET 2 OF 8

Issue	Date	Description	LAB	MG	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	19/07/22	LOT BOUNDARY, LOT NUMBER, CONTOURS UPDATED	LAB	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

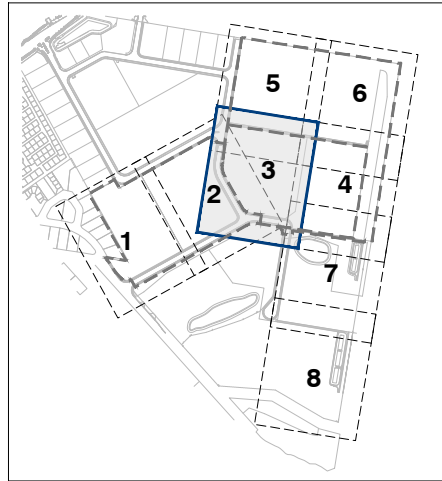
SCALE IN METRES



Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

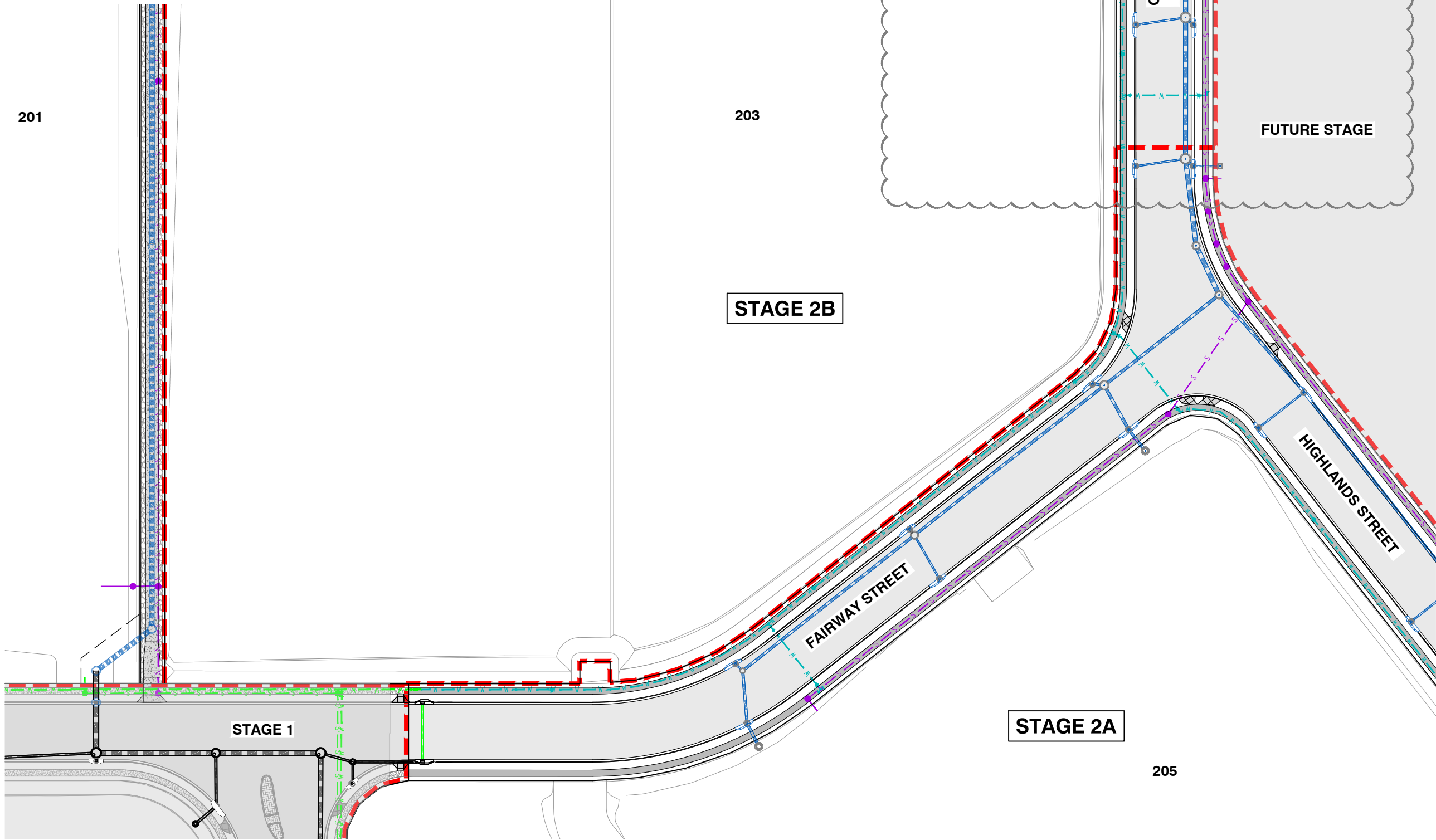
Drawing No: 5941 ENG OPW2 301 Rev. No: E



KEY PLAN
SCALE 1: 7500

WARNING
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NOTE:
STORMWATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 400 TO 5941 ENG OPW2 406
SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 700 TO 5941 ENG OPW2 703



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
OVERALL
SERVICES LAYOUT
PLAN SHEET 3 OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
F	06/04/23	LAYOUT AMENDED	JH	MG		
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG		
D	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	19/07/22	LOT BOUNDARY, STORMWATER AND SEWER UPDATED	LAB	MG		
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG
Drafted: LAB / IG
Approved: MG
RPEQ: 16939
Signed:
Date: 20/09/2022

Drawing No: 5941 ENG OPW2 302
Rev. No: F

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NOTE:
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SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 700 TO 5941 ENG OPW2 703



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Project:

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STAGE 2

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DRAWING TITLE
OVERALL SERVICES
LAYOUT PLAN SHEET 4
OF 8

Issue	Date	Description	LAB	MG	DRN	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
C	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG		
C	19/07/22	LOT BOUNDARY, STORMWATER AND SEWER UPDATED	LAB	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

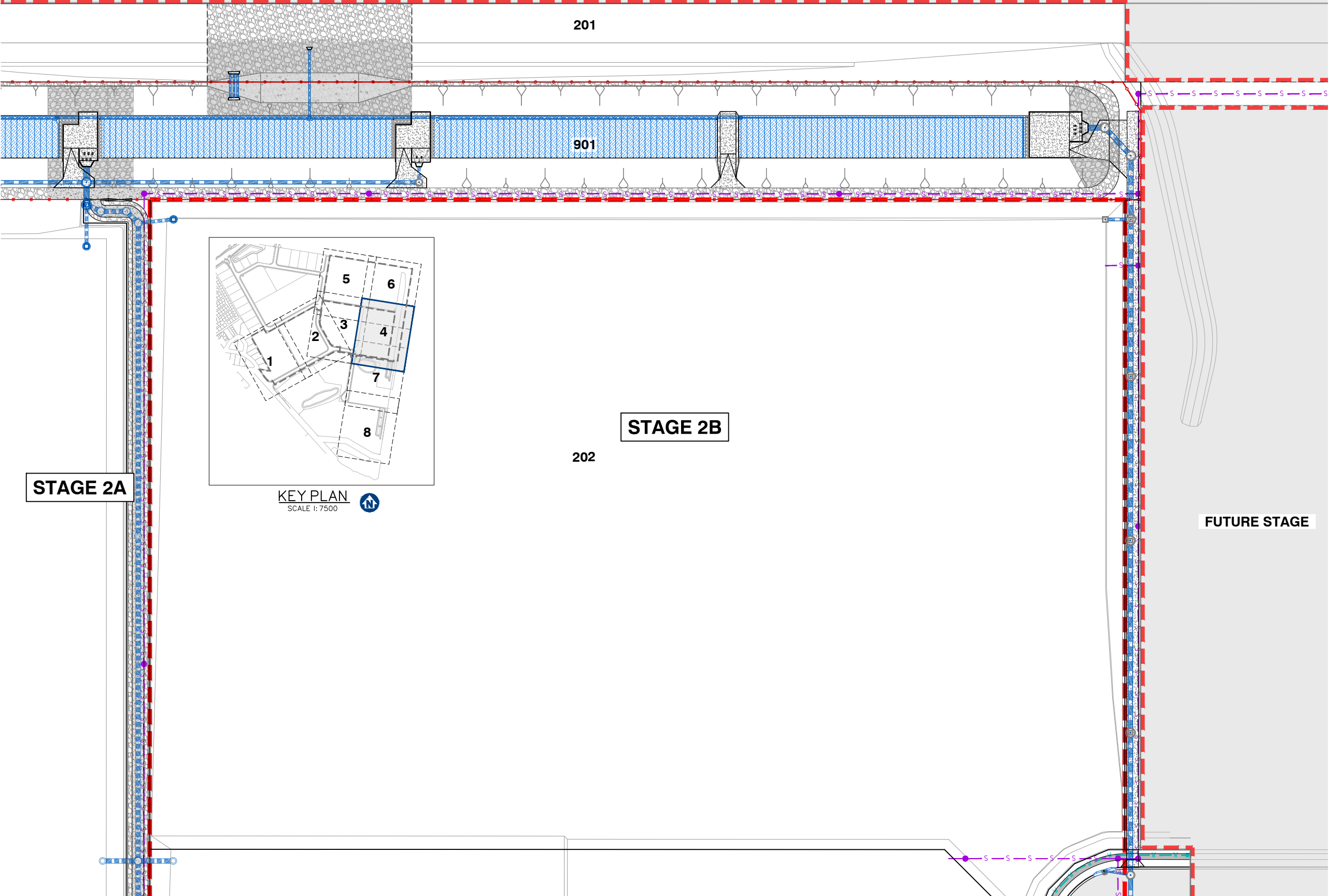
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 303 Rev. No: E

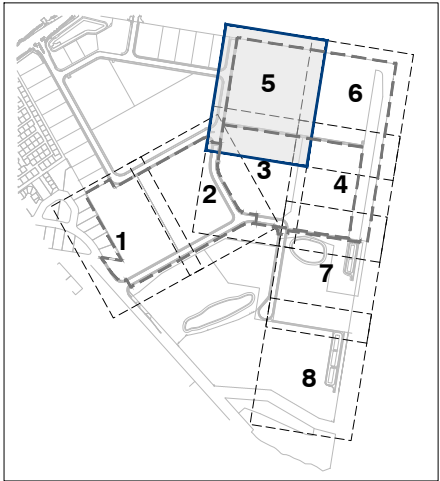
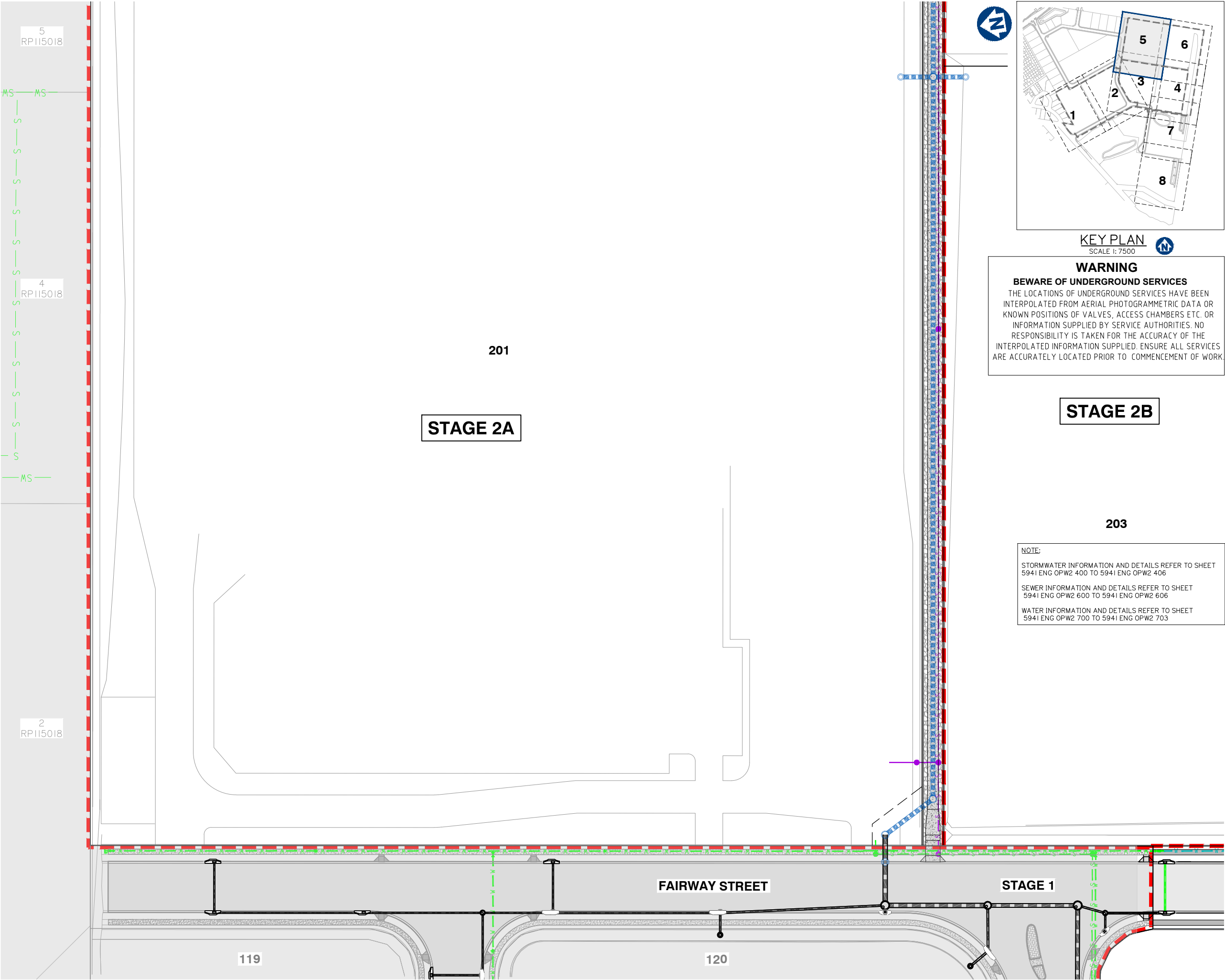
FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 305

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 306



FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 302

OVERALL SERVICES LAYOUT PLAN SHEET 4 OF 8



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STAGE 2B

NOTE:
STORMWATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 400 TO 5941 ENG OPW2 406
SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 700 TO 5941 ENG OPW2 703

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 302



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STAGE 2

Site Address:

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DRAWING TITLE
OVERALL SERVICES
LAYOUT PLAN SHEET
5 OF 8

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	29/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	19/07/22	LOT BOUNDARY, STORMWATER AND SEWER UPDATED	LAB	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

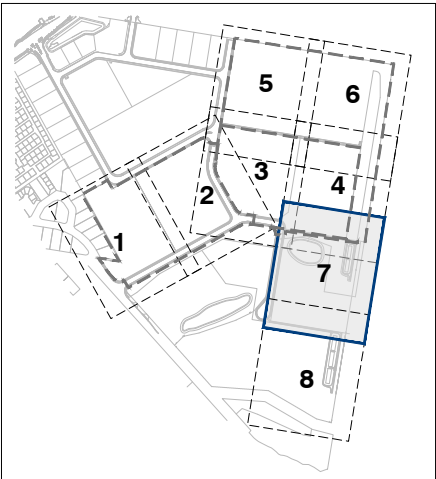
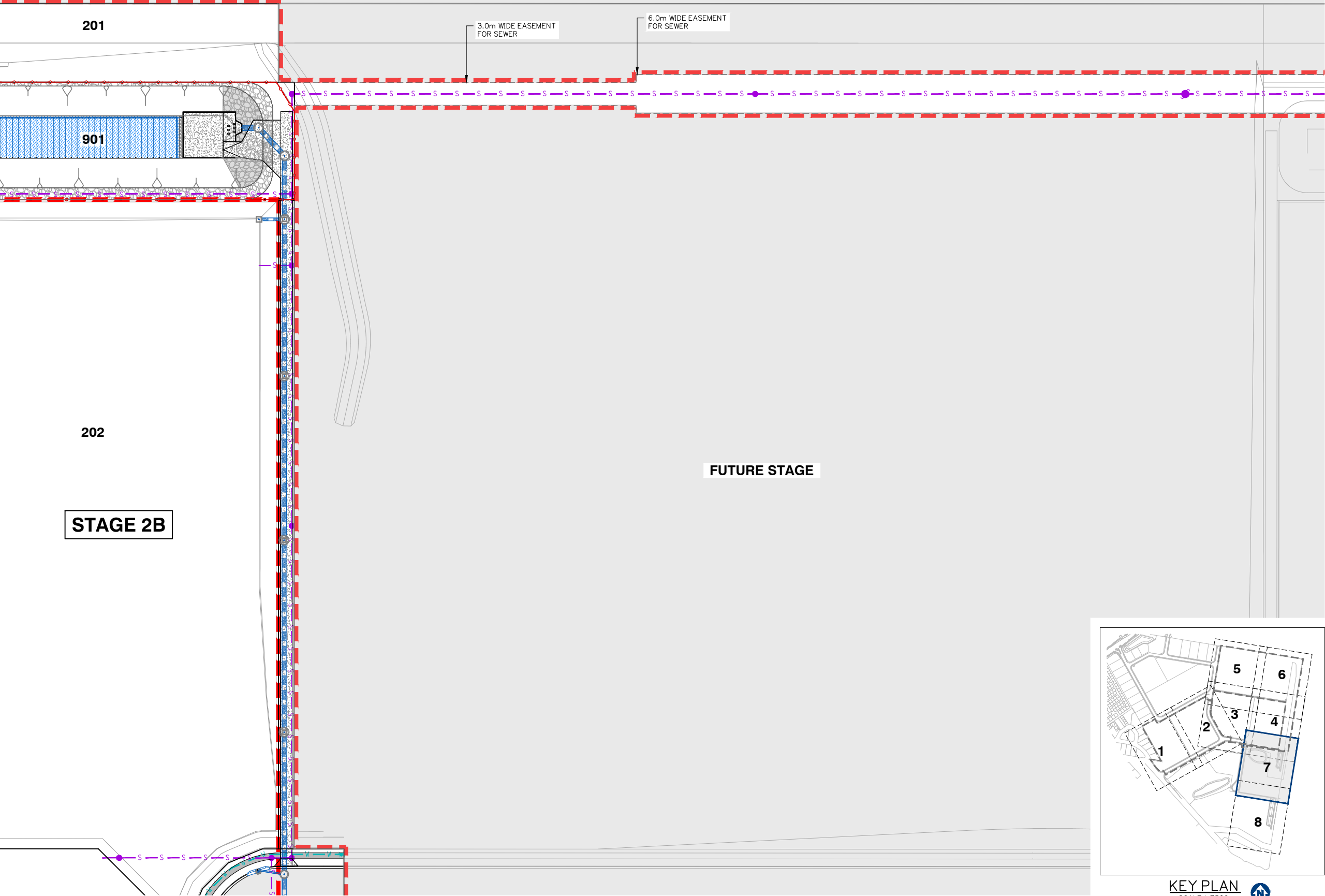
Date: 20/09/2022

Drawing No: 5941 ENG OPW2 304 Rev. No: F

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NOTE:
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SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 700 TO 5941 ENG OPW2 703

3
RP209307



KEY PLAN
SCALE 1: 7500



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

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DRAWING TITLE

OVERALL SERVICES LAYOUT
PLAN SHEET 7 OF 8

C	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	20/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES



Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

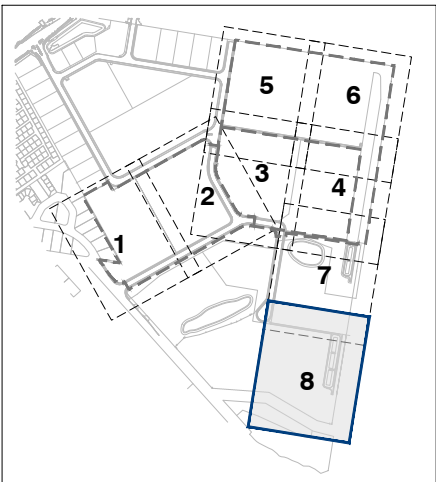
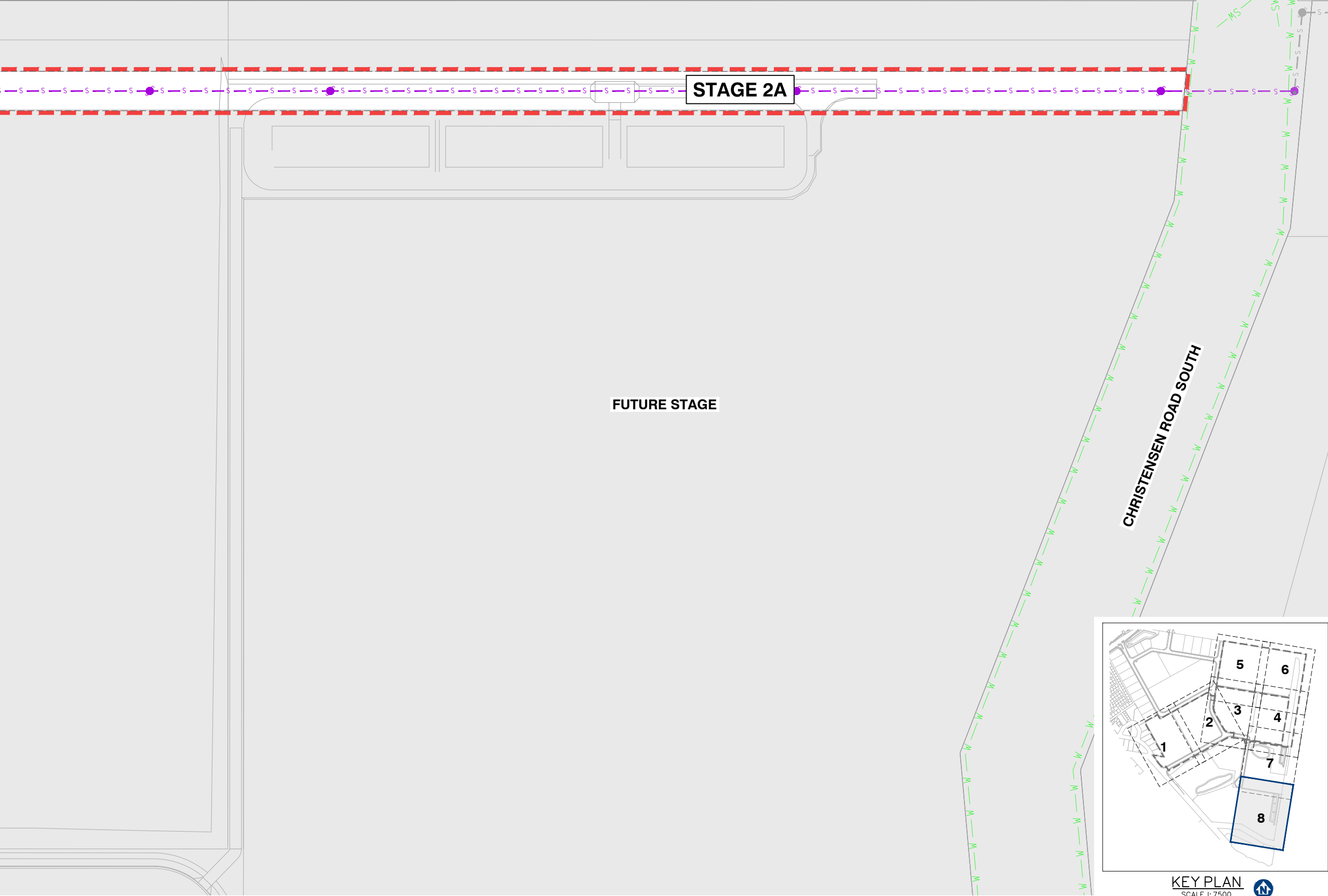
Drawing No:
5941 ENG OPW2 306

Rev. No:
C

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NOTE:
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SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 600 TO 5941 ENG OPW2 606
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW2 700 TO 5941 ENG OPW2 703

3
RP209307



KEY PLAN
SCALE 1:7500

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Project:
VANTAGE YATALA
STAGE 2

Site Address:
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ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
OVERALL SERVICES
LAYOUT PLAN SHEET 8
OF 8

C	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	20/07/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

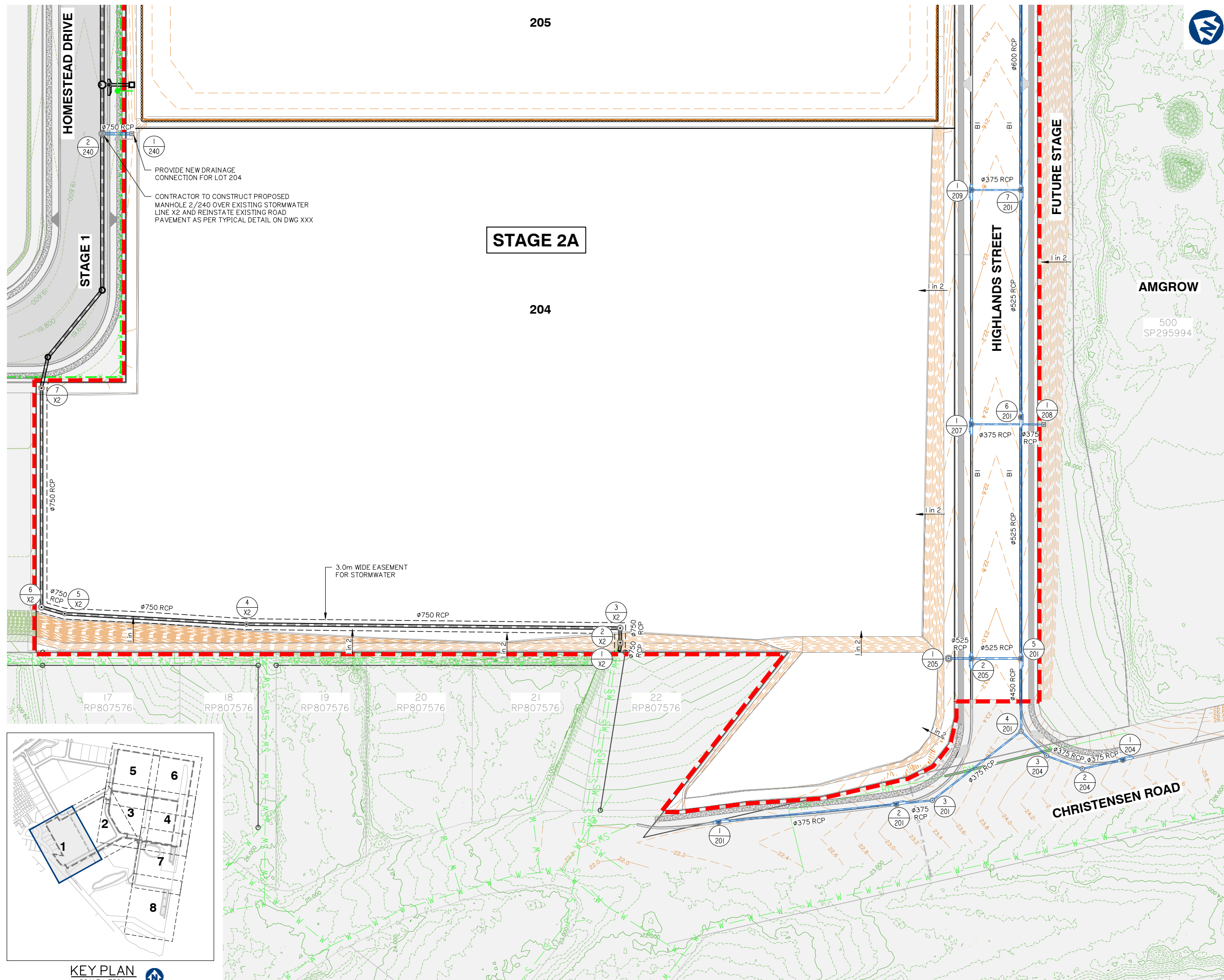
SCALE IN METRES



Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 307 Rev. No: C



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Project:

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STAGE 2

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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT
PLAN SHEET 1 OF 7

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
E	18/07/22	EX RM LOT BOUNDARY - STORMWATER UPDATED	LAB	MG	
D	24/06/22	LOT BOUNDARY AND LOT 203 NUMBER	JH	MG	
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

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1:500 (FULL SIZE A1)

1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

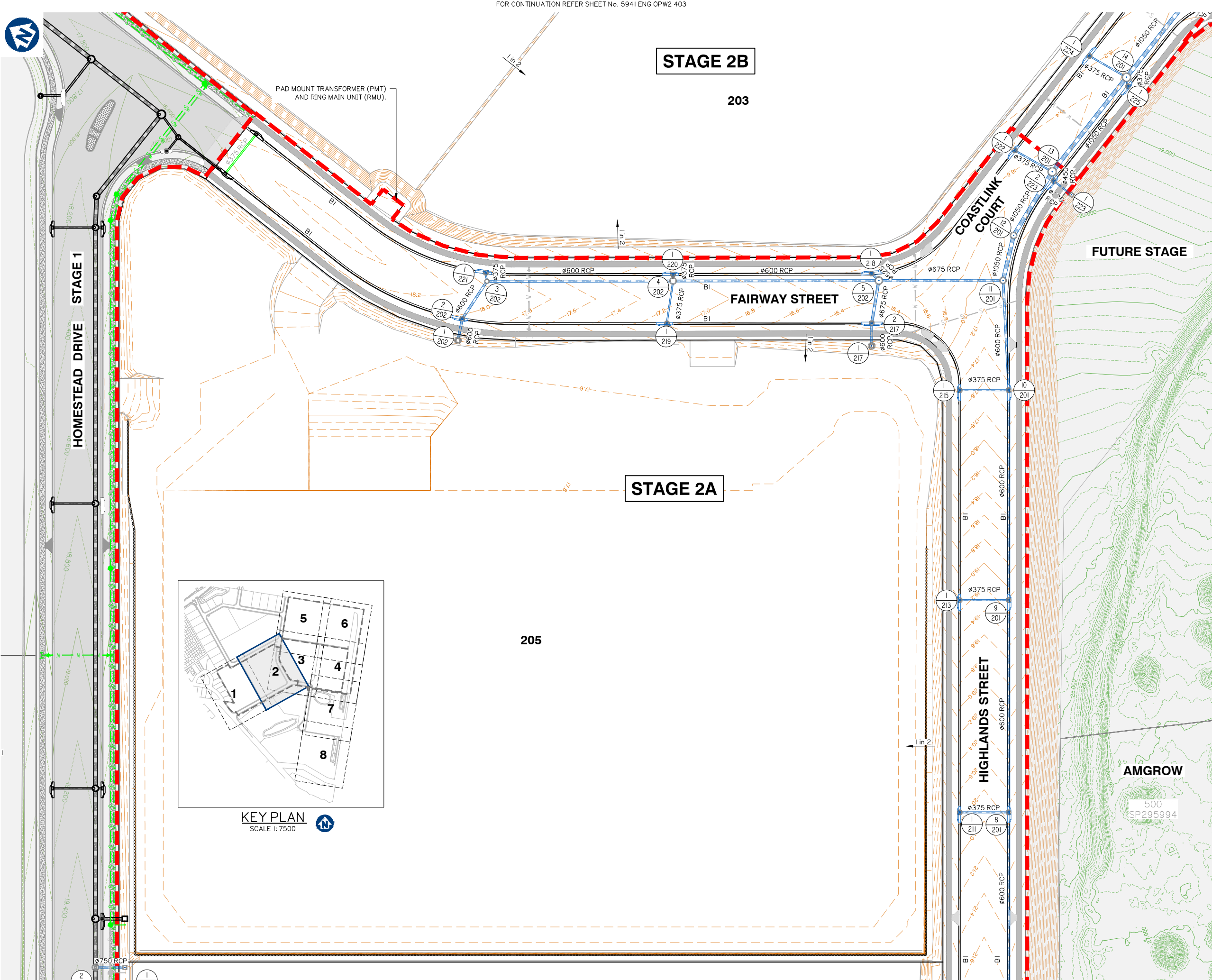
Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No: 5941 ENG OPW2 400
Rev. No: F



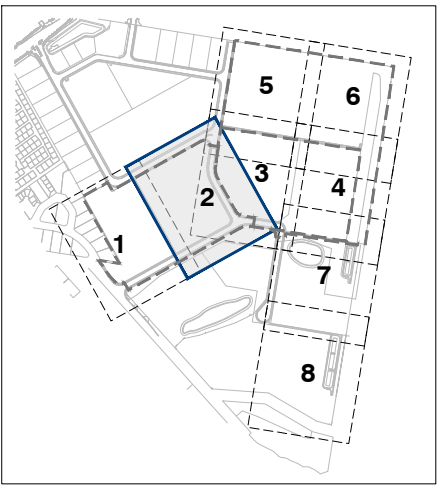
FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 403

STAGE 2B

203

STAGE 2A

205



KEY PLAN
SCALE 1: 7500

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 400



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STAGE 2

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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT
PLAN SHEET 2 OF 7

Issue	Date	Description	LAB	MG	DRN	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	19/07/22	LOT BOUNDARY AND LOT 203 NUMBER	LAB	MG		
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
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RPEQ:	16939
Signed:	
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5941 ENG OPW2 401

Rev. No:
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VANTAGE YATALA STAGE 2

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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT
PLAN SHEET 5 OF 7

G	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
F	20/09/21	ISSUED FOR CONSTRUCTION	JH	MG	
E	19/07/22	LOT BOUNDARY AND STORMWATER_UPDATED	LAB	MG	
D	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
D	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
C	16/09/21	CONTOURS AMENDED	LAB	MG	
B	11/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DFIN	CH-K	

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1:1000 (HALF SIZE A3)

Designed:	IG
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Drafted:	LAB / IG
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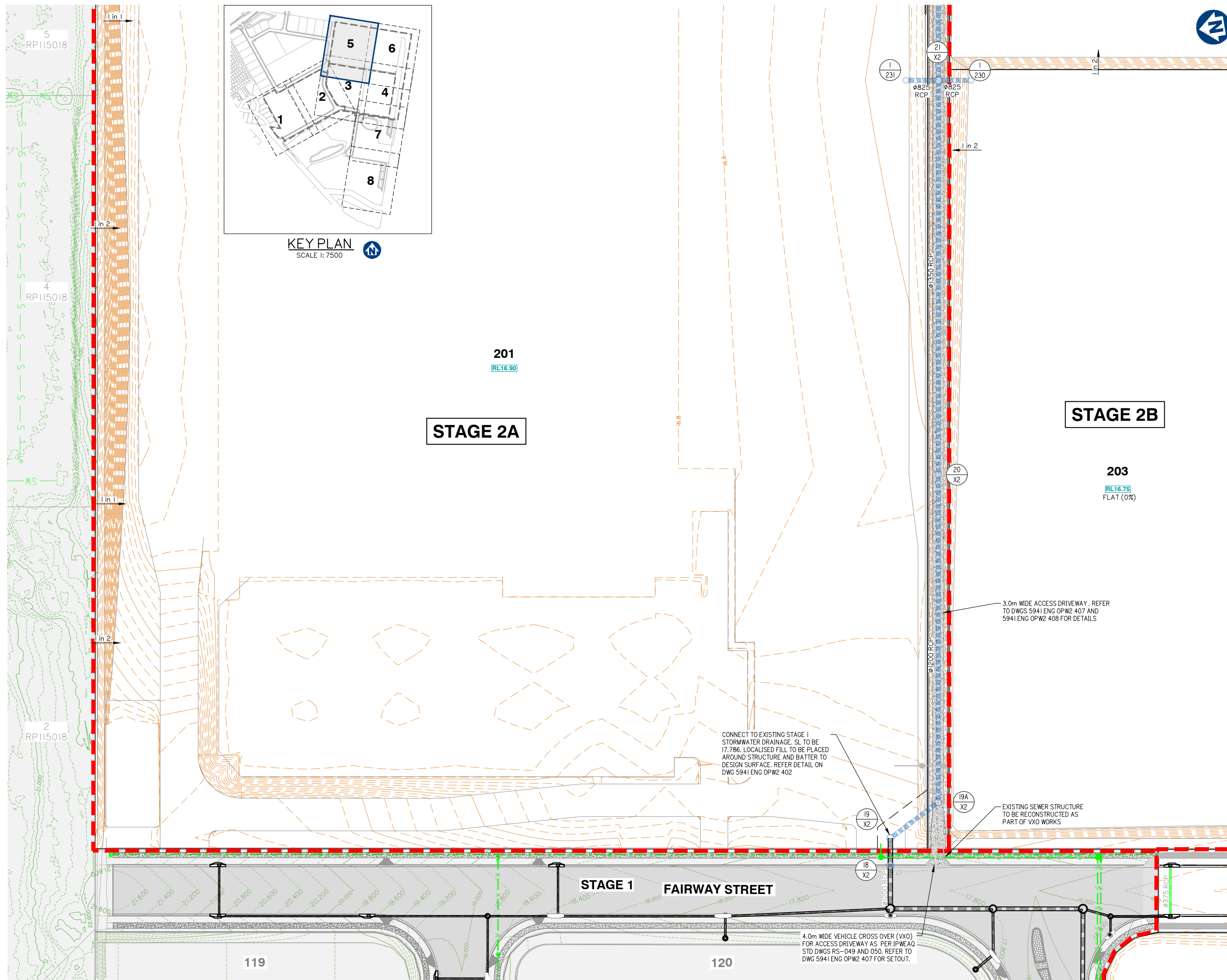
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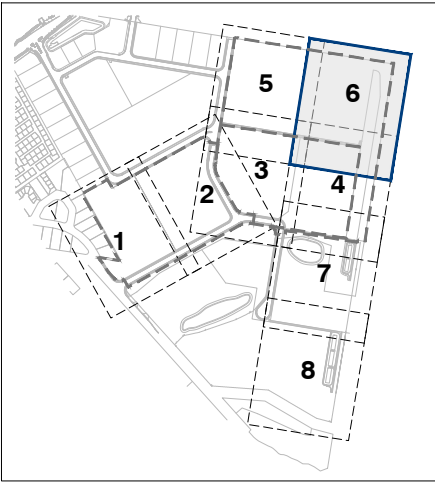
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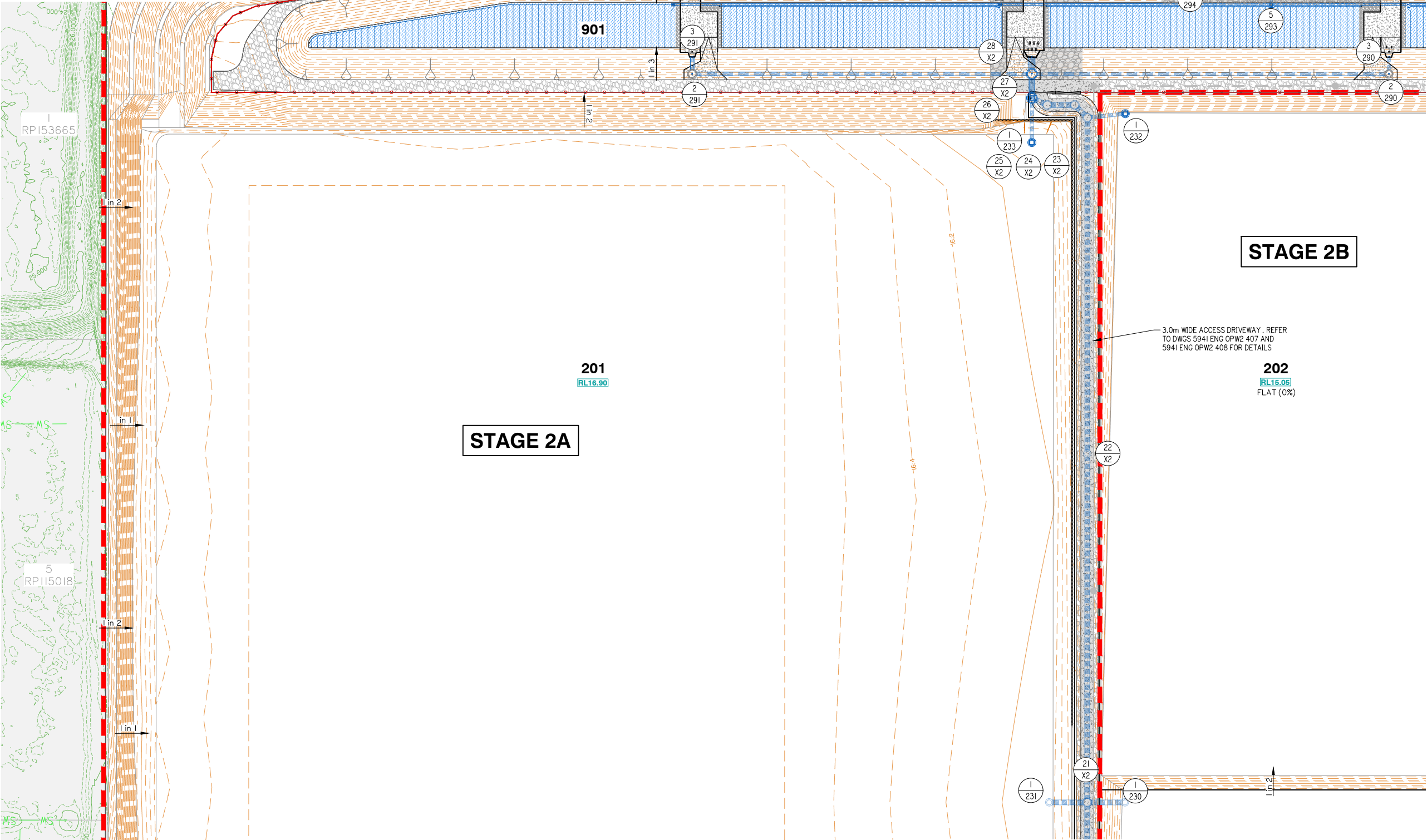
Date:	20/09/2022
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Drawing No:	Rev. No:
5941 ENG OPW2 404	G





KEY PLAN
SCALE 1: 7500



FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 404

ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 6 OF 7



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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT
PLAN SHEET 6 OF 7

Issue	Date	Description	LAB	MG	DRN	CHK
G	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
F	06/10/22	LINE 232 AMENDED	JH	MG		
E	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	06/09/22	STORMWATER LINE 233 UPDATED	JH	MG		
C	19/07/22	LOT BOUNDARY AND STORMWATER UPDATED	LAB	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
A	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

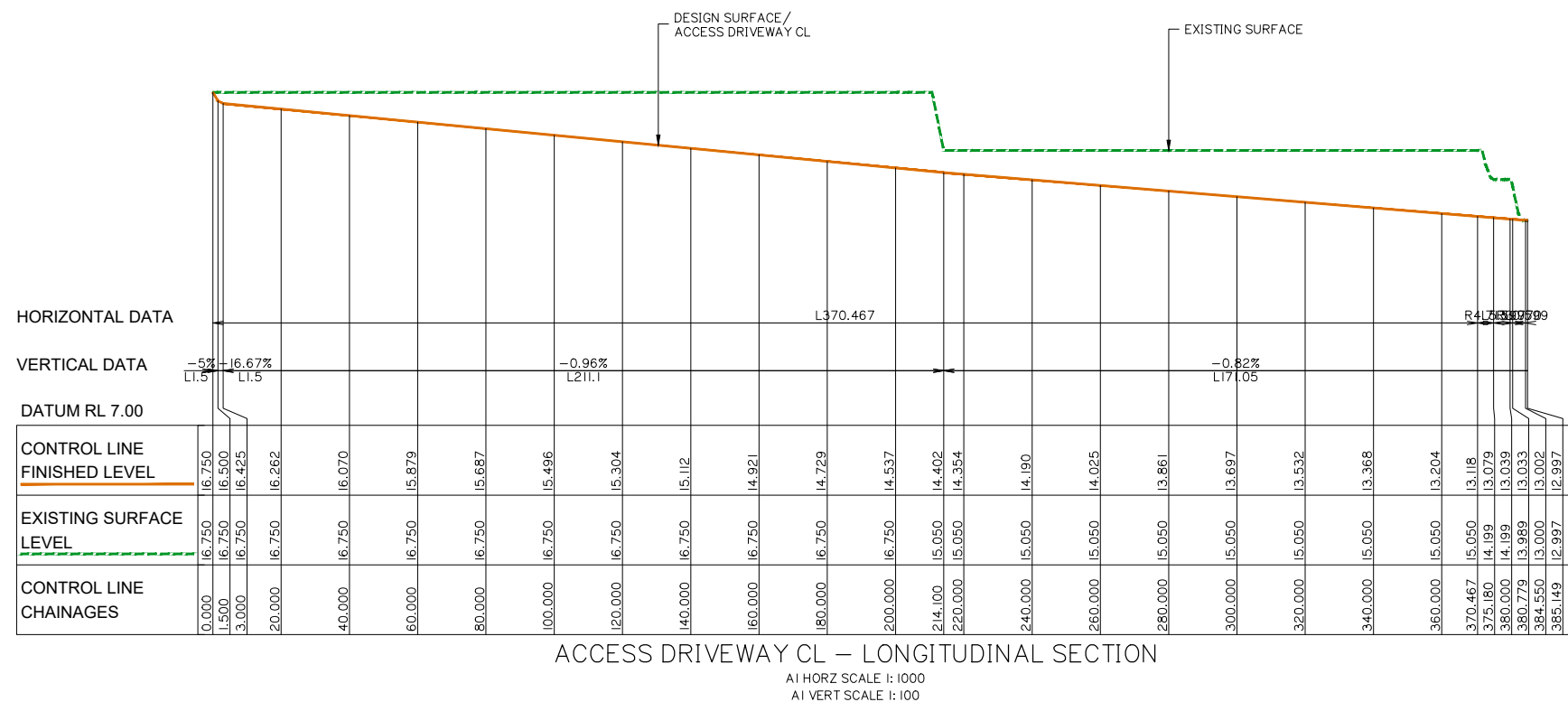
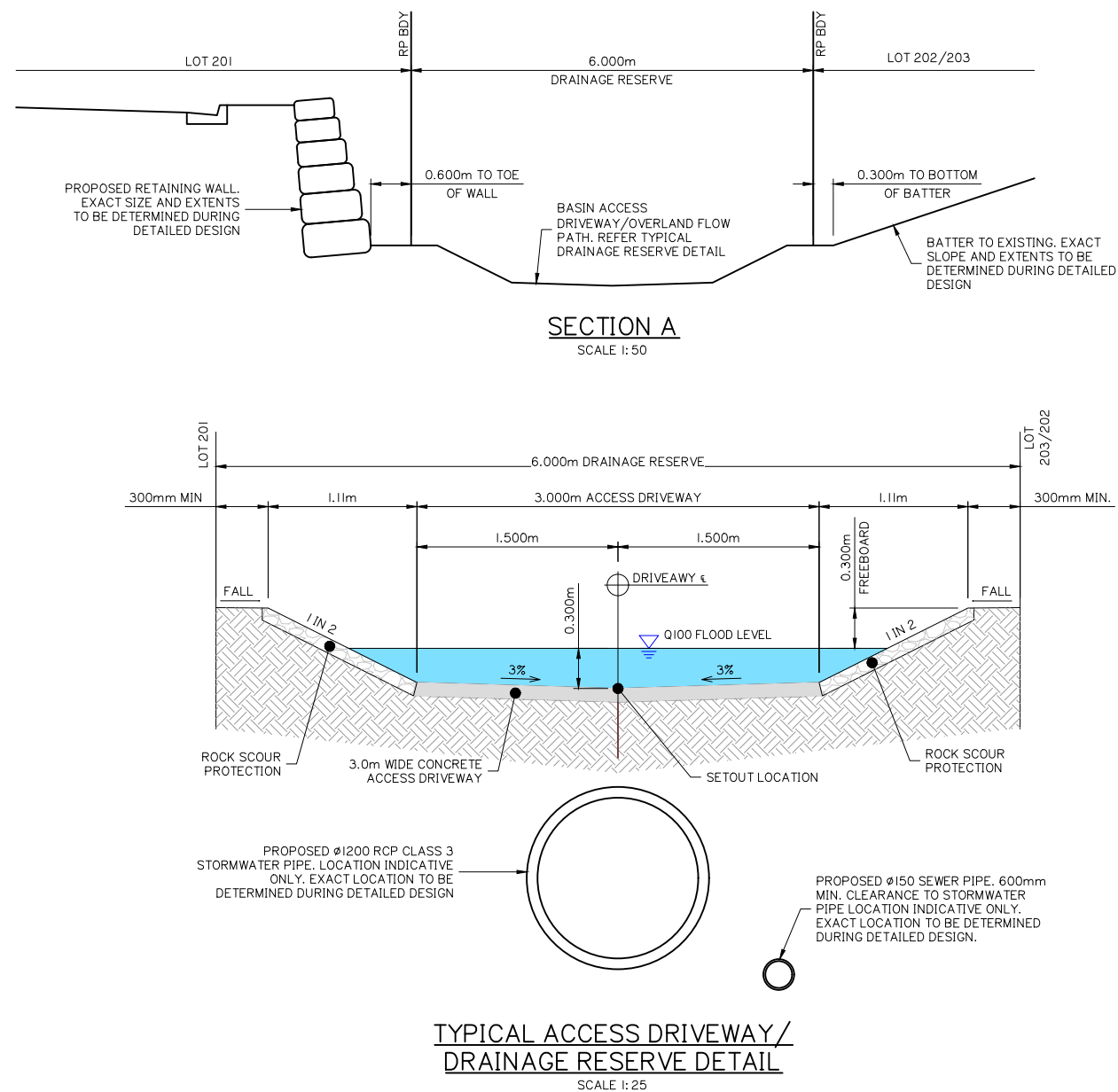
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 405
Rev. No: G

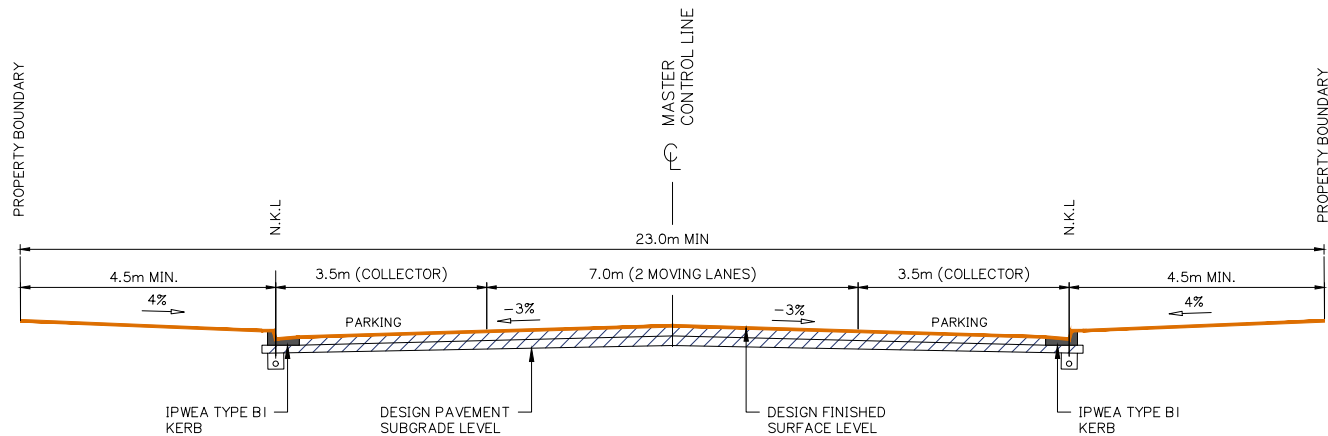
FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 403

Rev. No:
C

ACCESS DRIVEWAY CL – SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2698.826	6808.023	16.750	99°13'15.50"	R = −3.000	4.713	90°00'28.56"
	20.000	2718.567	6804.818	16.262	99°13'15.50"			
	40.000	2738.309	6801.613	16.070	99°13'15.50"			
	60.000	2758.050	6798.409	15.879	99°13'15.50"			
	80.000	2777.792	6795.204	15.687	99°13'15.50"			
	100.000	2797.533	6791.999	15.496	99°13'15.50"			
	120.000	2817.275	6788.794	15.304	99°13'15.50"			
	140.000	2837.017	6785.589	15.112	99°13'15.50"			
	160.000	2856.758	6782.384	14.921	99°13'15.50"			
	180.000	2876.500	6779.179	14.729	99°13'15.50"			
	200.000	2896.241	6775.975	14.537	99°13'15.50"			
	220.000	2915.983	6772.770	14.354	99°13'15.50"			
	240.000	2935.724	6769.565	14.190	99°13'15.50"			
	260.000	2955.466	6766.360	14.025	99°13'15.50"			
	280.000	2975.207	6763.155	13.861	99°13'15.50"			
	300.000	2994.949	6759.950	13.697	99°13'15.50"			
	320.000	3014.691	6756.746	13.532	99°13'15.50"			
	340.000	3034.432	6753.541	13.368	99°13'15.50"			
	360.000	3054.174	6750.336	13.204	99°13'15.50"			
	TC	370.467	3064.506	6748.659	13.118			
IP 2	372.824	3067.467	6748.178	13.098				
CT	375.180	3067.948	6751.139	13.079	9°12'46.95"			
	380.000	3068.719	6755.897	13.039	9°12'46.95"			
TC	380.779	3068.844	6756.666	13.033	9°12'46.95"			
IP 3	382.664	3069.229	6759.036	13.018				
CT	384.550	3071.598	6758.651	13.002	99°13'13.51"			
IP 4	385.149	3072.189	6758.555	12.997	99°13'13.51"			

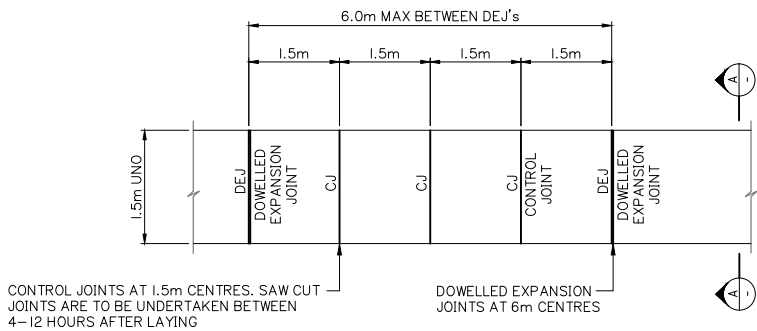


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 FRASERS PROPERTY				
FRASERS PROPERTY (AUSTRALIA) PTY. LTD.				
Project:				
VANTAGE YATALA STAGE 2				
Site Address:				
60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207				
THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR				
RPD:				
Lot:		501		
Plan:		SP295994		
Local Authority:		CITY OF GOLD COAST COUNCIL		
Level Datum:		AHD		
Meridian:		-		
Contour Interval:		-		
PSM:		-		
RL:		-		
ISSUED FOR CONSTRUCTION				
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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES				
DRAWING TITLE				
ACCESS DRIVEWAY TYPICAL DETAILS				
A	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
A	19/07/22	ORIGINAL ISSUE	JH	MG
Issue	Date	Description	DRN	CHK
SCALE IN METRES				
				
0 20 40 60 80 100				
1:1000 (FULL SIZE A1)				
1:2000 (HALF SIZE A3)				
Scale at A1:		1:1000		
Designed:		IG		
Drafted:		LAB / IG		
Approved:		MG		
RPEQ:		16939		
Signed:				
Date:		20/09/2022		
Drawing No:		Rev. No:		
5941 ENG OPW2 408		A		

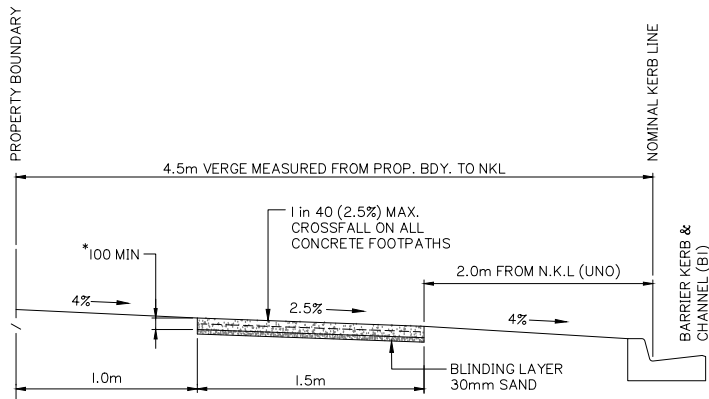


TYPICAL CROSS SECTION – INDUSTRIAL COLLECTOR STREET (23.0m)
FAIRWAY STREET, HIGHLANDS STREET AND COASTLINK COURT

REFER ALSO CoGC STD DWG 05-02-2004 FOR DETAILS



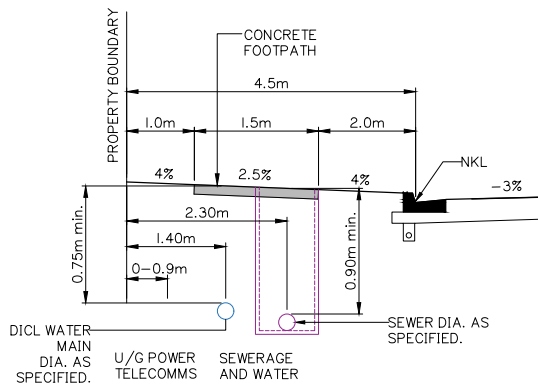
TYPICAL CONCRETE JOINTING PLAN
SCALE: N.T.S



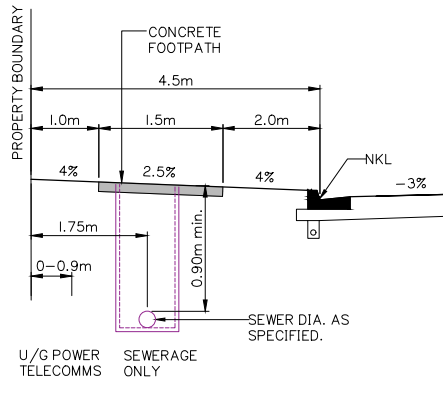
*100mm MIN. REINFORCED CONCRETE 25MPa (Min.), SL72 MESH CENTRAL, 50mm BOTTOM COVER, TRANSVERSE BROOM FINISHED FOR SLIP RESISTANCE. REFER IPWEA RS-065 PATHWAYS CONCRETE PATHWAY CONSTRUCTION DETAILS. REFER IPWEA STD DWG RS-049 AND RS-050 FOR TREATMENT AT DRIVEWAYS

SECTION A-A
SCALE: N.T.S

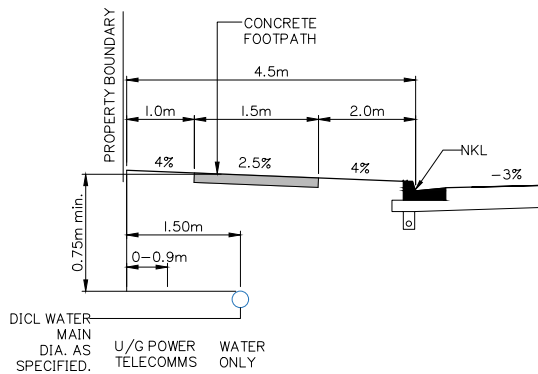
1.5m CONCRETE FOOTPATH DETAIL IN VERGE



TYPICAL SERVICES IN SHARED VERGE
POTABLE WATER AND SEWER
RETICULATION
SCALE: N.T.S

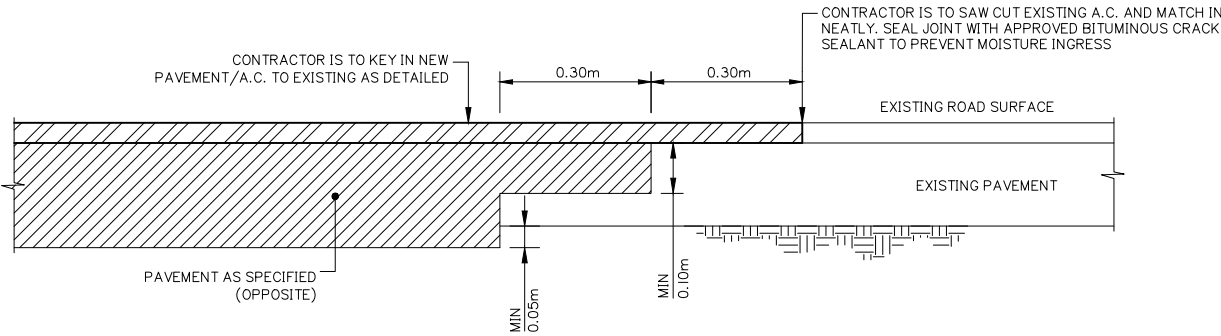


TYPICAL SERVICES IN VERGE
SEWER RETICULATION ONLY
SCALE: N.T.S



TYPICAL SERVICES IN VERGE
POTABLE WATER RETICULATION ONLY
SCALE: N.T.S

NOTE:
1. PUBLIC UTILITIES ALLOCATIONS ARE MEASURED FROM THE REAL PROPERTY BOUNDARY.
2. LIGHT POLE, TREE ALLOCATIONS AND FOOTPATHS ARE MEASURED FROM THE NOMINAL KERB LINE.



CONNECTION TO EXISTING PAVEMENT
N.T.S

TYPICAL DETAIL
SHOWING LONGITUDINAL CONSTRUCTION DETAIL FOR
CONNECTION TO EXISTING PAVEMENT / A.C.

Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
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COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
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DRAWING TITLE

TYPICAL SECTIONS AND
DETAILS SHEET 2 OF 3

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

NOT APPLICABLE

Scale at A1: NTS

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 411
Rev. No: B

Client:



Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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Local Authority: CITY OF GOLD COAST
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DRAWING TITLE

TYPICAL SECTIONS AND
DETAILS SHEET 3 OF 3

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

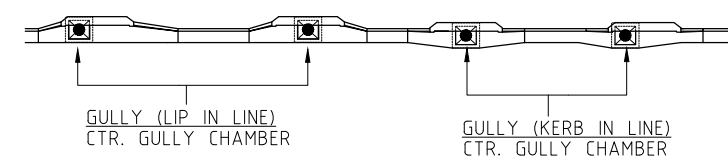
NOT APPLICABLE
(OR AS NOTED)

Scale at A1:	NTS
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 412 Rev. No: B

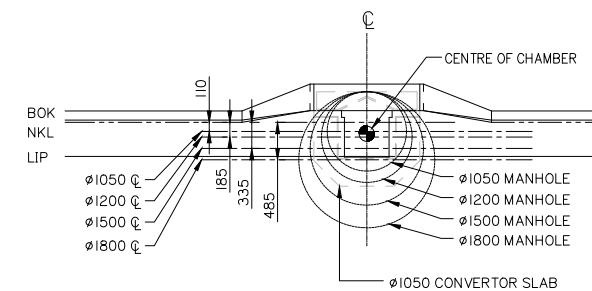
REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (REFERENCE POINT LOCATION)	VERTICAL CONTROL (REFERENCE LEVEL)
MANHOLE	 CENTRE OF MANHOLE	FINISHED SURFACE LEVEL
DRAINWAY GULLY PIT	 SETOUT TO CENTRE OF CHAMBER	FINISHED SURFACE LEVEL (INVERT OF KERB) REFER ALSO BELOW
HEADWALL	 INTERSECTION OF HEADWALL FACE & PIPE CENTRELINE	INVERT LEVEL
FIELD INLET PIT	 CENTRE OF PIT	FINISHED SURFACE LEVEL



NOTE: 1. SETOUT POINT LOCATIONS ARE AT CENTRE OF GULLY CHAMBER
2. NAMING CONVENTIONS USED (eg (H)) ARE ONLY FOR DEMONSTRATION PURPOSES

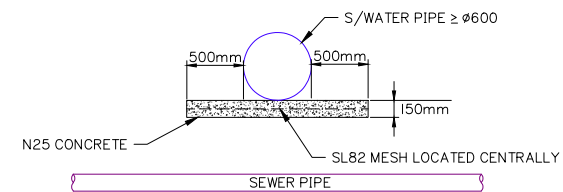
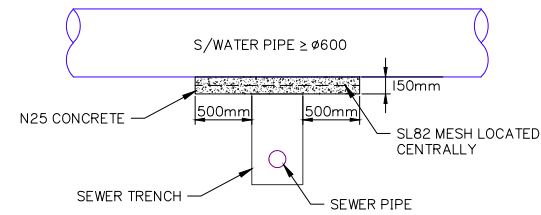
DETAIL – SETOUT POINTS FOR IPWEA GULLY PITS



TYPICAL DETAIL
DRAINWAY SIDE INLET GULLY

SCALE 1:50

- DENOTES GIVEN STRUCTURE SETOUT LOCATION
- CIRCULAR PRECAST DRAINWAY CONVERTOR SLABS ARE AVAILABLE IN SIZES LISTED BELOW:
- 1200 ID (1650 OD) x 150mm THICK – 1000mm HOLE
 - 1350 ID (1830 OD) x 150mm THICK – 1000mm HOLE
 - 1500 ID (1970 OD) x 175mm THICK – 1000mm HOLE
 - 1650 ID (2100 OD) x 225mm THICK – 1000mm HOLE
 - 1800 ID (2300 OD) x 225mm THICK – 1000mm HOLE
 - 2000 ID (2450 OD) x 250mm THICK – 1000mm HOLE



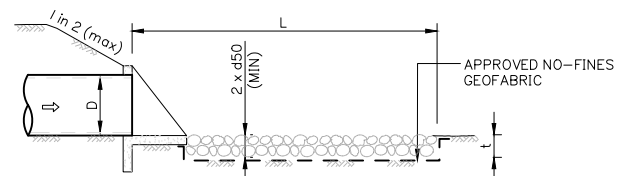
BRIDGING DETAILS FOR
STORMWATER PIPES $\geq \phi 600$

NOT TO SCALE

SCOUR PROTECTION DETAILS

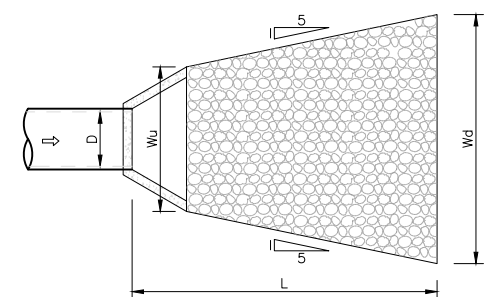
OUTLET PROTECTION TABLE								
CULVERT No.	PIPE ϕ	OUTLET VELOCITY	LENGTH OF PROTECTION	UPSTREAM WIDTH	DOWNSTREAM WIDTH	NOMINAL ROCK SIZE	THICKNESS OF PROTECTION	PROTECTION AREA
	D (mm)	V (m/s)	L (mm)	Wu (mm)	Wd (mm)	d ₅₀ (mm)	t (mm)	(m ²)
* 25/X2	1500	4.31	15000	2370	7968	500	1000	77.5
* 290/3	900	1.82	5400	2040	3860	200	700	15.9
* 291/3	900	1.83	5400	2040	3860	200	700	15.9
* 23/20I	1350	2.24	10800	2370	6288	300	600	46.8
293/6	450	2.15	2700	1850	2690	200	400	6.1
294/I	3/450	1.56	3600	3700	4660	400	600	7.5

* CALCULATIONS SHOWN FOR REFERENCE ONLY. THESE STORMWATER INLET HEADWALLS DISCHARGE TO A COARSE SEDIMENT FOREBAY. ROCK SCOUR PROTECTION NOT TO BE PROVIDED AT THESE LOCATIONS. REFER DWGS 580–583



TYPICAL STORMWATER OUTLET SECTION

N.T.S.



TYPICAL STORMWATER OUTLET PLAN

N.T.S.

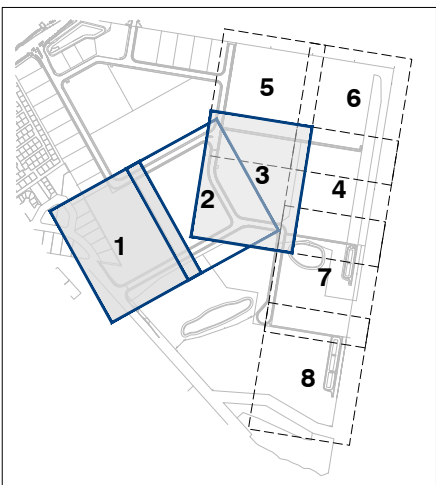
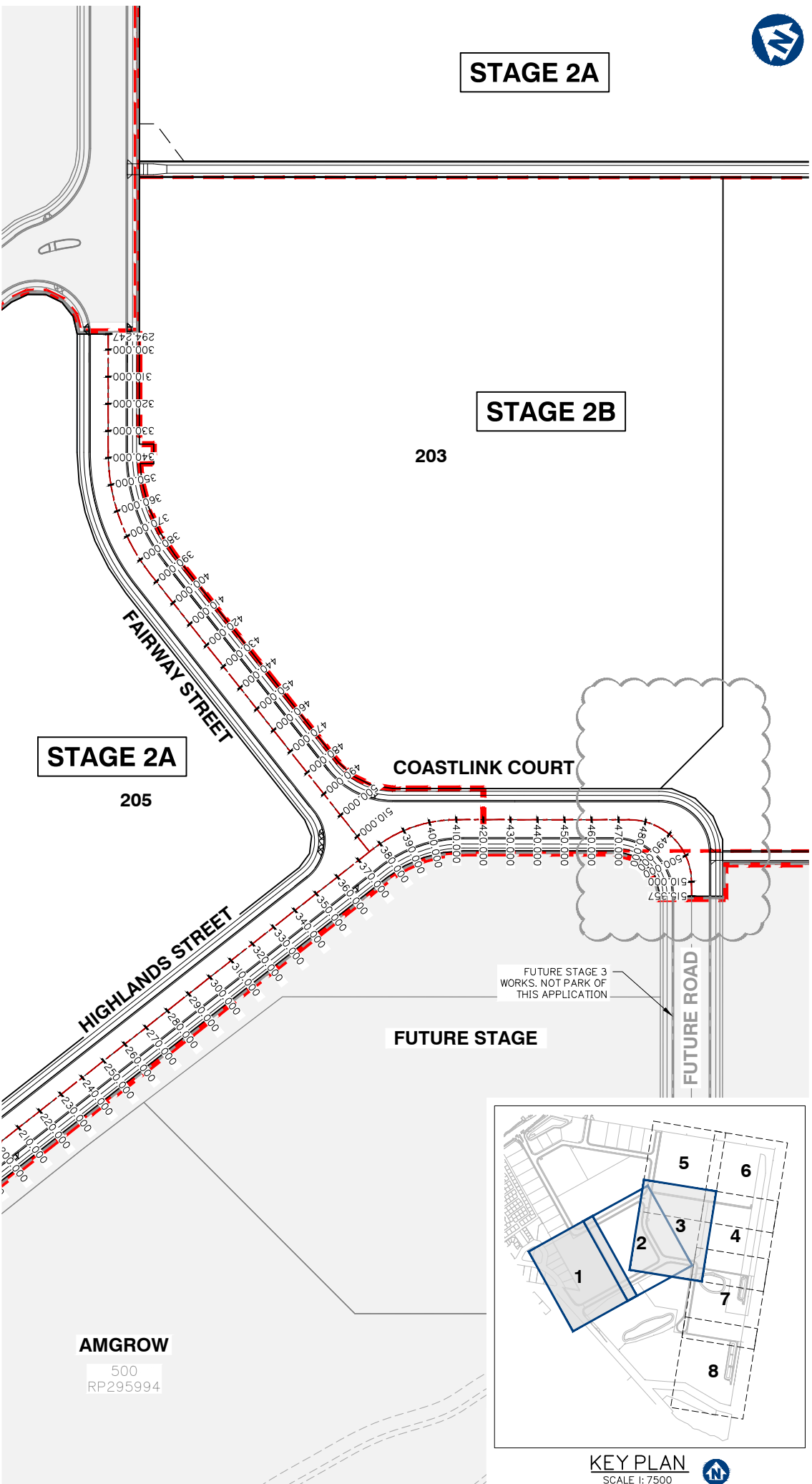
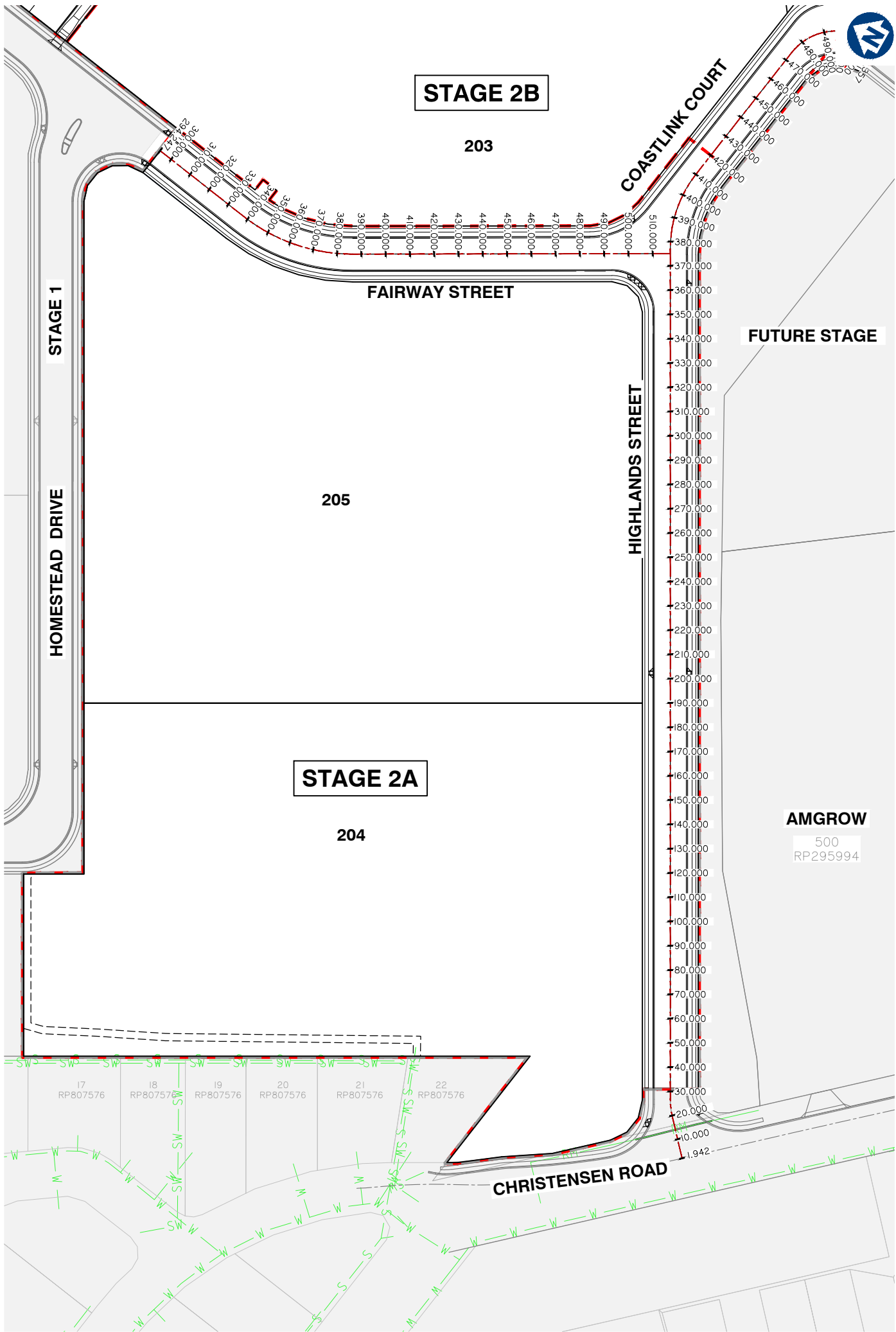
ROCK GRADATION TABLE						
SMALLEST DIMENSION IN (mm)						% OF ROCK SMALLER THAN SIZE SHOWN
150d ₅₀	200d ₅₀	300d ₅₀	400d ₅₀	500d ₅₀	600d ₅₀	
300	380	525	630	750	850	100
200	300	450	550	650	750	50–70
150	200	300	400	500	600	35–50
50	75	100	130	150	175	2–10

ROCK SIZE (M)	ROCK MASS (KG)	MIN. PERCENTAGE OF ROCKS LARGER THAN
0.40	100	0
0.30	35	50
0.15	25	90

NOTES:

- MINIMUM THICKNESS ROCK PROTECTION: 800mm MIN – UNDERLAY ROCK PROTECTION WITH 'TERRAFIX' XP310 GEOFABRIC OR EQUIVALENT.
- ROCKS SHALL BE DENSE, HARD & DURABLE.
- ANGULAR ROCK TO BE LAYED WITH LARGEST FACE VISIBLE.
- ROCK SIZE TO BE GRADED AS PER TABLE SHOWN.
- REFER ALSO ENERGY DISSIPATION DESIGN CALCULATIONS (ABOVE)

TYPICAL SECTIONS AND DETAILS SHEET 3 OF 3



KEY PLAN
SCALE 1:7500

CONTROL LINE LAYOUT PLAN



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Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
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Meridian: -
Contour interval: -
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DRAWING TITLE

CONTROL LINE LAYOUT
PLAN

Rev	Date	Description	By	Check
E	06/04/23	LAYOUT AMENDED	JH	MG
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
C	19/07/22	LOT BOUNDARIES AND NUMBERS UPDATED	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	By	Check

SCALE IN METRES

0 20 40 60 80 100

1:1000 (FULL SIZE A1)
1:2000 (HALF SIZE A3)

Scale at A1: 1:1000

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 420

Rev. No:
E

CONTROL LINE SETOUT TABLE – ROAD 01									
PT	CHAINAGE	EASTING	NORTHING	FSL	SUBGRADE	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	1.942	2413.875	6361.399	24.141	23.851	47°57'48.81"			
	10.000	2419.860	6366.795	23.900	23.610	47°57'48.81"			
TC	19.908	2427.219	6373.429	23.627	23.337	47°57'48.81"			
	20.000	2427.287	6373.491	23.625	23.335	48°08'21.35"			
IP 2	23.324	2429.767	6375.727	23.545	23.255		R = 30.000	6.833	13°02'58.02"
CT	26.741	2432.768	6377.390	23.468	23.178	61°00'46.82"			
	30.000	2435.619	6378.969	23.401	23.111	61°00'46.82"			
	40.000	2444.367	6383.815	23.217	22.927	61°00'46.82"			
	50.000	2453.114	6388.662	23.074	22.784	61°00'46.82"			
	60.000	2461.861	6393.508	22.970	22.680	61°00'46.82"			
	70.000	2470.609	6398.354	22.876	22.586	61°00'46.82"			
	80.000	2479.356	6403.200	22.782	22.492	61°00'46.82"			
	90.000	2488.103	6408.046	22.689	22.399	61°00'46.82"			
	100.000	2496.850	6412.892	22.595	22.305	61°00'46.82"			
	110.000	2505.598	6417.738	22.501	22.211	61°00'46.82"			
	120.000	2514.345	6422.584	22.407	22.117	61°00'46.82"			
	130.000	2523.092	6427.430	22.314	22.024	61°00'46.82"			
	140.000	2531.840	6432.277	22.220	21.930	61°00'46.82"			
	150.000	2540.587	6437.123	22.126	21.836	61°00'46.82"			
	160.000	2549.334	6441.969	22.032	21.742	61°00'46.82"			
	170.000	2558.082	6446.815	21.938	21.648	61°00'46.82"			
	180.000	2566.829	6451.661	21.831	21.541	61°00'46.82"			
	190.000	2575.576	6456.507	21.703	21.413	61°00'46.82"			
	200.000	2584.323	6461.353	21.554	21.264	61°00'46.82"			
	210.000	2593.071	6466.199	21.385	21.095	61°00'46.82"			
	220.000	2601.818	6471.045	21.195	20.905	61°00'46.82"			
	230.000	2610.565	6475.892	20.985	20.695	61°00'46.82"			
	240.000	2619.313	6480.738	20.754	20.464	61°00'46.82"			
	250.000	2628.060	6485.584	20.502	20.212	61°00'46.82"			
	260.000	2636.807	6490.430	20.230	19.940	61°00'46.82"			
	270.000	2645.555	6495.276	19.937	19.647	61°00'46.82"			
	280.000	2654.302	6500.122	19.637	19.347	61°00'46.82"			
	290.000	2663.049	6504.968	19.337	19.047	61°00'46.82"			
	300.000	2671.796	6509.814	19.037	18.747	61°00'46.82"			
	310.000	2680.544	6514.660	18.737	18.447	61°00'46.82"			
	320.000	2689.291	6519.507	18.437	18.147	61°00'46.82"			
	330.000	2698.038	6524.353	18.147	17.857	61°00'46.82"			
	340.000	2706.786	6529.199	17.882	17.592	61°00'46.82"			
	350.000	2715.533	6534.045	17.642	17.352	61°00'46.82"			
	360.000	2724.280	6538.891	17.427	17.137	61°00'46.82"			
	370.000	2733.027	6543.737	17.237	16.947	61°00'46.82"			
TC	376.975	2739.129	6547.117	17.119	16.829	61°00'46.82"			
	380.000	2741.818	6548.502	17.072	16.782	64°28'44.98"			
	390.000	2751.211	6551.883	16.931	16.641	75°56'17.94"			
IP 3	393.647	2754.277	6555.510	16.886	16.596		R = 50.000	33.343	38°12'28.44"
	400.000	2761.089	6553.329	16.816	16.526	87°23'50.90"			

CONTROL LINE SETOUT TABLE – ROAD 01									
PT	CHAINAGE	EASTING	NORTHING	FSL	SUBGRADE	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
	410.000	2771.058	6552.785	16.716	16.426	98°51'23.86"			
CT	410.318	2771.372	6552.735	16.713	16.423	99°13'15.26"			
	420.000	2780.929	6551.183	16.616	16.326	99°13'15.26"			
	430.000	2790.799	6549.581	16.516	16.226	99°13'15.26"			
	440.000	2800.670	6547.978	16.416	16.126	99°13'15.26"			
	450.000	2810.541	6546.376	16.316	16.026	99°13'15.26"			
	460.000	2820.412	6544.774	16.216	15.926	99°13'15.26"			
	470.000	2830.282	6543.171	16.116	15.826	99°13'15.26"			
TC	473.980	2834.211	6542.533	16.076	15.786	99°13'15.26"			
	480.000	2839.960	6540.806	16.016	15.726	114°13'04.34"			
	490.000	2847.918	6534.881	15.947	15.657	139°07'44.69"			
IP 4	492.044	2856.913	6538.848	15.939	15.649		R = 23.000	36.128	89°59'54.34"
	500.000	2852.639	6526.155	15.930	15.640	164°02'25.05"			
	510.000	2853.245	6516.252	15.967	15.677	188°57'05.40"			
CT	510.108	2853.228	6516.146	15.967	15.677	189°13'09.61"			
IP 5	515.357	2852.387	6510.964	16.008	15.718	189°13'09.61"			

CONTROL LINE SETOUT TABLE – FAIRWAY STREET									
PT	CHAINAGE	EASTING	NORTHING	FSL	SUBGRADE	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
	290.000	2673.355	6754.715	18.243	17.953	189°13'15.11"			
	300.000	2671.752	6744.845	18.328	18.038	189°13'15.11"			
	310.000	2670.150	6734.974	18.402	18.112	189°13'15.11"			
	320.000	2668.547	6725.103	18.445	18.155	189°13'15.11"			
	330.000	2666.945	6715.232	18.458	18.168	189°13'15.11"			
TC	337.977	2665.667	6707.358	18.446	18.156	189°13'15.11"			
	340.000	2665.371	6705.357	18.440	18.150	187°37'20.40"			
	350.000	2664.731	6695.386	18.392	18.102	179°43'10.08"			
	360.000	2665.468	6685.421	18.313	18.023	171°48'59.76"			
IP 3	362.206	2661.633	6682.510	18.292	18.002		R = – 72.500	48.458	38°17'45.40"
	370.000	2667.569	6675.652	18.204	17.914	163°54'49.44"			
	380.000	2670.992	6666.265	18.063	17.773	156°00'39.13"			
CT	386.436	2673.866	6660.509	17.961	17.671	150°55'29.71"			
	390.000	2675.598	6657.394	17.903	17.613	150°55'29.71"			
	400.000	2680.458	6648.654	17.743	17.453	150°55'29.71"			
	410.000	2685.317	6639.914	17.583	17.293	150°55'29.71"			
	420.000	2690.177	6631.174	17.422	17.132	150°55'29.71"			
	430.000	2695.037	6622.434	17.262	16.972	150°55'29.71"			
	440.000	2699.896	6613.694	17.102	16.812	150°55'29.71"			
	450.000	2704.756	6604.955	16.941	16.651	150°55'29.71"			
	460.000	2709.615	6596.215	16.781	16.491	150°55'29.71"			
	470.000	2714.475	6587.475	16.621	16.331	150°55'29.71"			
	480.000	2719.334	6578.735	16.470	16.180	150°55'29.71"			
	490.000	2724.194	6569.995	16.461	16.171	150°55'29.71"			
	500.000	2729.053	6561.255	16.636	16.346	150°55'29.71"			
	510.000	2733.913	6552.516	16.933	16.643	150°55'29.71"			
IP 4	517.250	2737.436	6546.179	17.150	16.860	150°55'29.71"			

Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

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Meridian: -
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PSM: -
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DRAWING TITLE

CONTROL LINE SETOUT
TABLES SHEET 1 OF 2

C	06/04/23	ROAD 01 TABLE UPDATED	JH	MG	
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/05/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

NOT APPLICABLE

Scale at A1:

NTS

Designed:

IG

Drafted:

LAB / IG

Approved:

MG

RPEQ:

16939

Signed:



Date:

20/09/2022

Drawing No:

5941 ENG OPW2 421

Rev. No:

C

CONTROL LINE SETOUT TABLE – AMGROW DAM OVERFLOW DRAIN								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2971.870	6491.557	12.850	111°26'55.60"			
	10.000	2981.177	6487.901	12.816	111°26'55.60"			
TC	13.893	2984.800	6486.477	12.802	111°26'55.60"			
	20.000	2990.672	6484.836	12.781	99°47'06.91"			
IP 2	20.299	2990.856	6484.098	12.780		R = –30.000	12.813	24°28'14.95"
CT	26.706	2997.352	6484.441	12.758	86°58'40.66"			
	30.000	3000.642	6484.615	12.747	86°58'40.66"			
	40.000	3010.628	6485.142	12.712	86°58'40.66"			
	50.000	3020.614	6485.669	12.678	86°58'40.66"			
	60.000	3030.600	6486.196	12.643	86°58'40.66"			
TC	70.000	3040.586	6486.724	12.609	86°58'40.66"			
	73.800	3044.381	6486.924	12.596	86°58'40.66"			
	80.000	3050.522	6487.728	12.574	78°05'48.71"			
	IP 3	81.739	3052.414	6487.348	12.568	R = –40.000	15.877	22°44'33.80"
CT	89.677	3059.659	6490.845	12.541	64°14'06.86"			
	90.000	3059.950	6490.985	12.540	64°14'06.86"			
	100.000	3068.955	6495.332	12.505	64°14'06.86"			
IP 4	104.492	3073.001	6497.285	12.500	64°14'06.86"			



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VANTAGE YATALA
STAGE 2

Site Address:

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DRAWING TITLE

CONTROL LINE SETOUT
TABLES SHEET 2 OF 2

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

NOT APPLICABLE

Scale at A1:

NTS

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
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Rev. No:

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VANTAGE YATALA STAGE 2

60 STAPYLTON JACOBS WELL
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DRAWING TITLE
HIGHLANDS STREET
LONGITUDINAL SECTION
SHEET 2 OF 2

C	06/04/23	HIGHLANDS STREET UPDATED	JH	MC
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MC
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MC
B	1/09/21	INFORMATION REQUEST RESPONSE	LAB	MC
A	30/07/21	ORIGINAL ISSUE	LAB	MC
Issue	Date	Description	DRN	CH

HORZ:

VERT:

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
5941 ENG OPW2 431	C



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

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DRAWING TITLE

FAIRWAY STREET
LONGITUDINAL SECTION

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

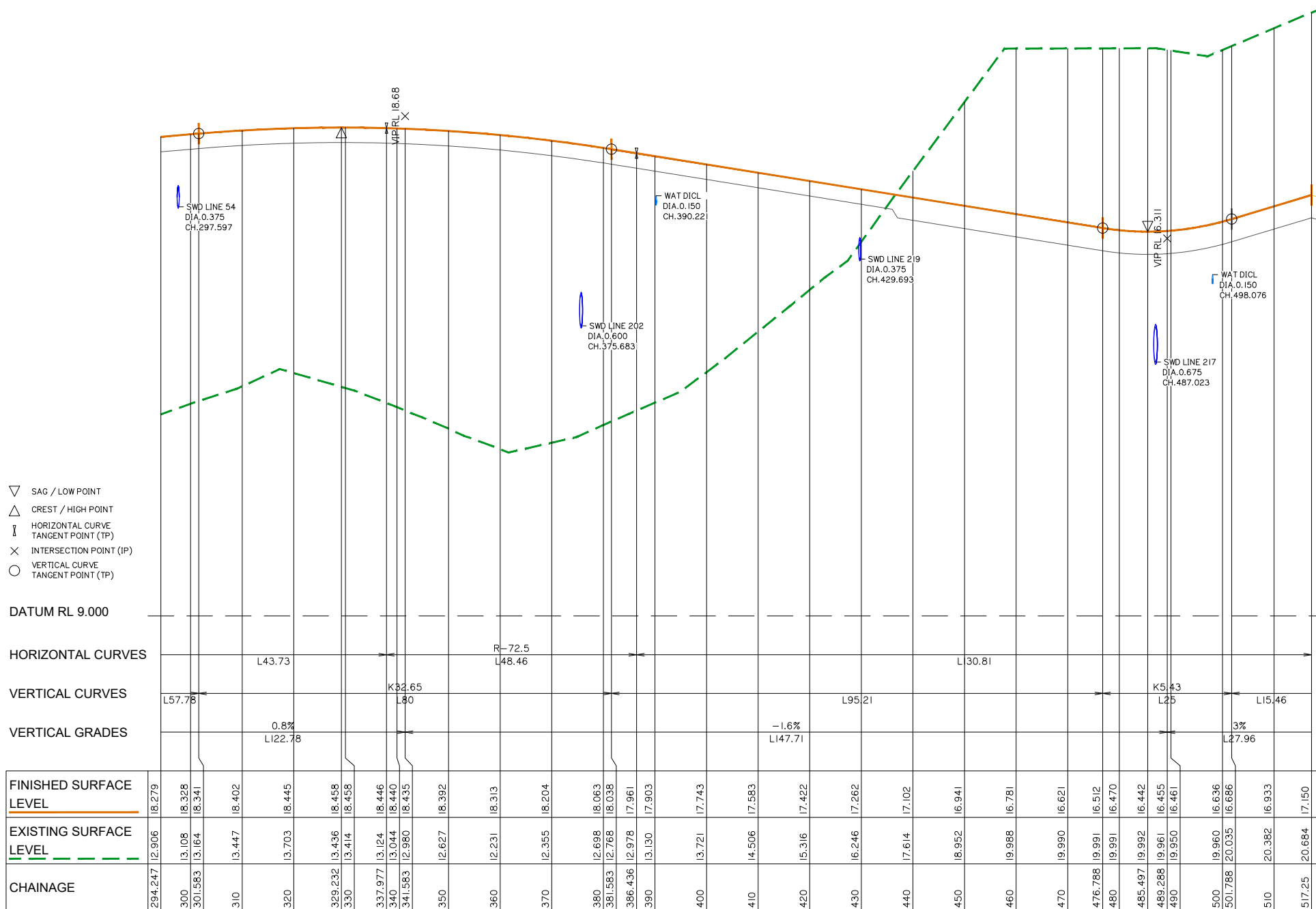
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0 5 10 15 20 25 30 35 40

VERT: Scale 1:50 - Lengths are in Metres.
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 432 Rev. No: B



FAIRWAY STREET - LONGITUDINAL SECTION



VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GEOMETRY GRADE (%)
VERTICAL GEOMETRY LENGTH (m)

DATUM RL = 10.200

[illegible]

LONGITUDINAL SECTION - AMGROW DAM OVERFLOW DRAIN

20/09/22	ISSUED FOR CONSTRUCTION		LAB
19/07/22	SEWER LINE UPDATED		LAB
28/11/21	ISSUED FOR CONSTRUCTION		LAB
1/09/21	INFORMATION REQUEST RESPONSE		LAB
30/07/21	ORIGINAL ISSUE		LAB
Date	Description		DRN

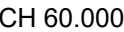
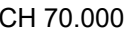
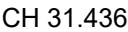
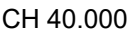
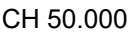
SCALE IN METRES

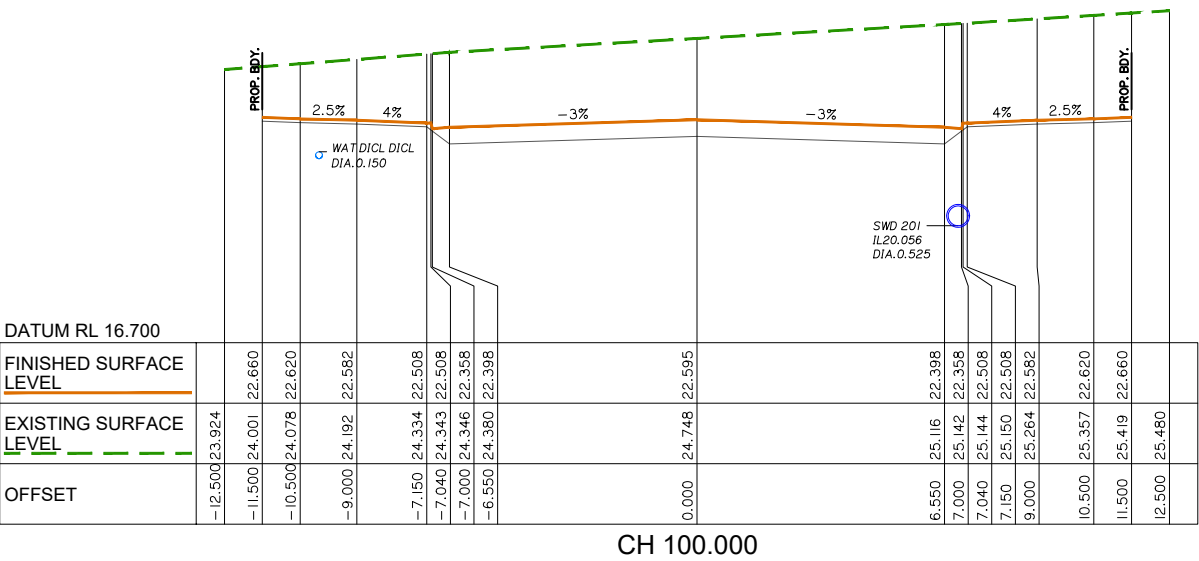
HORIZ: 

VERT: 

Scale at A1:	AS SHOWN
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
PEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 041 ENG OPW2 450 Rev. N C





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Project: VANTAGE YATALA
STAGE 2

Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

HIGHLANDS STREET CROSS
SECTIONS SHEET 3 OF 9

C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	SEWER LINE UPDATED	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

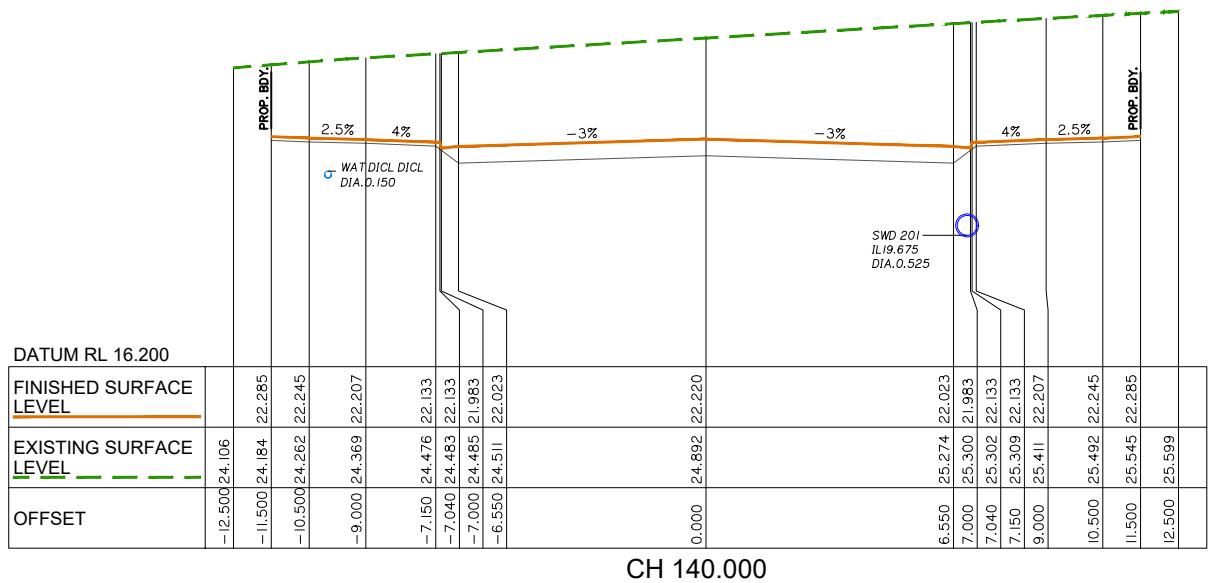
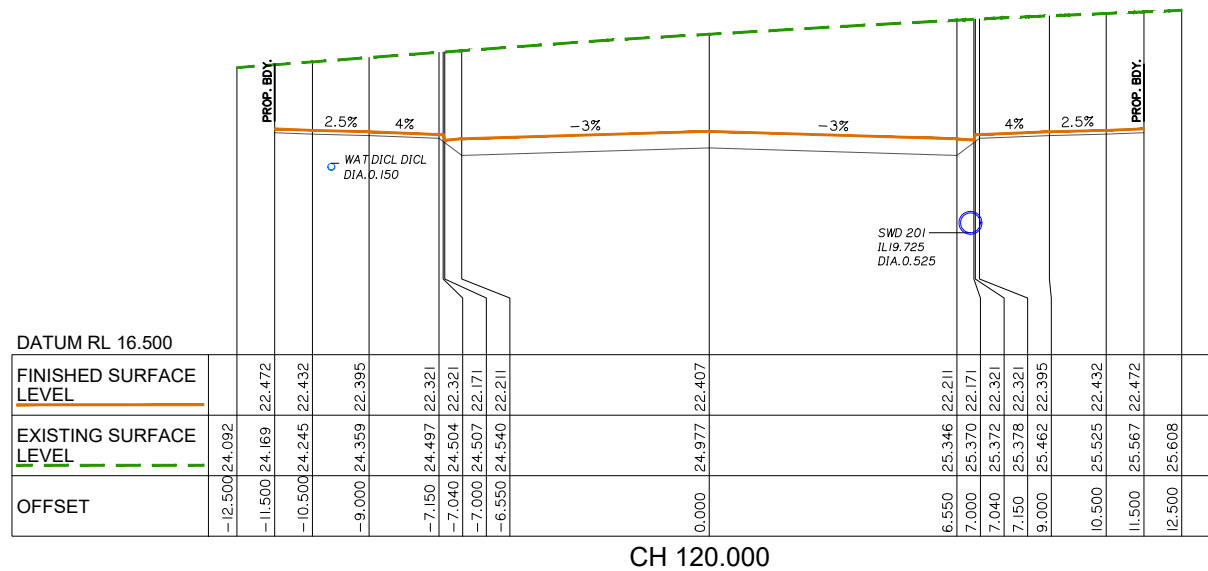
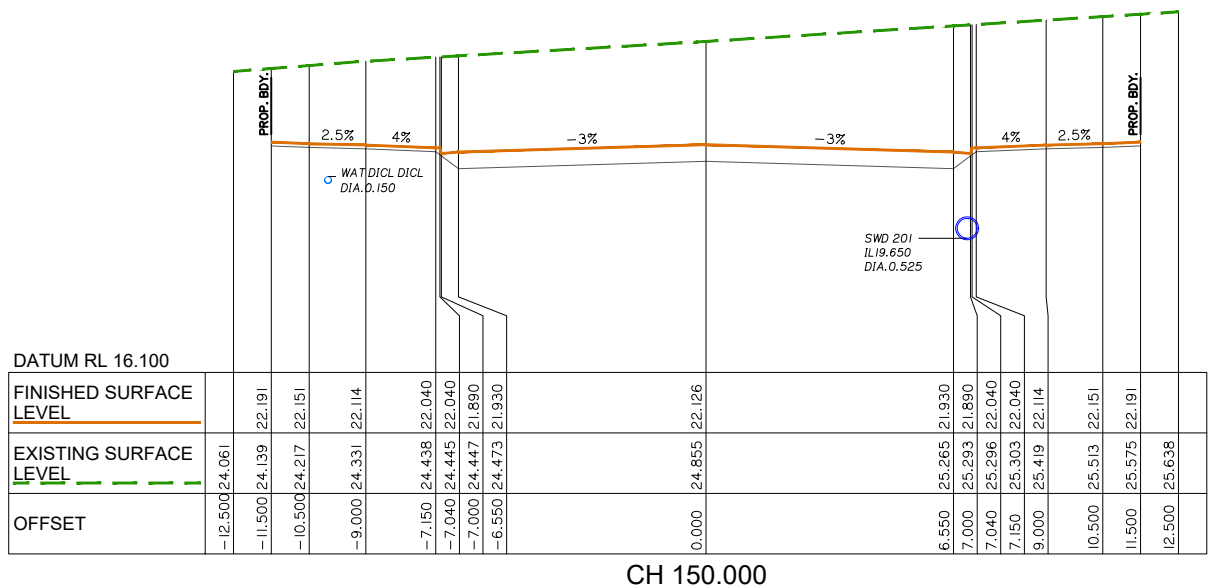
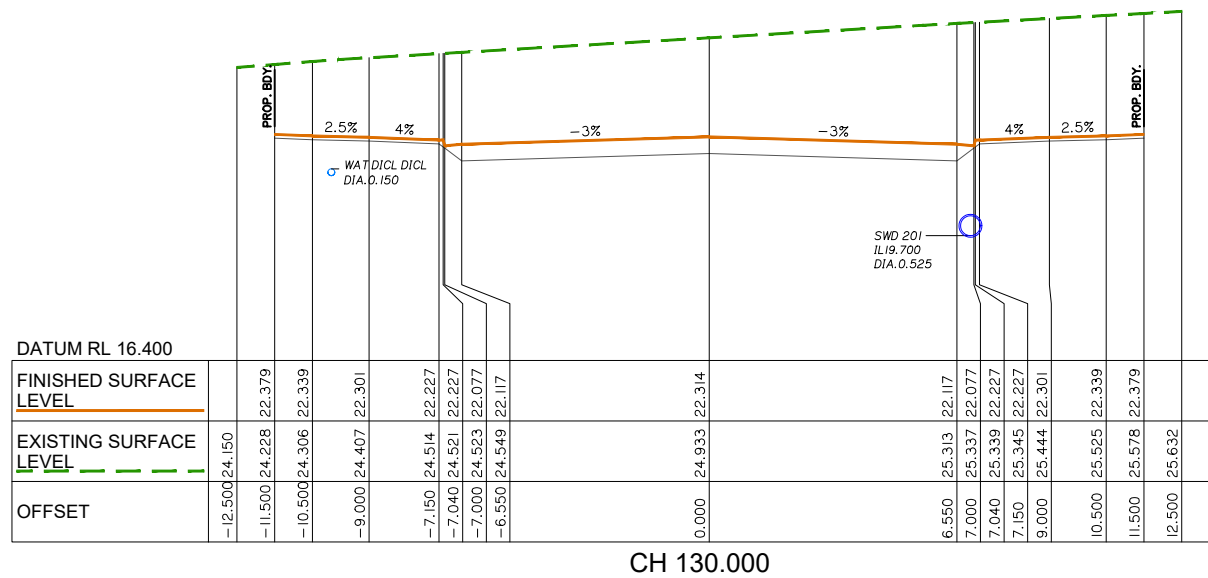
HORZ:  Scale 1:100 - Lengths are in Metres.

VERT:  Scale 1:100 - Lengths are in Metres.

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
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Project:

VANTAGE YATALA STAGE 2

Site Address:

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DRAWING TITLE

HIGHLANDS STREET CROSS
SECTIONS SHEET 4 OF 9

C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	19/07/22	SEWER LINE UPDATED	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CH-K

SCALE IN METRES

HORZ: Scale 1:100 - Lengths are in Metres.



A horizontal scale bar with alternating black and white segments. It is marked with numbers from 0 to 8 at regular intervals.

VERT: Scale 1:100 - Lengths are in Metres.

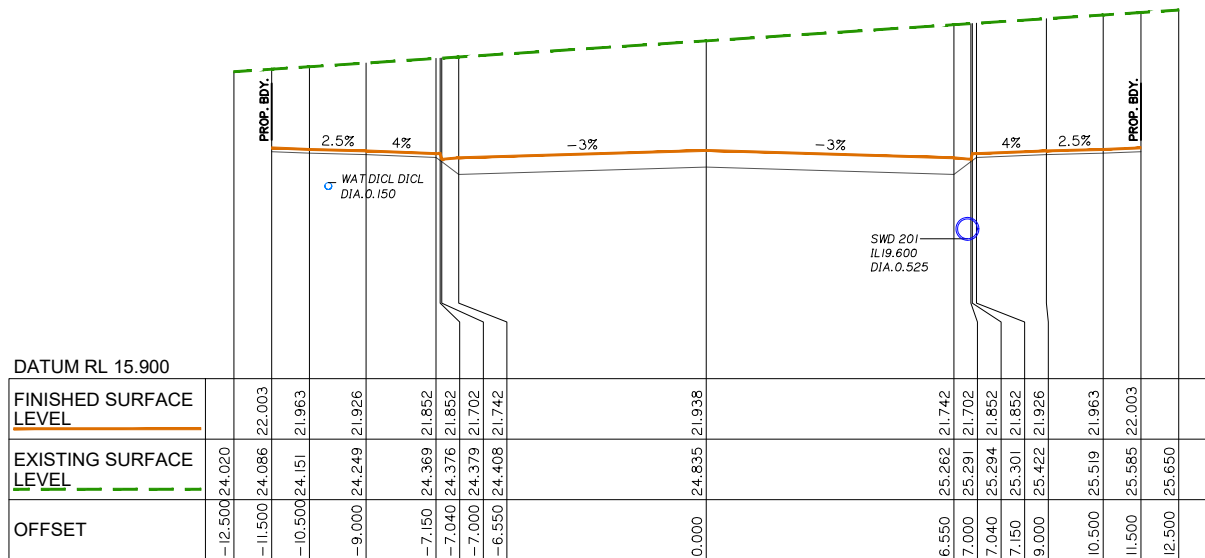


A vertical scale bar with alternating black and white segments. It is marked with numbers from 0 to 8 at regular intervals.

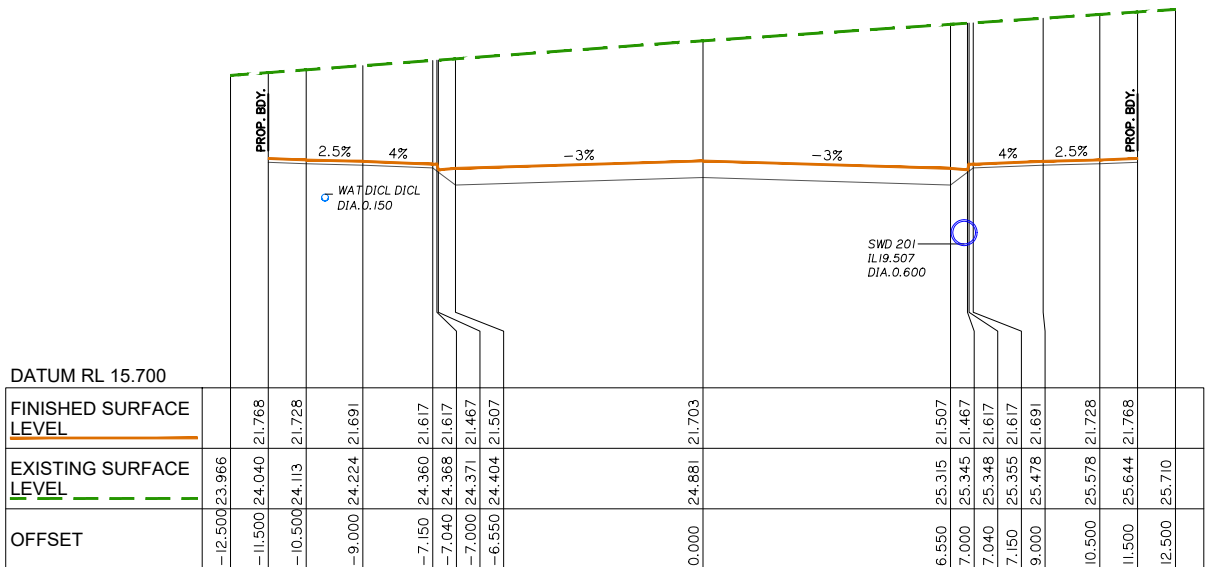
Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

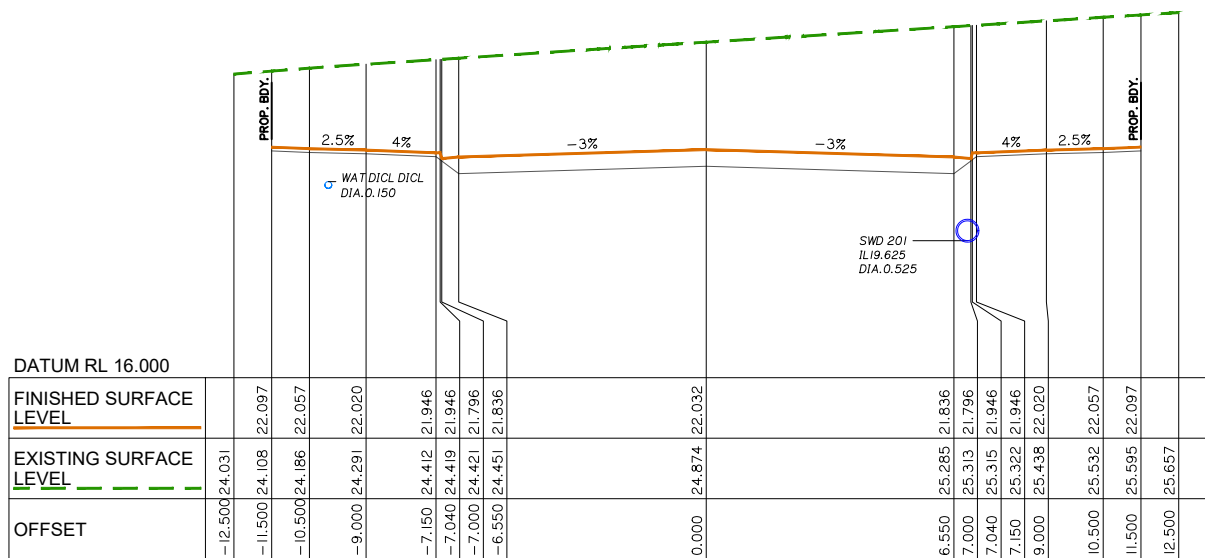
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5941 ENG OPW2 453	C



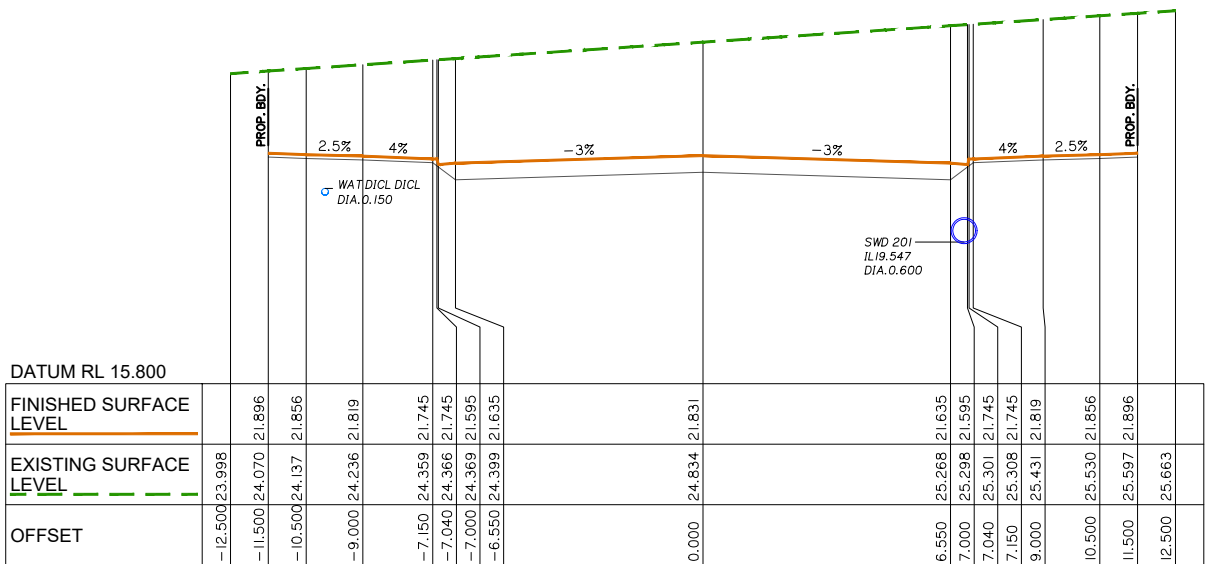
CH 170.000



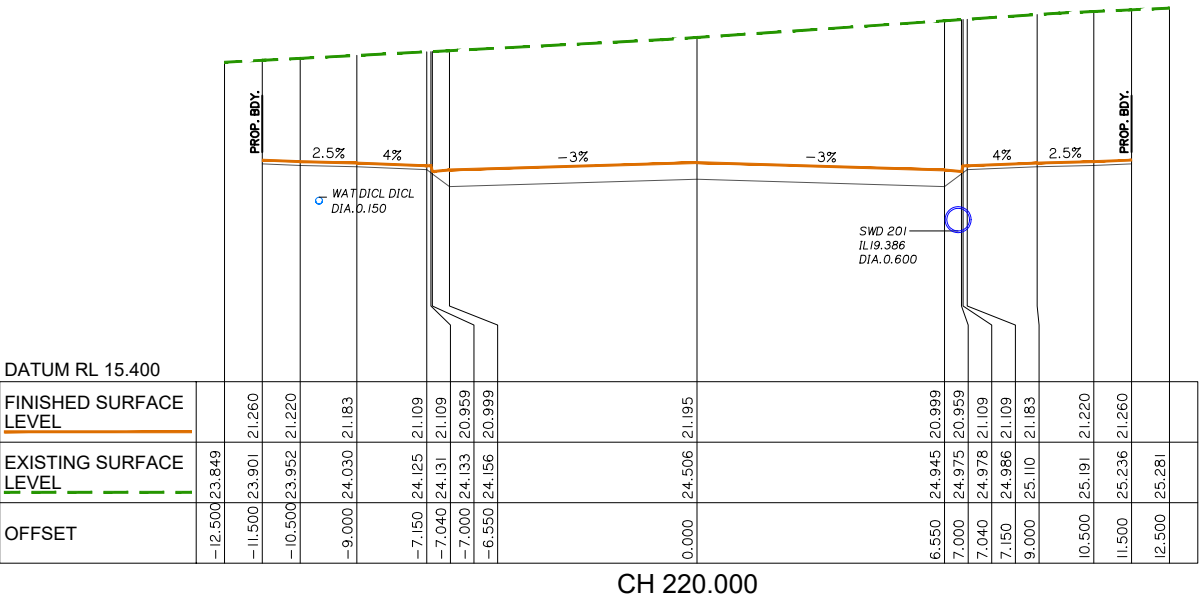
CH 190.000



CH 160.000



CH 180.000



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5941 ENG OPW2 455	C



Project: VANTAGE YATALA
STAGE 2

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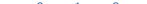
Lot:	501
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Meridian:	-
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HIGHLANDS STREET CROSS
SECTIONS SHEET 7 OF 9

B	20/09/22		ISSUED FOR CONSTRUCTION		LAB		MCM
B	26/11/21		ISSUED FOR CONSTRUCTION		LAB		MCM
B	1/08/21		INFORMATION REQUEST RESPONSE		LAB		MCM
A	30/07/21		ORIGINAL ISSUE		LAB		MCM
Issue	Date		Description		DRN		CH

HORZ: 

VERT: 

Designed:	IG
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Drafted:	LAB / IG
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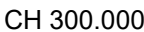
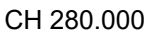
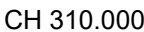
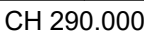
Approved:	MG
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RPEQ:	16030
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Signed:	
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Date:	20/09/2022
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Drawing No:	Rev. No:
5941 ENG OPW2 456	B

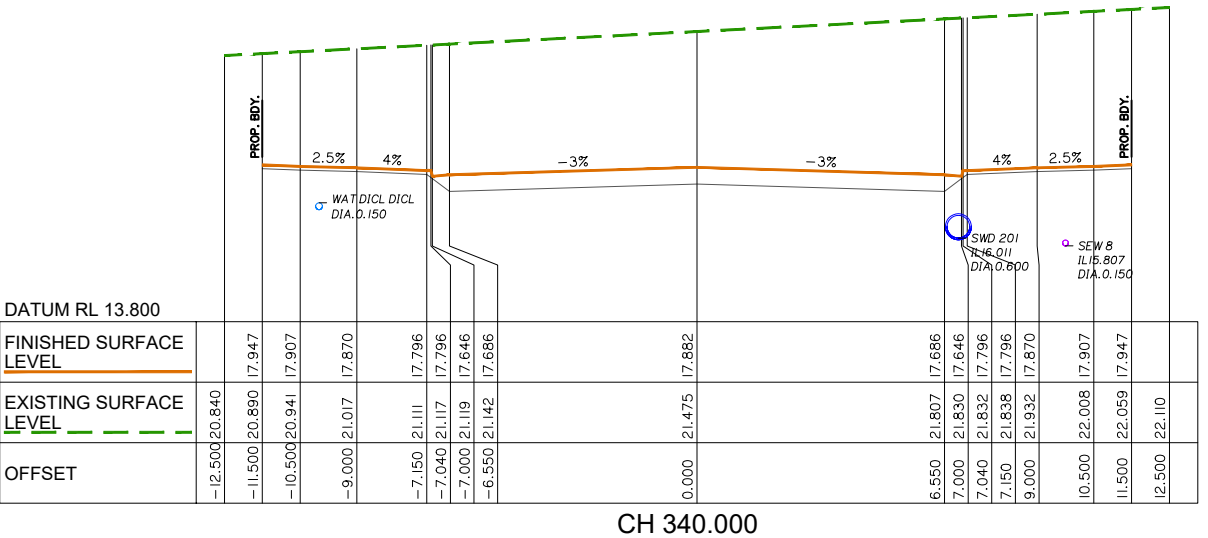
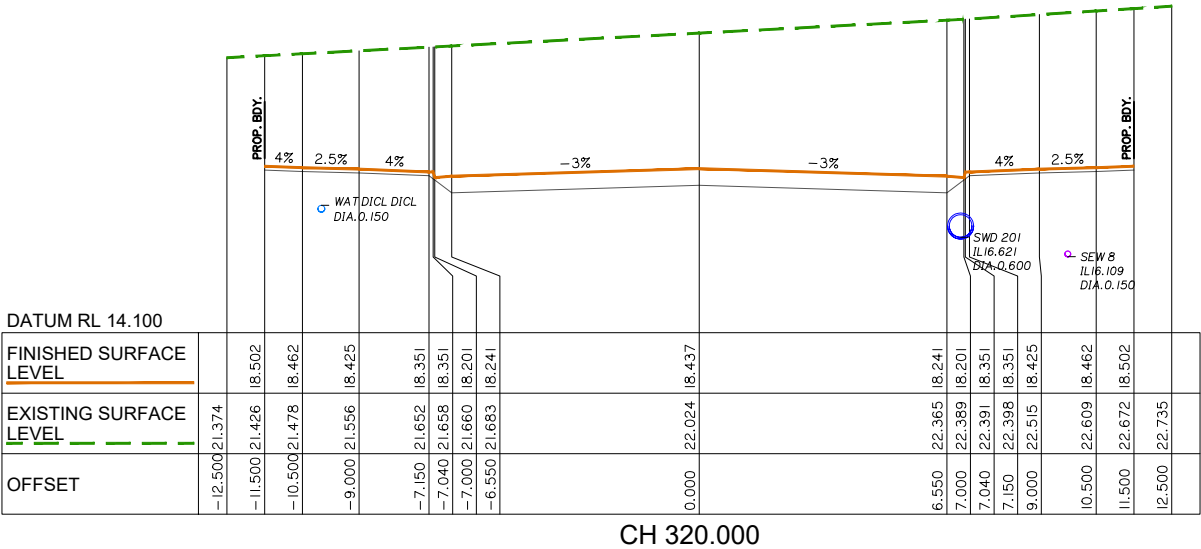


SCALE IN METRES

HORIZ: 

VERT: 

Scale at A1:	AS SHOWN
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
PEQ:	16939
Signed:	
Date:	20/09/2022



Client:



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

FAIRWAY STREET CROSS
SECTIONS SHEET 1 OF 4

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

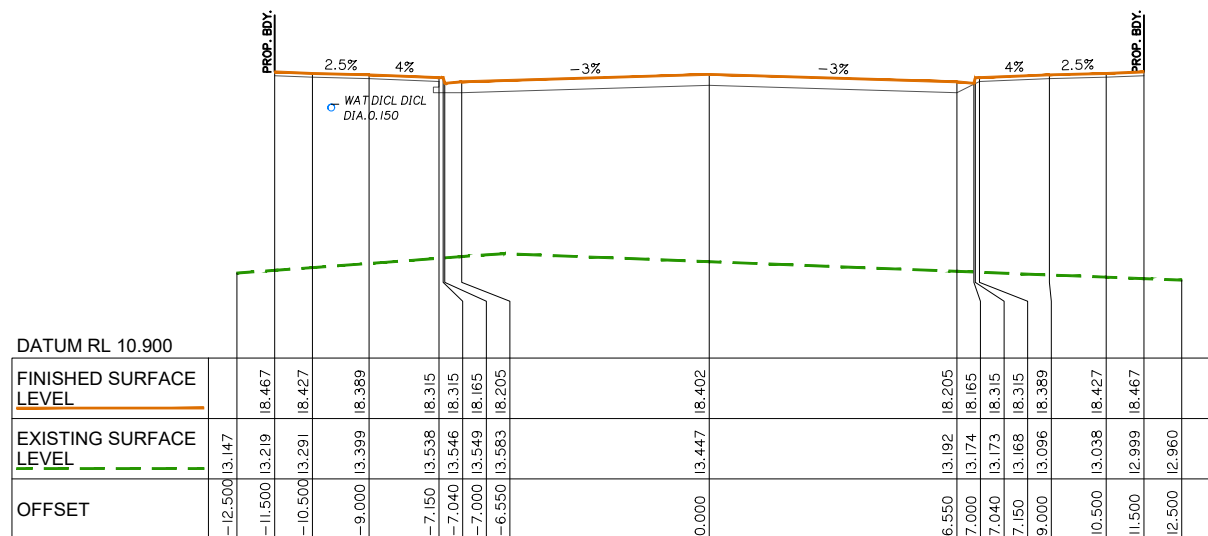
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0 1 2 3 4 5 6 7 8

VERT: Scale 1:100 - Lengths are in Metres.
0 1 2 3 4 5 6 7 8

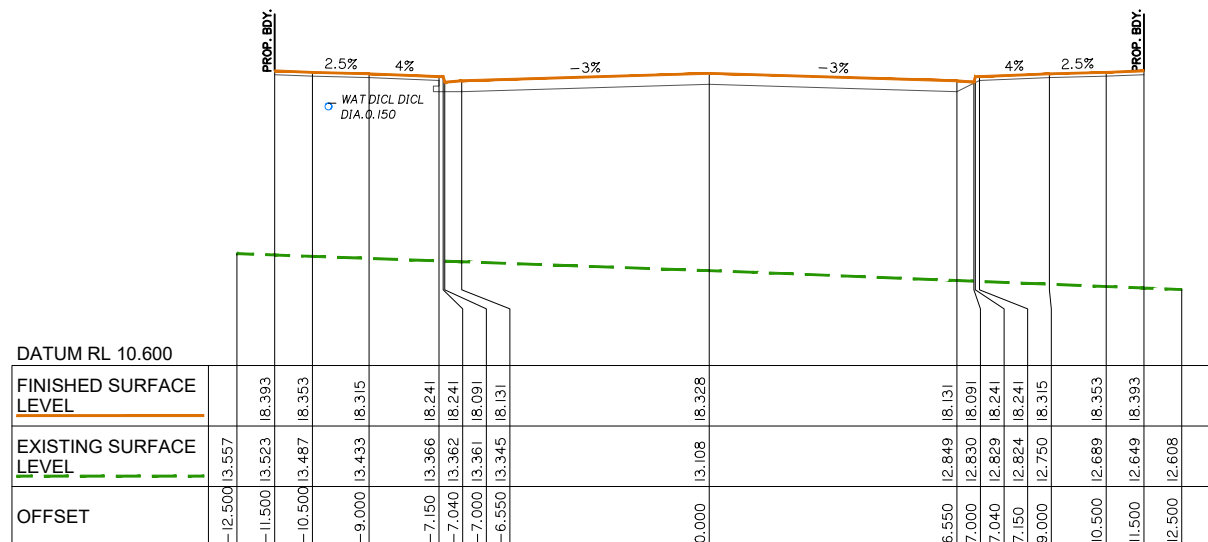
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

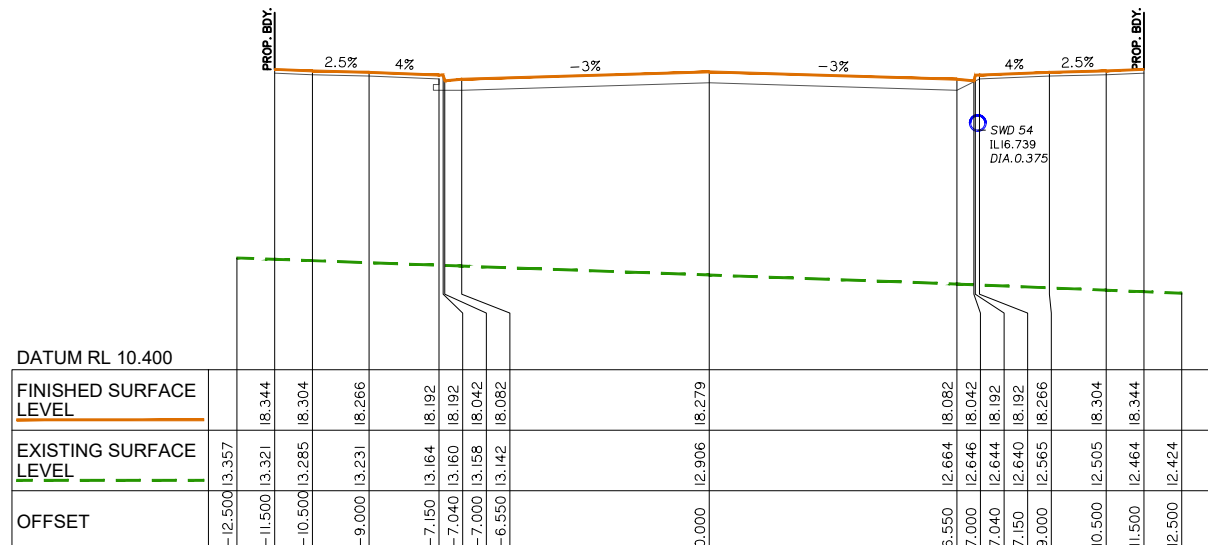
Drawing No: 5941 ENG OPW2 459 Rev. No: B



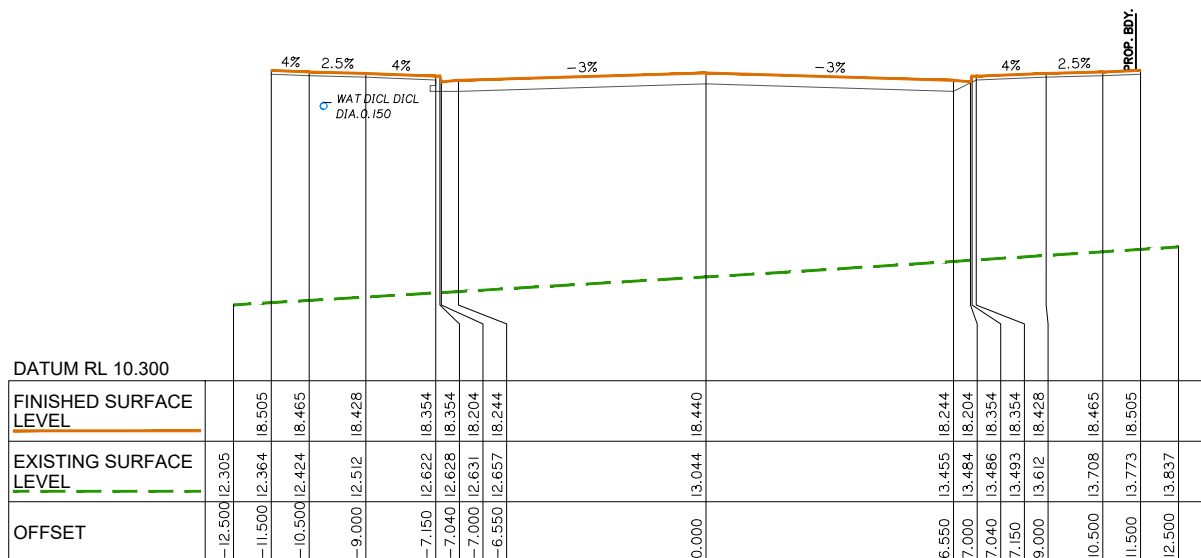
CH 310.000



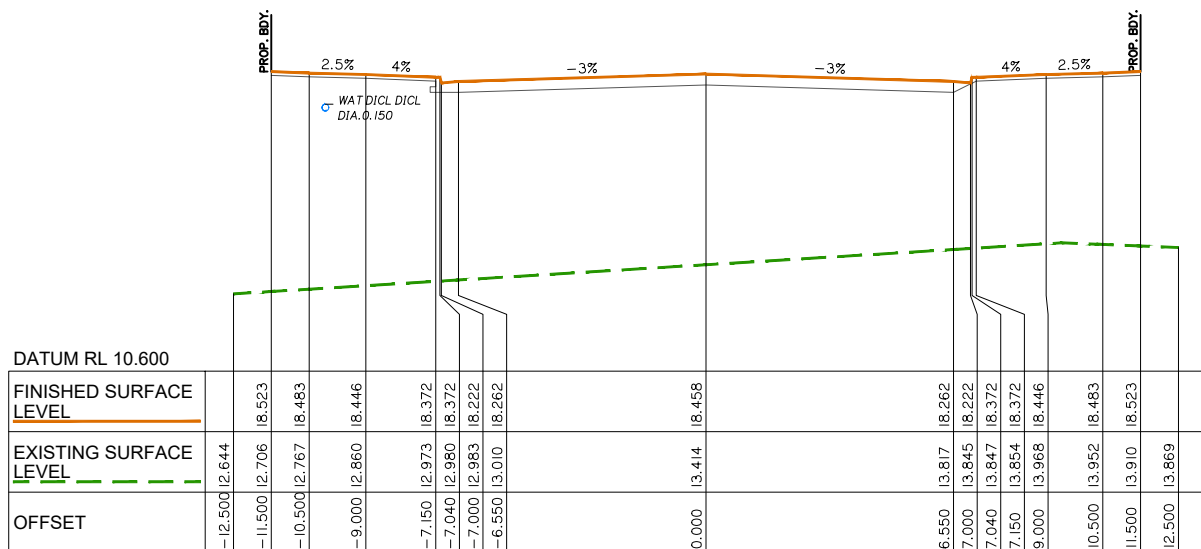
CH 300.000



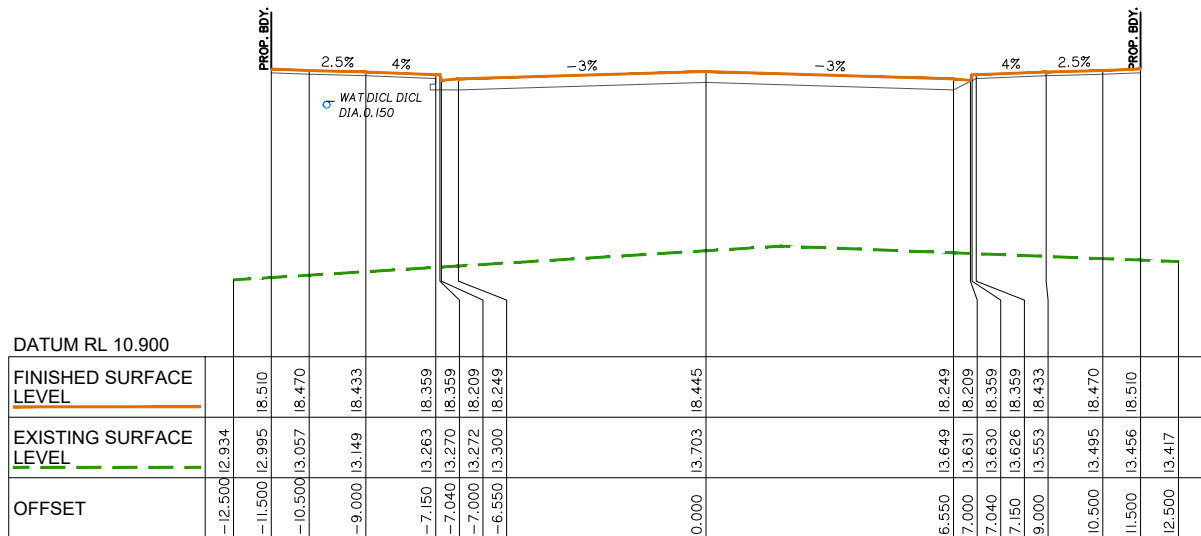
CH 294.247



CH 340.000

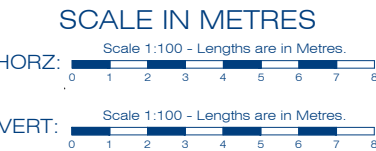


CH 330.000



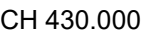
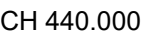
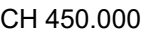
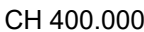
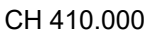
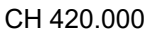
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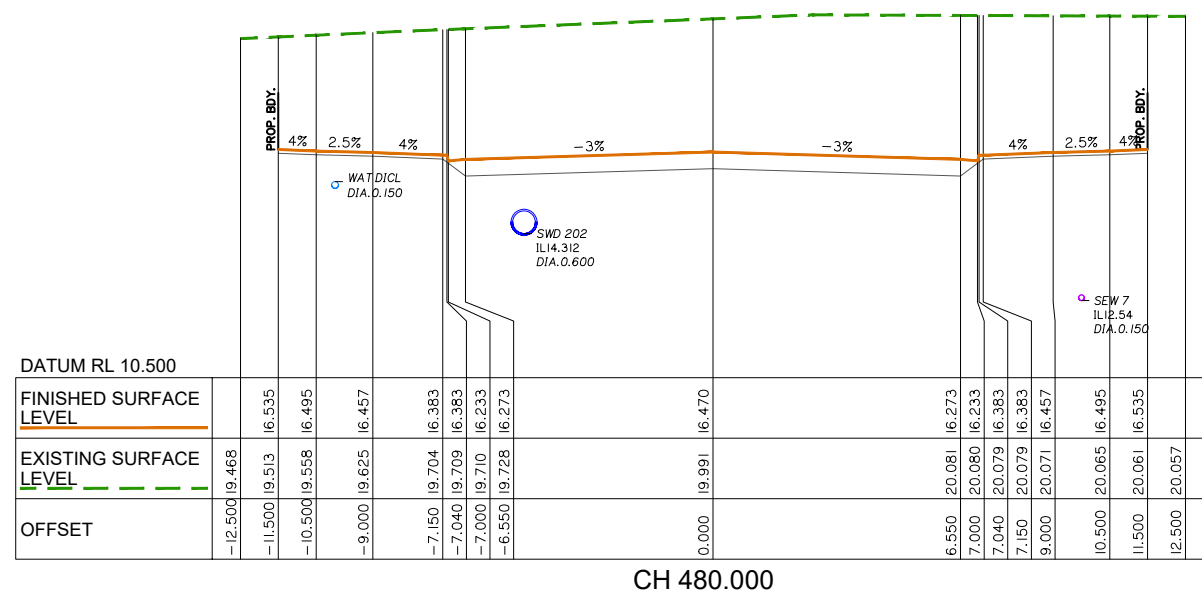
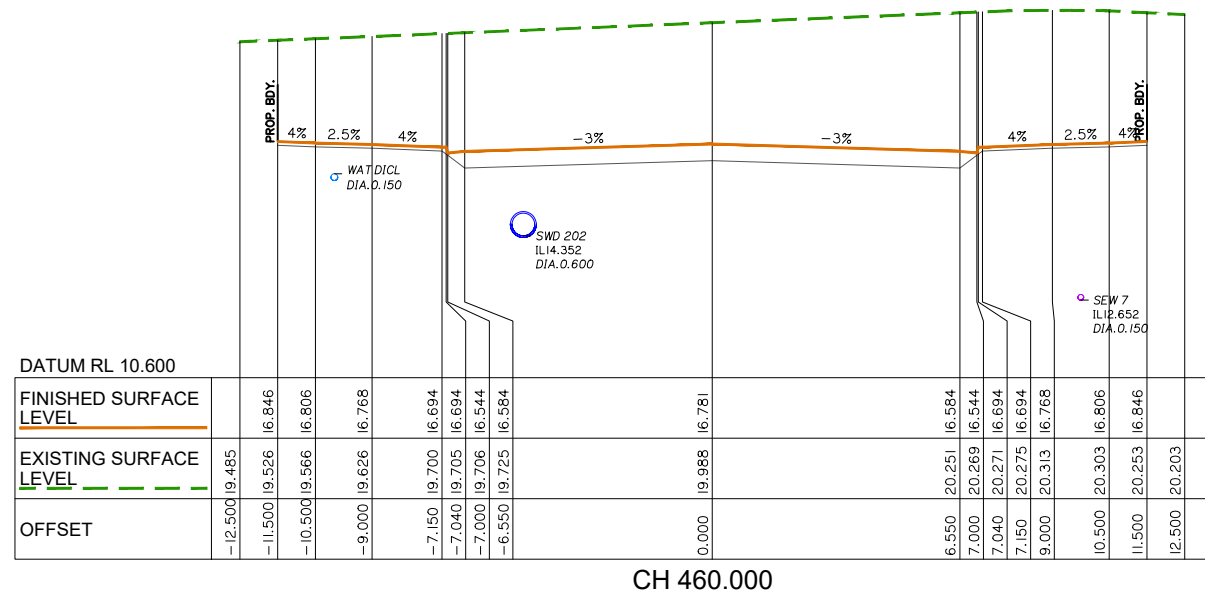
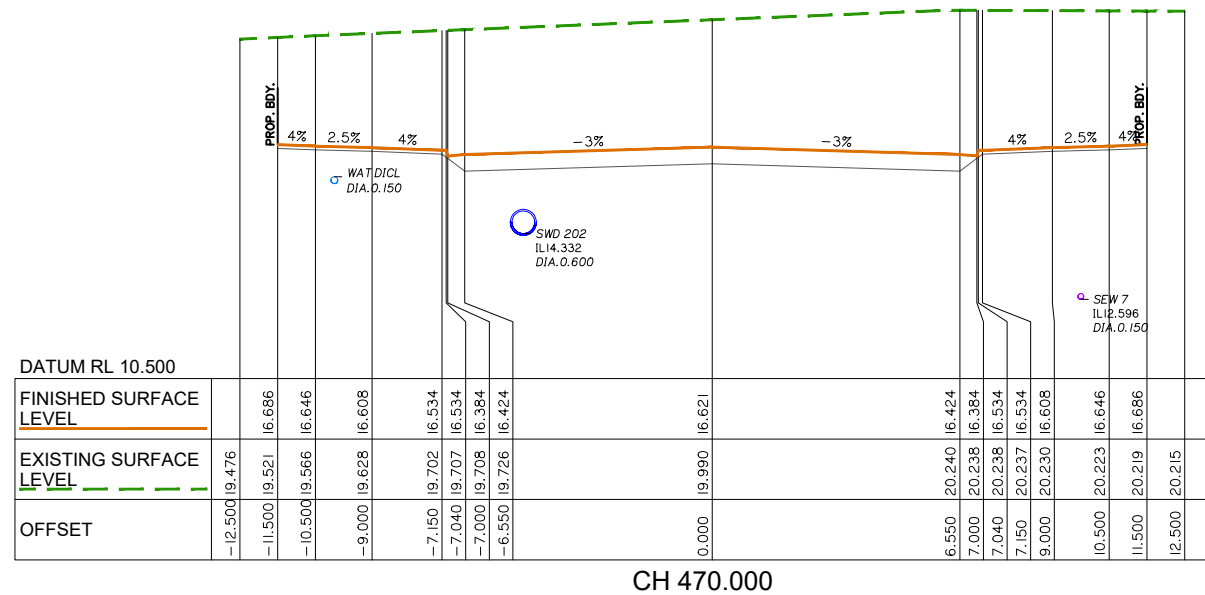
20/09/22	ISSUED FOR CONSTRUCTION	LAB
26/11/21	ISSUED FOR CONSTRUCTION	LAB
10/09/21	INFORMATION REQUEST RESPONSE	LAB
30/07/21	ORIGINAL ISSUE	LAB
Date	Description	DRN



Scale at A1:	AS SHOWN
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
PEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. N
041 ENG OPW2 461	B







Client:



Project:

Site Address:

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RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
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DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 1 OF 5

E	06/04/23	STAGE BOUNDARY AMENDED	JH	MC	
D	23/09/22	ISSUED FOR CONSTRUCTION	LAB	MC	
D	19/07/22	LOT NUMBER UPDATED	LAB	MC	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MC	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MC	
B	10/05/21	INFORMATION REQUEST RESPONSE	LAB	MC	
A	30/07/21	ORIGINAL ISSUE	LAB	MC	
Issue#	Date	Description	DRN	CHN	

SCALE IN METRES



1:150 (FULL SIZE A1)
1:300 (HALF SIZE A3)

Scale at A1: 1:150

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
5941 ENG OPW2 490	E

KERB RAMP 1A SETOUT TABLE		
POINT	EASTING	NORTHING
1	2419.032	6379.852
2	2420.826	6380.102
3	2422.053	6380.515
4	2421.028	6381.651
5	2420.146	6380.856
6	2419.343	6381.747
7	2418.229	6380.743
8	2418.191	6379.936

KERB RAMP IB SETOUT TABLE		
POINT	EASTING	NORTHING
1	2432.696	6364.677
2	2433.234	6366.320
3	2433.697	6367.001
4	2434.404	6366.217
5	2433.810	6365.681
6	2434.613	6364.790
7	2433.499	6363.785
8	2432.657	6363.832

204

STAGE 2A

HIGHLANDS STREET

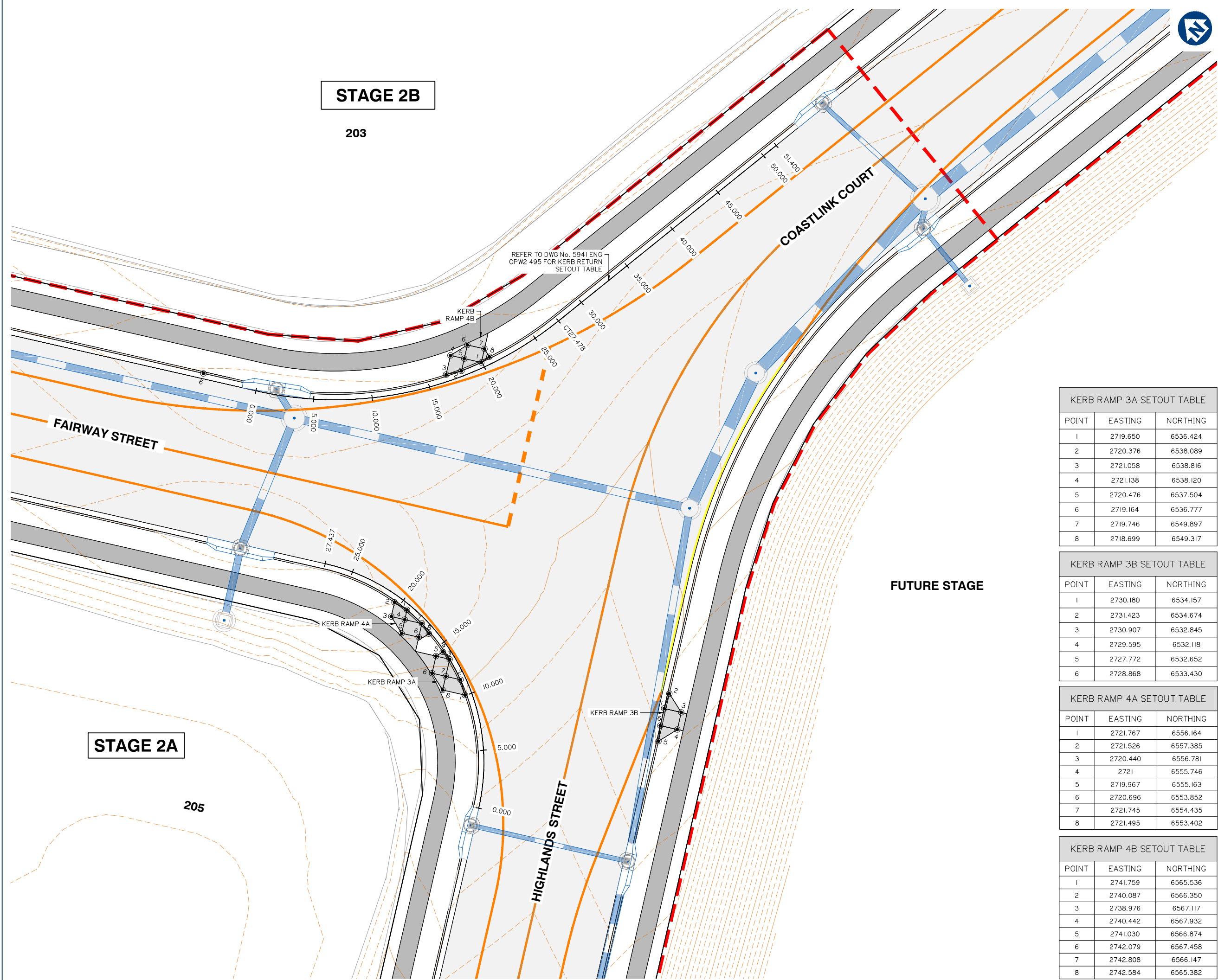
FUTURE STAGE

CHRISTENSEN ROAD

ROAD INTERSECTION DETAILS SHEET 1 OF 5



Drawing No: 5941 ENG OPW2 491 Rev. No: D



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Meridian: -
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DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 3 OF 5

E	06/04/23	ISSUED FOR CONSTRUCTION	JH	MG	
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	19/07/22	LOT NUMBER UPDATED	LAB	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

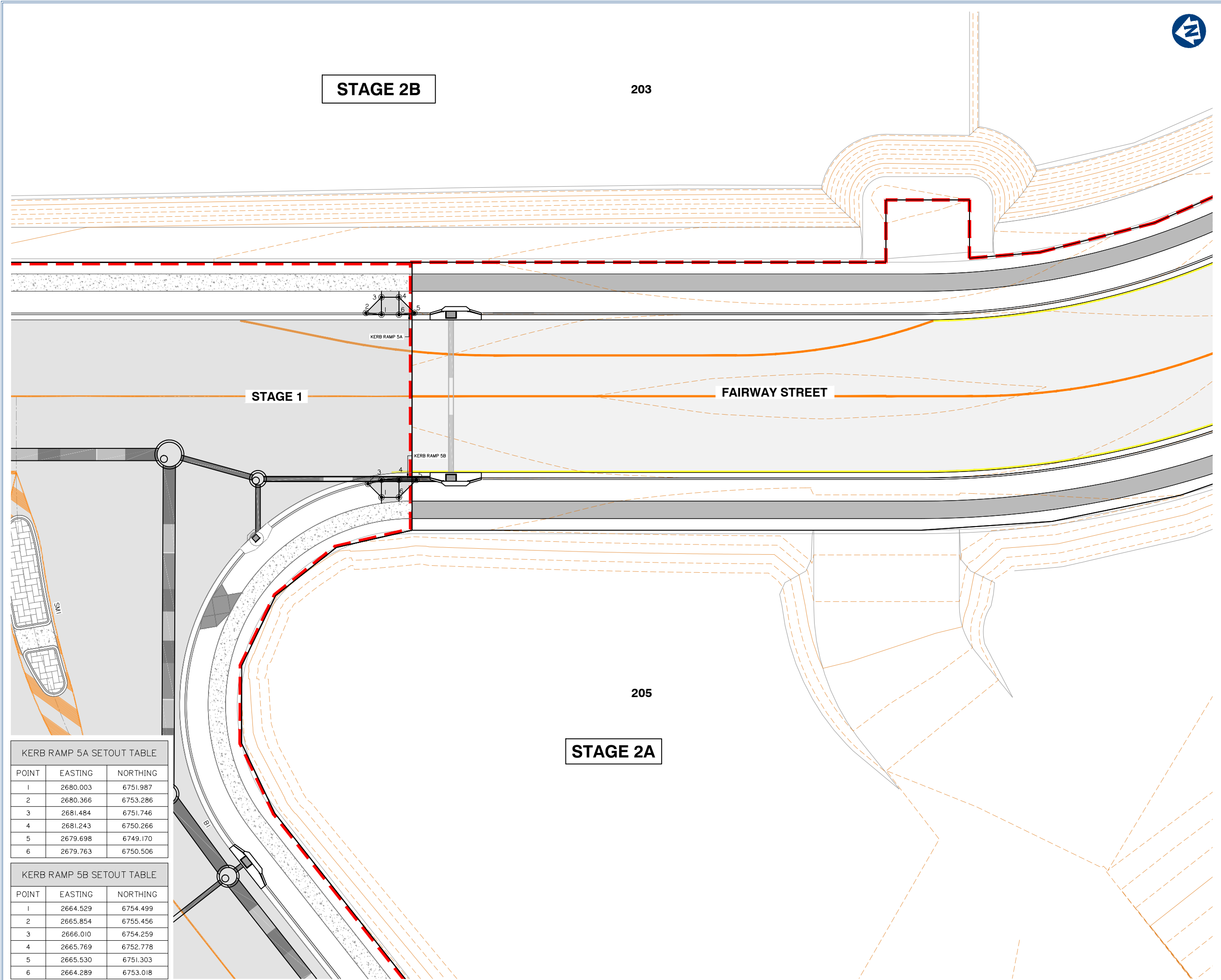


1:150 (FULL SIZE A1)
1:300 (HALF SIZE A3)

Scale at A1: 1:150

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Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 492 Rev. No: E

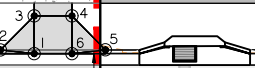


STAGE 2B

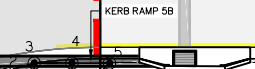
203

STAGE 1

FAIRWAY STREET



KERB RAMP 5A



KERB RAMP 5B

205

STAGE 2A

KERB RAMP 5A SETOUT TABLE

POINT	EASTING	NORTHING
1	2680.003	6751.987
2	2680.366	6753.286
3	2681.484	6751.746
4	2681.243	6750.266
5	2679.698	6749.170
6	2679.763	6750.506

KERB RAMP 5B SETOUT TABLE

POINT	EASTING	NORTHING
1	2664.529	6754.499
2	2665.854	6755.456
3	2666.010	6754.259
4	2665.769	6752.778
5	2665.530	6751.303
6	2664.289	6753.018



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VANTAGE YATALA
STAGE 2

Site Address:

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ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 4 OF 5

Issue	Date	Description	LAB	MG	CHK
D	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:150 (FULL SIZE A1)
1:300 (HALF SIZE A3)

Scale at A1: 1:150

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 493 Rev. No: D



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Project:

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STAGE 2

Site Address:

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Plan: SP295994
Local Authority: CITY OF GOLD COAST
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Meridian: -
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ROAD INTERSECTION
DETAILS SHEET 5 OF 5

Issue	Date	Description	LAB	MG	DRN	CHK
E	06/04/23	ROAD LAYOUT AMENDED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
D	19/07/22	LOT NUMBER UPDATED	LAB	MG		
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
C	09/11/21	KERB RAMP LOCATION AMENDED	JH	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



1:150 (FULL SIZE A1)
1:300 (HALF SIZE A3)

Scale at A1: 1:150

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 494 Rev. No: E

STAGE 2B

203

REFER TO DWG No. 5941 ENG
OPW2 495 FOR ROAD
WIDENING 02 SETOUT TABLE

REFER TO DWG No. 5941 ENG
OPW2 495 FOR ROAD
WIDENING 01 SETOUT TABLE

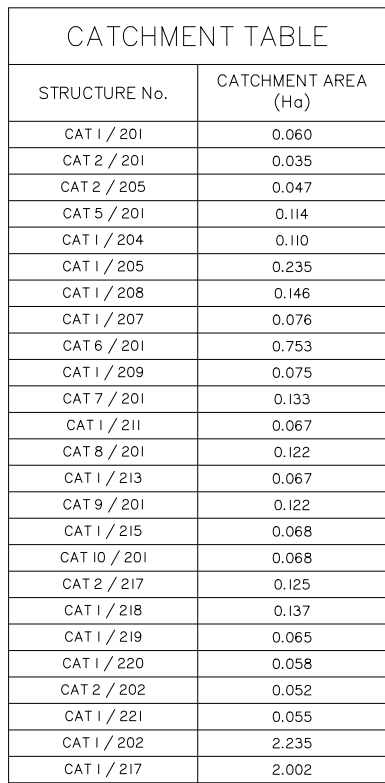
FUTURE STAGE 3
WORKS. NOT PARK OF
THIS APPLICATION

COASTLINK COURT

FUTURE ROAD

FUTURE STAGE

ROAD INTERSECTION DETAILS SHEET 5 OF 5



CATCHMENT TABLE	
STRUCTURE No.	CATCHMENT AREA (Ha)
CAT 2 / 223	0.074
CAT 1 / 223	0.264
CAT 1 / 222	0.016
CAT 2 / 225	0.038
CAT 1 / 227	0.417
CAT 2 / 227	0.116
CAT 1 / 224	0.055
CAT 1 / 228	0.148
CAT 17 / 201	0.012
CAT 18 / 201	0.020
CAT 19 / 201	0.017
CAT 20 / 201	0.018
CAT 1 / 239	2.180
CAT 1 / 206	2.137
CAT 1 / 230	2.279
CAT 1 / 232	1.947
CAT 20 / X2	0.062
CAT 21/ X2	0.066
CAT 22 / X2	0.049
CAT 23 / X2	0.052
CAT 1 / 231	4.914
CAT 1 / 233	3.878
CAT 2 / X2	1.927



06/04/23	STORMWATER CATCHMENTS UPDATED	JH	MG	
29/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
19/07/22	LOT NUMBER AND BOUNDARY, STORMWATER UPDATED	LAB	MG	
26/04/21	ISSUED FOR CONSTRUCTION	LAB	MG	
1/03/21	INFORMATION REQUEST RESPONSE	LAB	MG	
30/07/21	ORIGINAL ISSUE	LAB	MG	
Date	Description	DRN	CH-K	

Scale at A1:	1:2000
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
PEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
041 ENG OPW2 500	E

STRUCTURE NAME

1/201

STRUCTURE DESCRIPTION

DRAINWAY ITCSO GULLY ON GRADE WITH 1050mm MANHOLE

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK.

(i) SUPPORT TYPE: HS2

(ii) CONSTRUCTION: VIBRATORY RAMMER

(iii) EQUIPMENT LOADING: (UP TO 75kg)

(iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm

— PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE (>= Ø600). REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SLB2 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200Ø, 1500Ø, 1800Ø

PIPE / BOX SIZE (mm)

TYPE / CLASS

PIPE / BOX GRADE (%)

PIPE / BOX SLOPE (1 in X)

PIPE / BOX FLOW (cumecs) (39% AEP)

CAPACITY FLOW (cumecs)

PIPE / BOX FLOW VELOCITY (m/s)

CAPACITY FLOW VELOCITY (m/s)

DATUM RL

HGL ELEVATION (39% AEP)

DEPTH TO INVERT

INVERT LEVEL OF DRAIN

FINISHED SURFACE LEVEL

SETOUT COORDINATES

CHAINAGES

EXTERNAL INTERSECTION WORKS

STAGE 2 WORKS

EXISTING SEWER RISING MAIN Ø100 CH.19.866 IL21.097

0.342m CLEARANCE TO STORMWATER

WATER Ø150 CH.54.505 IL22.382 (OVERT)

EXISTING SEWER RISING MAIN Ø100 CH.73.475 IL22.790 0.570m COVER TO SURFACE

SEWER Ø150 CH.109.276 IL19.500

39% AEP HGL

PROVIDE TYPE 9 SUPPORT (CONCRETE ENCASEMENT) AS PER SEQ STD DWG 'SEQ-SEW-1203-I'

21.246

21.237

21.229

21.228

21.227

21.224

21.217

21.213

21.226

21.032

20.718

20.641

20.163

20.094

1.727

2.606

2.626

2.936

2.956

3.429

3.449

2.990

3.010

2.519

2.539

2.088

2.108

20.423

20.229

20.209

20.173

20.153

20.032

20.012

19.954

19.934

19.774

19.754

19.594

19.574

22.150

22.835

23.109

23.461

22.944

22.293

21.682

2369.850 E

6430.563 N

2398.076 E

6389.907 N

2403.839 E

6381.606 N

2432.542 E

6369.365 N

2450.188 E

6379.141 N

2507.045 E

6410.641 N

2563.903 E

6442.141 N

0.000

48.504

49.494

9.055

59.599

30.154

90.803

19.183

110.976

64.070

175.976

64.070

240.976

STRUCTURE NAME	14/201	15/201	16/201	2/228	17/201	18/201	19/201	20/201	21/201	22/201	23/201
STRUCTURE DESCRIPTION	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1800mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1800mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTOR SLAB AND 900x900 FI WITH GALV. GRATE CL D	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTOR SLAB AND 900x900 FI WITH GALV. GRATE CL D	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTOR SLAB AND 900x900 FI WITH GALV. GRATE CL D	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTOR SLAB AND 900x900 FI WITH GALV. GRATE CL D	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID	XXXXmm DIA OUTLET HEADWALL INSTALL GALV TUBULAR HANDRAIL REFER LOCAL AUTHORITY STD DWG

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK.

- (i) SUPPORT TYPE: HS2
(ii) CONSTRUCTION: VIBRATORY RAMMER
(iii) EQUIPMENT LOADING: (UP TO 75kg)
(iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm

PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE ($\geq \phi 600$).
REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200 ϕ , 1500 ϕ , 1800 ϕ

PIPE / BOX SIZE (mm)
TYPE / CLASS
PIPE / BOX GRADE (%)
PIPE / BOX SLOPE (1 in X)
PIPE / BOX FLOW (cumecs) (39% AEP)
CAPACITY FLOW (cumecs)
PIPE / BOX FLOW VELOCITY (m/s)
CAPACITY FLOW VELOCITY (m/s)

DATUM RL 4.000

HGL ELEVATION (39% AEP)	14.222 14.184	14.079 14.096	13.616 13.682	13.028	13.010 12.938	12.793 12.721	12.447 12.440	12.326 12.284	12.177 12.096	12.032 11.861	11.754 11.699	11.691
DEPTH TO INVERT	3.258 3.308	3.124 3.144	3.034 3.642	3.744 3.764	2.877 3.005	2.253 2.404	2.234 2.254	2.092 2.112	2.093 2.143	2.093 2.143	1.719 1.769	1.350 1.350
INVERT LEVEL OF DRAIN	12.898 12.848	12.814 12.794	12.787 12.179	12.031 12.011	11.543 11.415	11.165 11.014	10.974 10.954	10.916 10.896	10.882 10.832	10.824 10.774	10.770 10.770	10.770 10.770
FINISHED SURFACE LEVEL	16.156	15.938	15.821	15.775	14.420	13.418	13.208	13.008	12.975	12.543	12.120	
SETOUT COORDINATES	2810.639 E 6541.295 N	2846.245 E 6535.514 N	2847.199 E 6527.254 N	2859.768 E 6525.235 N	2895.636 E 6519.442 N	2944.072 E 6511.630 N	2985.425 E 6504.865 N	3024.942 E 6498.400 N	3040.958 E 6495.797 N	3049.108 E 6501.239 N	3049.798 E 6505.513 N	
CHAINAGES	515.435 33.772	551.507 6.365	559.822 10.931	572.552	608.885	657.946	699.849	739.892	756.118 14.127	765.918 7.700	770.247 3.276	

LINE201

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 14



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STAGE 2

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60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR
CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 3 OF 14

Rev	Date	Description	By	Check
C	06/04/23	STRUCTURE 2228 ADDED	JH	MG
B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HORIZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.
VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 512 Rev. No: C

STRUCTURE NAME

STRUCTURE DESCRIPTION

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK.

(i) SUPPORT TYPE: HS2

(ii) CONSTRUCTION: VIBRATORY RAMMER

(iii) EQUIPMENT LOADING: (UP TO 75kg)

(iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm

PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE (>= Ø600). REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200ø, 1500ø, 1800ø

PIPE / BOX SIZE (mm)

TYPE / CLASS

PIPE / BOX GRADE (%)

PIPE / BOX SLOPE (I in X)

PIPE / BOX FLOW (cumecs) (39% AEP)

CAPACITY FLOW (cumecs)

PIPE / BOX FLOW VELOCITY (m/s)

CAPACITY FLOW VELOCITY (m/s)

DATUM RL

HGL ELEVATION (39% AEP)

DEPTH TO INVERT

INVERT LEVEL OF DRAIN

FINISHED SURFACE LEVEL

SETOUT COORDINATES

CHAINAGES

1/202

2/202

3/202

4/202

5/202

11/201

STD IPWEA ACCESS CHAMBER 1800mm DIA WITH CONVERTOR SLAB AND 900x900 FI WITH GALV. GRATE C.I.D

DRAINWAY 1TC50 GULLY ON GRADE WITH 1050mm MANHOLE LINTEL (S) K.I.L.L. HINGED BIKESAFE GALV. GRATE C.I.D

STD IPWEA ACCESS CHAMBER 1050mm DIA WITH CLASS D LID

STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID

STD IPWEA ACCESS CHAMBER 1800mm DIA WITH CLASS D LID

STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID

SEWER Ø150 CH-2.688 IL13.286

WATER Ø150 CH-24.280 IL17.125

39% AEP HGL

WATER Ø150 CH-132.134 IL15.645

600 3

600 3

600 3

600 3

675 3

0.21% 471.3

0.21% 479.6

0.20% 501.7

1.01% 98.9

0.42% 239.4

0.537 0.307

0.536 0.304

0.547 0.297

0.580 0.669

1.101 0.589

1.90 1.90

1.90 1.90

1.94 1.94

2.05 2.66

3.08 3.08

6.000

17.010 16.542

16.511 16.462

16.387 16.401

16.212

15.869 15.822

15.398 15.162

14.679 14.775

3.136

3.257 3.307

3.347 3.397

2.645 2.695

2.452 2.482

3.232

14.694

14.684 14.634

14.610 14.560

14.459 14.409

13.845 13.815

13.677

17.830

17.941

17.957

17.104

16.297

16.909

2656.014 E 6668.957 N

2661.858 E 6670.834 N

2674.380 E 6669.873 N

2699.622 E 6624.477 N

2727.525 E 6574.293 N

2744.381 E

-6.138

4.713

11.509

50.667

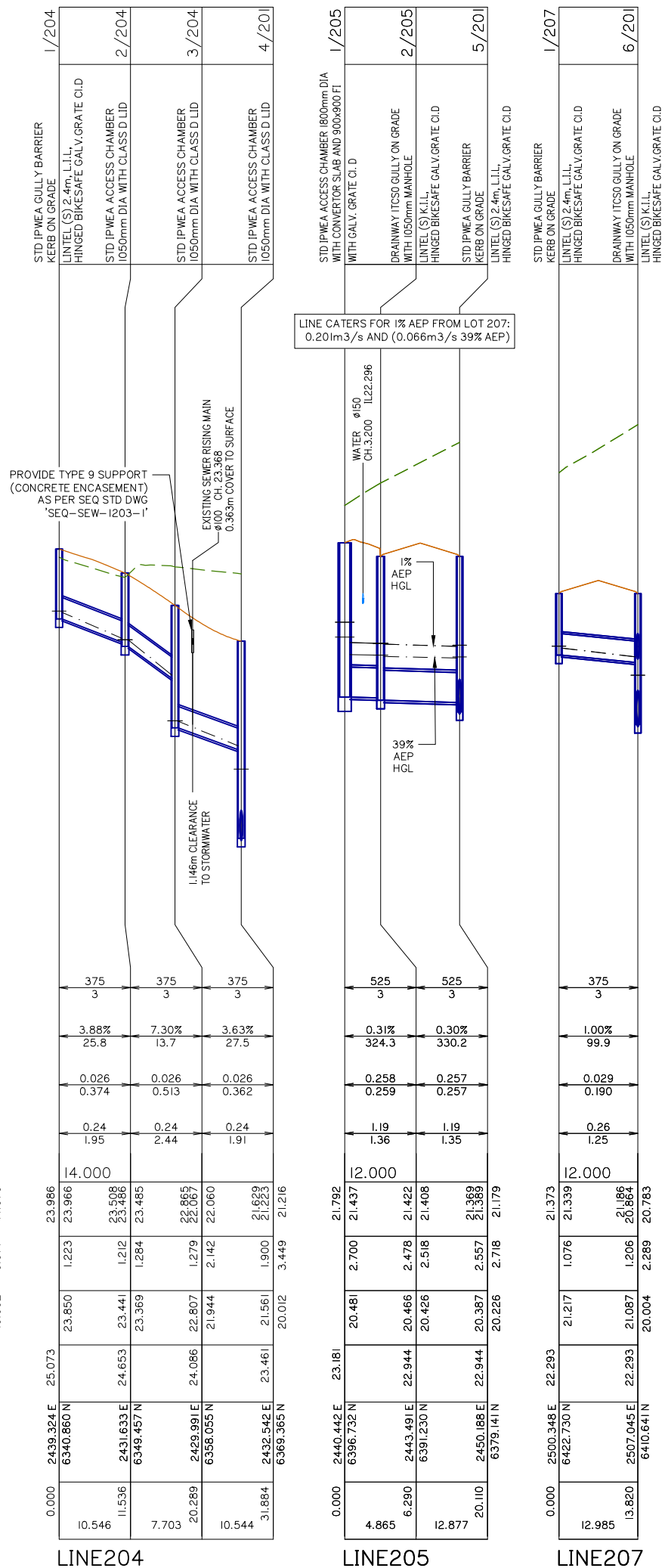
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55.769

121.920

33.037

56.607



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 4 OF 14

C	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
C	27/07/22	LINE 204 UPDATED	JH	MG
C	26/08/22	LINE 201 AND 204 UPDATED	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	13/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
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Drafted:	LAB / IG
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Approved:	MG
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RPEQ:	16939
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Signed:

Date:	20/09/2022
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Drawing No:	Rev. No:
5941 ENG OPW2 513	C

STRUCTURE NAME		STRUCTURE DESCRIPTION		SHAFT / PIT BASE		CONVERTER SLAB TABLE		PIPE / BOX SIZE (mm) TYPE / CLASS		PIPE / BOX GRADE (%) PIPE / BOX SLOPE (1 in X)		PIPE / BOX FLOW (cumecs) (39% AEP) CAPACITY FLOW (cumecs)		PIPE / BOX FLOW VELOCITY (m/s) CAPACITY FLOW VELOCITY (m/s)		DATUM RL		HGL ELEVATION (39% AEP)		DEPTH TO INVERT		INVERT LEVEL OF DRAIN		FINISHED SURFACE LEVEL		SETOUT COORDINATES		CHAINAGES	
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		STRUCTURE DESCRIPTION		SHAFT / PIT BASE		CONVERTER SLAB TABLE		PIPE / BOX SIZE (mm) TYPE																					

STRUCTURE NAME	1/223
STRUCTURE DESCRIPTION	STD IPWEA ACCESS CHAMBER 1200mm DIA WITH CONVERTOR SLAB AND 900x900 FT WITH GALV. GRATE CI. D

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN
USED FOR THE DESIGN AND SPECIFICATION OF
THE STORMWATER DRAINAGE PIPEWORK.

- (i) SUPPORT TYPE: HS2
(ii) CONSTRUCTION: VIBRATORY RAMMER
(iii) EQUIPMENT LOADING: (UP TO 75kg)
(iv) MINIMUM COMPACTED COVER OVER PIPE:

PROVIDE BRIDGING SLAB UNDER
STORMWATER PIPE ($\geq \phi 600$).
REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE PRECAST
CONCRETE PIT BASE (OR
EQUIVALENT) TO SUIT SPECIFIED
DIAMETER OF SHAFT UP TO 1200
DIA.

ALTERNATELY (OR EXCEEDING
1200 DIA) PROVIDE 250mm THICK
CAST IN-SITU REINFORCED
CONCRETE BASE, 2 LAYERS SL82
MESH ON 50MM THICK BLINDING
CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER
SLAB FOR SHAFTS 1200 ϕ , 1500 ϕ , 1800 ϕ

PIPE / BOX SIZE (mm)

TYPE / CLASS

PIPE / BOX GRADE (%)

PIPE / BOX SLOPE (I in X)

PIPE / BOX FLOW (cumecs) (39% AEP)

CAPACITY FLOW (cumecs)

PIPE / BOX FLOW VELOCITY (m/s)

CAPACITY FLOW VELOCITY (m/s)

DATUM RL

HGL ELEVATION (39% AEP)

DEPTH TO INVERT

INVERT LEVEL OF DRAIN

FINISHED SURFACE LEVEL

SETOUT COORDINATES

CHAINAGES

LINE223

LINE224

LINE225

LINE226

LINE227

LINE228

LINE229

LINE230

LINE231

LINE232

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 6 OF 14



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Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR
CONSTRUCTION

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DRAWING TITLE

STORMWATER DRAINAGE LONGITUDINAL SECTIONS

SHEET 6 OF 14

D	06/04/23	STORMWATER LINES UPDATED	JH	MG	
C	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
C	19/07/22	STORMWATER UPDATES	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
ISSUE	Date	Description	DRN	CHK	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HORIZ: 0 5 10 15 20 25 30 35 40

VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed: IG

Drafted: LAB / IG

Approved: MG

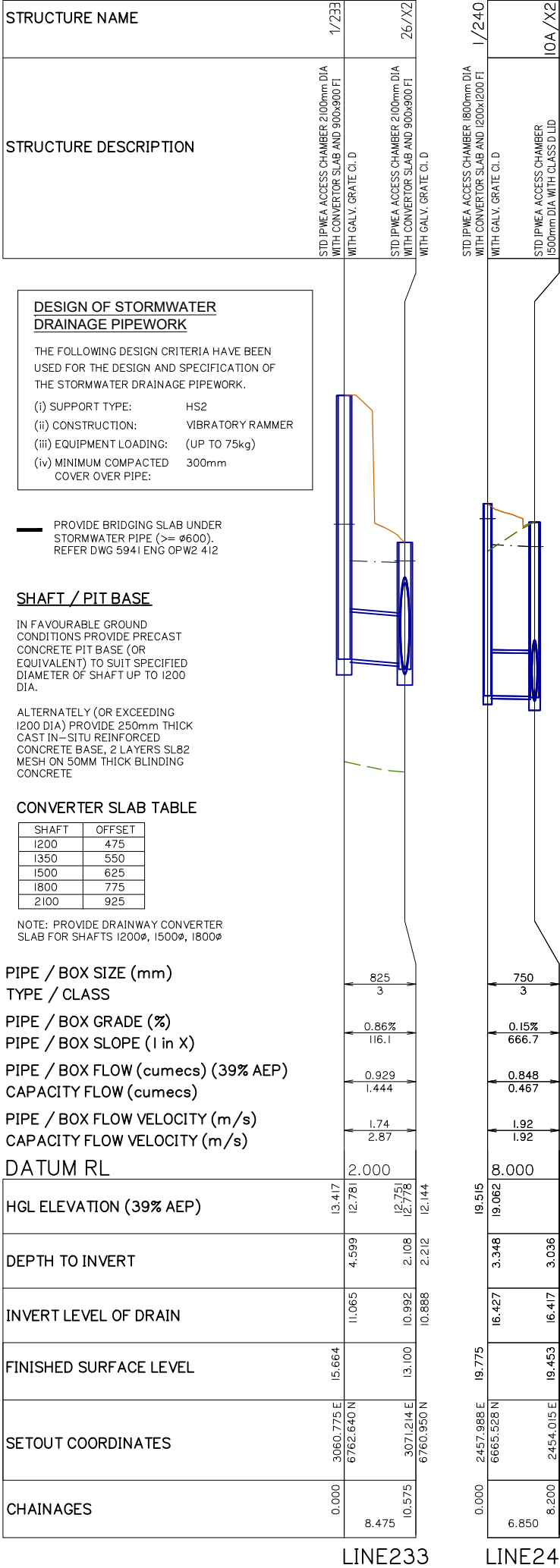
RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 515

Rev. No:
D



STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 7 OF 14

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DRAWING TITLE

STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 7 OF 14

Issue	Date	Description	LAB	MG	DRN	CHK
D	06/04/23	LINES 234, 235 & 236 REMOVED	JH	MG		
C	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG		
C	06/09/22	STORMWATER LINE 233 UPDATED	JH	MG		
C	19/07/22	STORMWATER UPDATES	JH	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES

HORIZ: Scale 1:500 - Lengths are in Metres.

VERT: Scale 1:50 - Lengths are in Metres.

Scale at A1:

AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

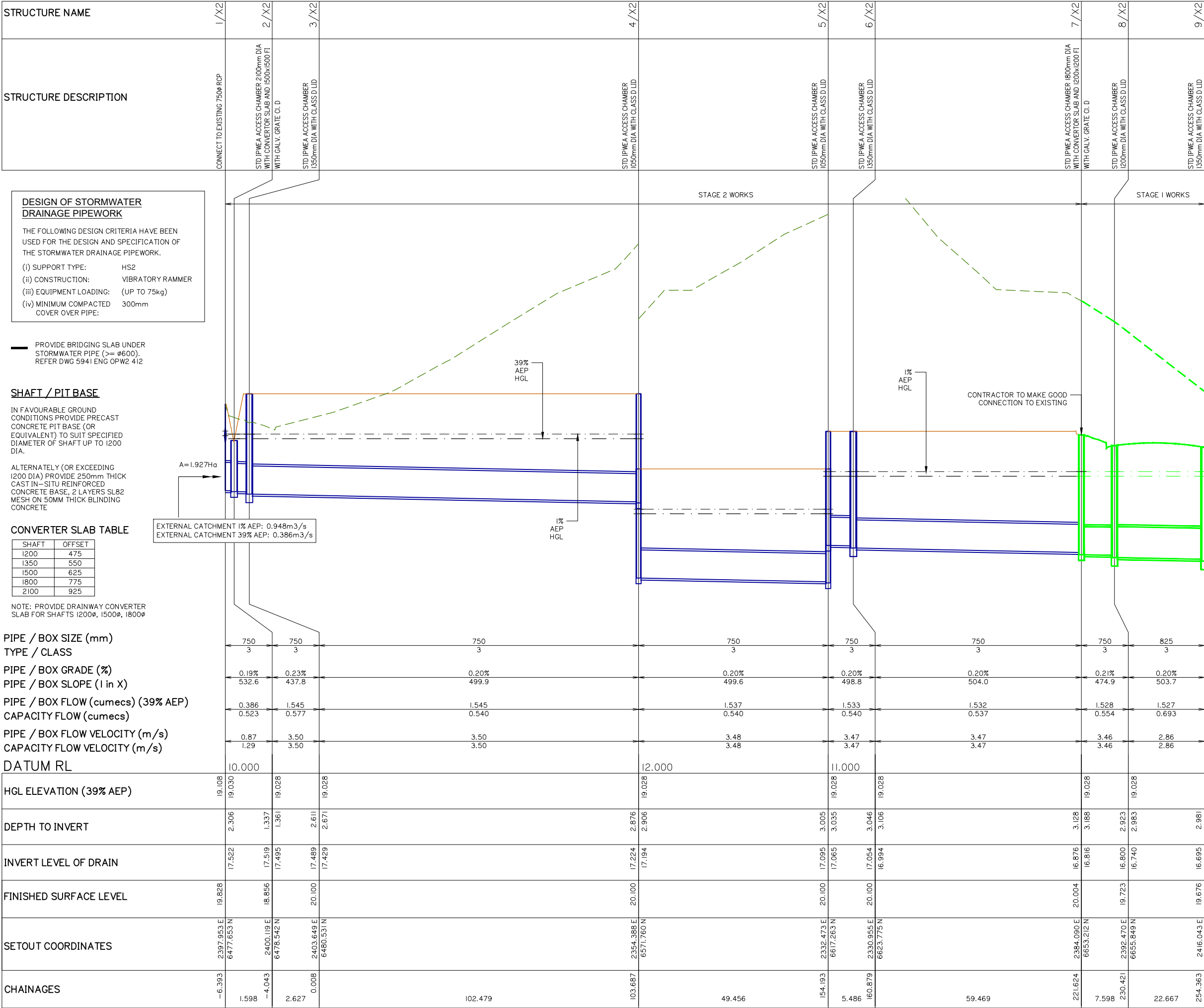
Drawing No:

5941 ENG OPW2 516

Rev. No:

D

G:\Projects\5941\ENGINEERING\Acad\CIVIL WORKS STAGE 2\Current\5941 ENG OPW2 510.dwg



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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 8 OF 14

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.



Scale 1:50 - Lengths are in Metres.



Scale at A1: AS SHOWN

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 517

Rev. No:
B

STRUCTURE NAME	9 / X2	10 / X2	10A / X2	11 / X2	12 / X2	13 / X2	14 / X2																																																																																								
STRUCTURE DESCRIPTION	STD IPWEA ACCESS CHAMBER 1350mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID	STD IPWEA ACCESS CHAMBER 1500mm DIA WITH CLASS D LID																																																																																								
DESIGN OF STORMWATER DRAINAGE PIPEWORK THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK. (i) SUPPORT TYPE: HS2 (ii) CONSTRUCTION: VIBRATORY RAMMER (iii) EQUIPMENT LOADING: (UP TO 75kg) (iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE (>= Ø600). REFER DWG 5941 ENG OPW2 412 SHAFT / PIT BASE IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA. ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE CONVERTER SLAB TABLE <table><tr><th>SHAFT</th><th>OFFSET</th></tr><tr><td>1200</td><td>475</td></tr><tr><td>1350</td><td>550</td></tr><tr><td>1500</td><td>625</td></tr><tr><td>1800</td><td>775</td></tr><tr><td>2100</td><td>925</td></tr></table> NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200Ø, 1500Ø, 1800Ø PIPE / BOX SIZE (mm) TYPE / CLASS PIPE / BOX GRADE (%) PIPE / BOX SLOPE (1 in X) PIPE / BOX FLOW (cumecs) (39% AEP) CAPACITY FLOW (cumecs) PIPE / BOX FLOW VELOCITY (m/s) CAPACITY FLOW VELOCITY (m/s) DATUM RL <table><tr><td></td><td>900 3</td><td>900 3</td><td>1050 3</td><td>1050 3</td><td>1050 3</td><td>1050 3</td></tr><tr><td></td><td>0.50% 200.0</td><td>0.50% 200.0</td><td>0.50% 199.3</td><td>0.40% 250.7</td><td>0.25% 399.3</td><td>0.50% 201.1</td></tr><tr><td></td><td>1.525 1.387</td><td>2.331 1.387</td><td>2.328 2.096</td><td>2.381 1.869</td><td>2.359 1.481</td><td>2.335 2.087</td></tr><tr><td></td><td>2.40 2.40</td><td>3.66 3.66</td><td>2.69 2.69</td><td>2.75 2.75</td><td>2.72 2.72</td><td>2.70 2.70</td></tr><tr><td></td><td>6.000</td><td></td><td></td><td></td><td></td><td></td></tr></table> <table><tr><td>HGL ELEVATION (39% AEP)</td><td>19.028</td><td>19.028</td><td>19.028</td><td>19.028 18.961</td><td>18.541 18.474</td><td>18.051 18.019</td><td>18.001 17.827</td></tr><tr><td>DEPTH TO INVERT</td><td>2.981 3.031</td><td>3.018 3.056</td><td>3.030 3.050</td><td>2.992 3.043</td><td>2.848 2.899</td><td>2.597 2.617</td><td>2.609 2.690</td></tr><tr><td>INVERT LEVEL OF DRAIN</td><td>16.695 16.645</td><td>16.435 16.397</td><td>16.337 16.317</td><td>16.142 16.091</td><td>15.780 15.729</td><td>15.540 15.520</td><td>15.484 15.403</td></tr><tr><td>FINISHED SURFACE LEVEL</td><td>19.676</td><td>19.453</td><td>19.367</td><td>19.134</td><td>18.628</td><td>18.137</td><td>18.093</td></tr><tr><td>SETOUT COORDINATES</td><td>2416.043 E 6651.664 N</td><td>2454.015 E 6672.701 N</td><td>2465.884 E 6679.277 N</td><td>2497.710 E 6696.909 N</td><td>2567.213 E 6735.414 N</td><td>2634.538 E 6772.713 N</td><td>2642.323 E 6776.685 N</td></tr><tr><td>CHAINAGES</td><td>254.363 41.984</td><td>297.772 12.069 311.342</td><td> 34.884</td><td>347.725 77.956</td><td>427.181 75.467</td><td>504.149 7.240</td><td>512.889</td></tr></table>	SHAFT	OFFSET	1200	475	1350	550	1500	625	1800	775	2100	925		900 3	900 3	1050 3	1050 3	1050 3	1050 3		0.50% 200.0	0.50% 200.0	0.50% 199.3	0.40% 250.7	0.25% 399.3	0.50% 201.1		1.525 1.387	2.331 1.387	2.328 2.096	2.381 1.869	2.359 1.481	2.335 2.087		2.40 2.40	3.66 3.66	2.69 2.69	2.75 2.75	2.72 2.72	2.70 2.70		6.000						HGL ELEVATION (39% AEP)	19.028	19.028	19.028	19.028 18.961	18.541 18.474	18.051 18.019	18.001 17.827	DEPTH TO INVERT	2.981 3.031	3.018 3.056	3.030 3.050	2.992 3.043	2.848 2.899	2.597 2.617	2.609 2.690	INVERT LEVEL OF DRAIN	16.695 16.645	16.435 16.397	16.337 16.317	16.142 16.091	15.780 15.729	15.540 15.520	15.484 15.403	FINISHED SURFACE LEVEL	19.676	19.453	19.367	19.134	18.628	18.137	18.093	SETOUT COORDINATES	2416.043 E 6651.664 N	2454.015 E 6672.701 N	2465.884 E 6679.277 N	2497.710 E 6696.909 N	2567.213 E 6735.414 N	2634.538 E 6772.713 N	2642.323 E 6776.685 N	CHAINAGES	254.363 41.984	297.772 12.069 311.342	 34.884	347.725 77.956	427.181 75.467	504.149 7.240	512.889
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	2100	925																																																																																													
		900 3	900 3	1050 3	1050 3	1050 3	1050 3																																																																																								
		0.50% 200.0	0.50% 200.0	0.50% 199.3	0.40% 250.7	0.25% 399.3	0.50% 201.1																																																																																								
		1.525 1.387	2.331 1.387	2.328 2.096	2.381 1.869	2.359 1.481	2.335 2.087																																																																																								
	2.40 2.40	3.66 3.66	2.69 2.69	2.75 2.75	2.72 2.72	2.70 2.70																																																																																									
	6.000																																																																																														
HGL ELEVATION (39% AEP)	19.028	19.028	19.028	19.028 18.961	18.541 18.474	18.051 18.019	18.001 17.827																																																																																								
DEPTH TO INVERT	2.981 3.031	3.018 3.056	3.030 3.050	2.992 3.043	2.848 2.899	2.597 2.617	2.609 2.690																																																																																								
INVERT LEVEL OF DRAIN	16.695 16.645	16.435 16.397	16.337 16.317	16.142 16.091	15.780 15.729	15.540 15.520	15.484 15.403																																																																																								
FINISHED SURFACE LEVEL	19.676	19.453	19.367	19.134	18.628	18.137	18.093																																																																																								
SETOUT COORDINATES	2416.043 E 6651.664 N	2454.015 E 6672.701 N	2465.884 E 6679.277 N	2497.710 E 6696.909 N	2567.213 E 6735.414 N	2634.538 E 6772.713 N	2642.323 E 6776.685 N																																																																																								
CHAINAGES	254.363 41.984	297.772 12.069 311.342	 34.884	347.725 77.956	427.181 75.467	504.149 7.240	512.889																																																																																								

STRUCTURE NAME

STRUCTURE DESCRIPTION

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK.

- (i) SUPPORT TYPE: HS2
(ii) CONSTRUCTION: VIBRATORY RAMMER
(iii) EQUIPMENT LOADING: (UP TO 75kg)
(iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm

PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE ($\geq \phi 600$). REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200 ϕ , 1500 ϕ , 1800 ϕ

PIPE / BOX SIZE (mm)

TYPE / CLASS

PIPE / BOX GRADE (%)

PIPE / BOX SLOPE (1 in X)

PIPE / BOX FLOW (cumecs) (39% AEP)

CAPACITY FLOW (cumecs)

PIPE / BOX FLOW VELOCITY (m/s)

CAPACITY FLOW VELOCITY (m/s)

DATUM RL

HGL ELEVATION (39% AEP)

DEPTH TO INVERT

INVERT LEVEL OF DRAIN

FINISHED SURFACE LEVEL

SETOUT COORDINATES

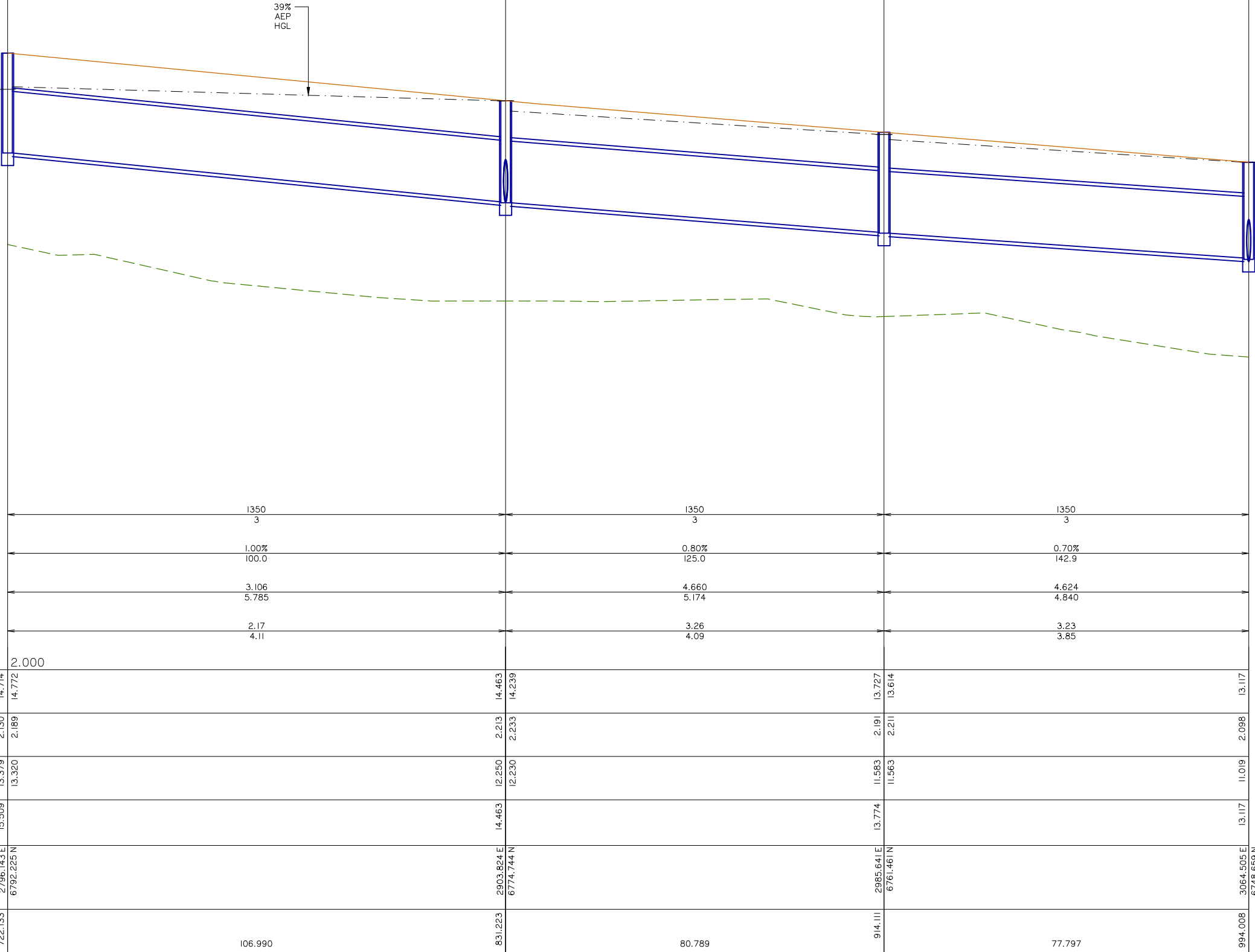
CHAINAGES

20 / X2
STD IPWEA ACCESS CHAMBER 2100mm DIA
WITH CONVERTOR SLAB AND 900x900 FT
WITH GALV. GRATE CI. D

21 / X2
STD IPWEA ACCESS CHAMBER 2100mm DIA
WITH CONVERTOR SLAB AND 900x900 FT
WITH GALV. GRATE CI. D

22 / X2
STD IPWEA ACCESS CHAMBER 2100mm DIA
WITH CONVERTOR SLAB AND 900x900 FT
WITH GALV. GRATE CI. D

23 / X2
STD IPWEA ACCESS CHAMBER 2100mm DIA
WITH CONVERTOR SLAB AND 900x900 FT
WITH GALV. GRATE CI. D



LINEX2

STORMWATER LONGITUDINAL SECTIONS SHEET 11 OF 14



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Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 11 OF 14

E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	08/09/22	LINE X2 UPDATED	JH	MG	
C	19/07/22	STORMWATER UPDATES	JH	MG	
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HORIZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.
VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 520

Rev. No:
E

STRUCTURE NAME	23 / X2
STRUCTURE DESCRIPTION	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTER SLAB AND 900x900 FT WITH GALV GRATE CI. D
	24 / X2
	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID
	25 / X2
	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID
	26 / X2
	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CONVERTER SLAB AND 900x900 FT WITH GALV GRATE CI. D
	27 / X2
	STD IPWEA ACCESS CHAMBER 2100mm DIA WITH CLASS D LID
	28 / X2
	XXXXmm DIA OUTLET HEADWALL INSTALL GALV TUBULAR HANDRAIL REFER LOCAL AUTHORITY STD DWG

DESIGN OF STORMWATER DRAINAGE PIPEWORK

THE FOLLOWING DESIGN CRITERIA HAVE BEEN USED FOR THE DESIGN AND SPECIFICATION OF THE STORMWATER DRAINAGE PIPEWORK.

- (i) SUPPORT TYPE: HS2
(ii) CONSTRUCTION: VIBRATORY RAMMER
(iii) EQUIPMENT LOADING: (UP TO 75kg)
(iv) MINIMUM COMPACTED COVER OVER PIPE: 300mm

PROVIDE BRIDGING SLAB UNDER STORMWATER PIPE ($\geq \phi 600$). REFER DWG 5941 ENG OPW2 412

SHAFT / PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR SHAFTS 1200 ϕ , 1500 ϕ , 1800 ϕ

PIPE / BOX SIZE (mm)

TYPE / CLASS

PIPE / BOX GRADE (%)

PIPE / BOX SLOPE (I in X)

PIPE / BOX FLOW (cumecs) (39% AEP)

CAPACITY FLOW (cumecs)

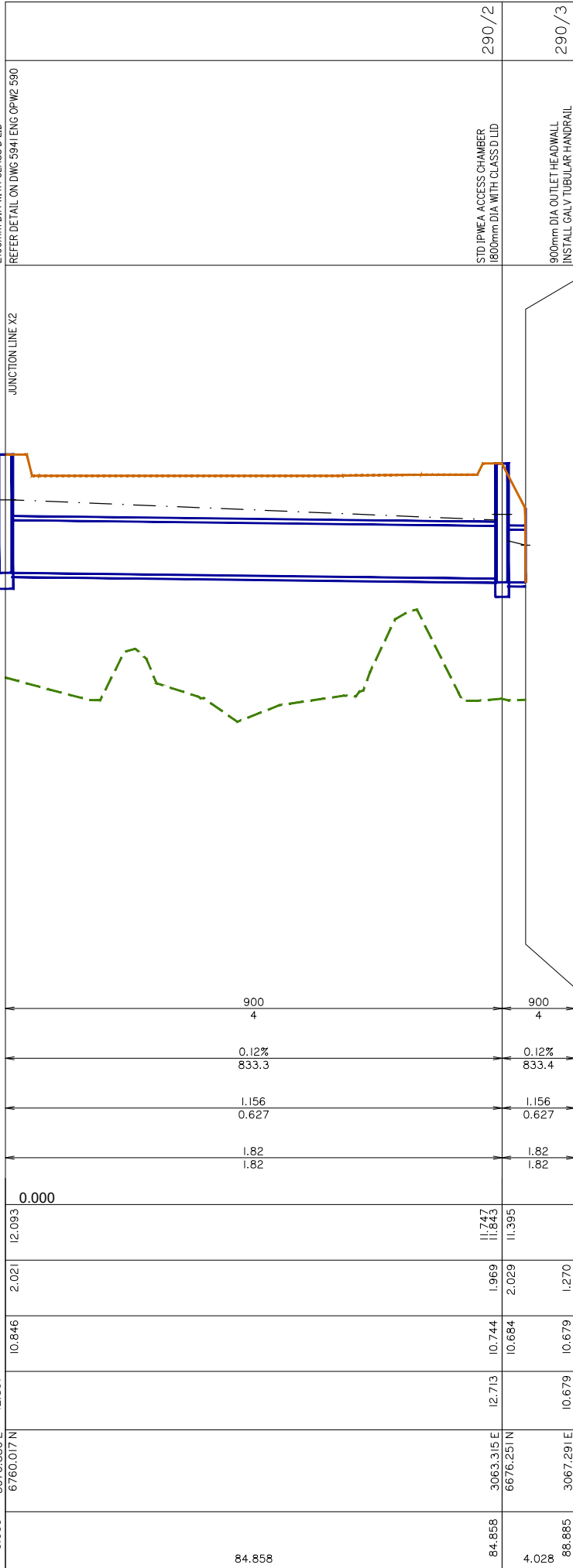
PIPE / BOX FLOW VELOCITY (m/s)

CAPACITY FLOW VELOCITY (m/s)

DATUM RL

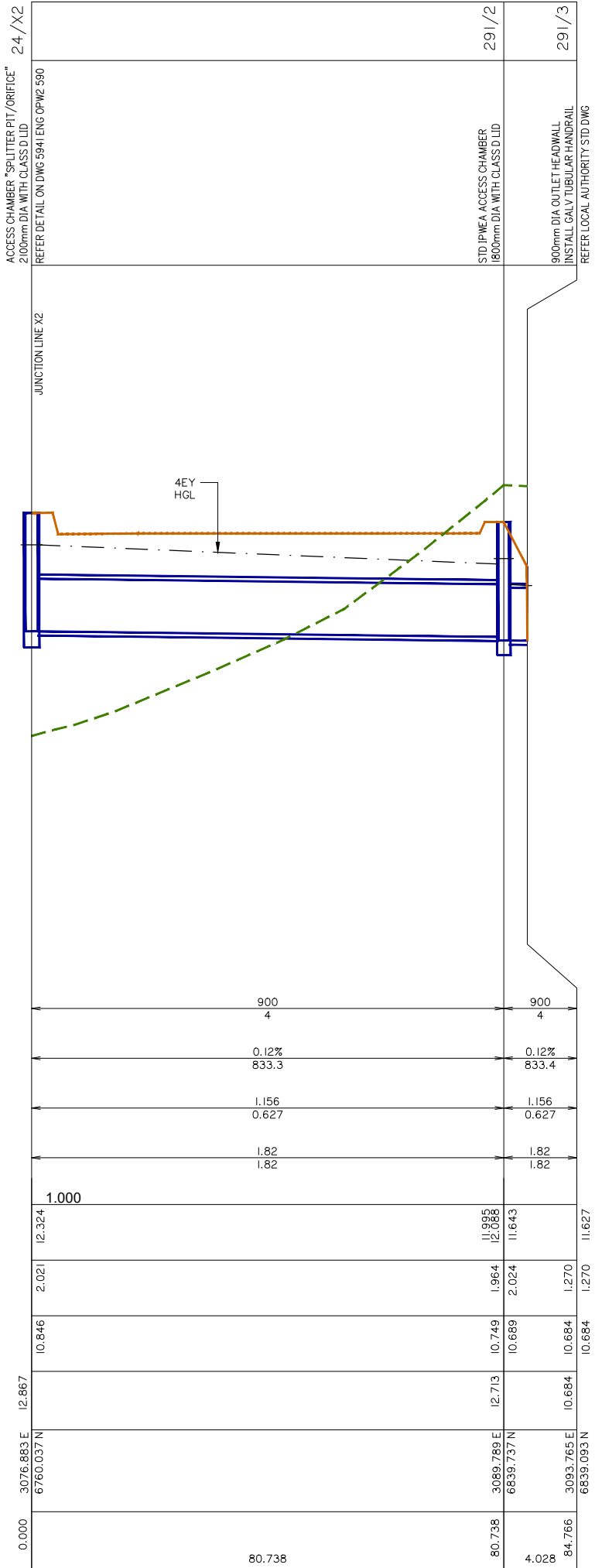
HGL ELEVATION (39% AEP)	13.17	13.080	13.079	12.895	12.880	12.751	12.778	12.144	12.092	11.825	11.789	11.627
DEPTH TO INVERT	2.098	2.118	2.093	2.113	2.091	2.192	2.212	2.102	2.096	2.116	2.100	1.500
INVERT LEVEL OF DRAIN	11.019	10.999	10.986	10.966	10.939	10.919	10.888	10.846	10.866	10.846	10.823	10.823
FINISHED SURFACE LEVEL	13.117	13.079	13.079	13.030	13.030	13.100	12.962	12.962	12.962	12.962	12.962	12.962
SETOUT COORDINATES	3064.505 E 6748.659 N	3067.946 E 6751.139 N	3068.993 E 6757.602 N	3071.214 E 6760.950 N	3076.881 E 6760.027 N	3080.857 E 6759.381 N	3076.880 E 6760.017 N	3063.315 E 6676.251 N	3067.291 E 6675.607 N	3093.765 E 6683.093 N	3093.765 E 6683.093 N	3093.765 E 6683.093 N
CHAINAGES	994.008	2.142	4.447	1004.797	1.917	1008.814	3.641	1014.556	2.977	1018.584	1018.584	1018.584

LINE X2



LINE 290

STORMWATER LONGITUDINAL SECTIONS SHEET 12 OF 14



LINE 291



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
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Level Datum: AHD
Meridian: -
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PSM: -
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DRAWING TITLE

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 12 OF 14

F	06/10/22	STRUCTURE 27/X2 AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	08/09/22	LINE X2 UPDATED	JH	MG	
C	19/07/22	STORMWATER UPDATES	JH	MG	
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HORIZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.

VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed: IG

Drafted: LAB / IG

Approved: MG

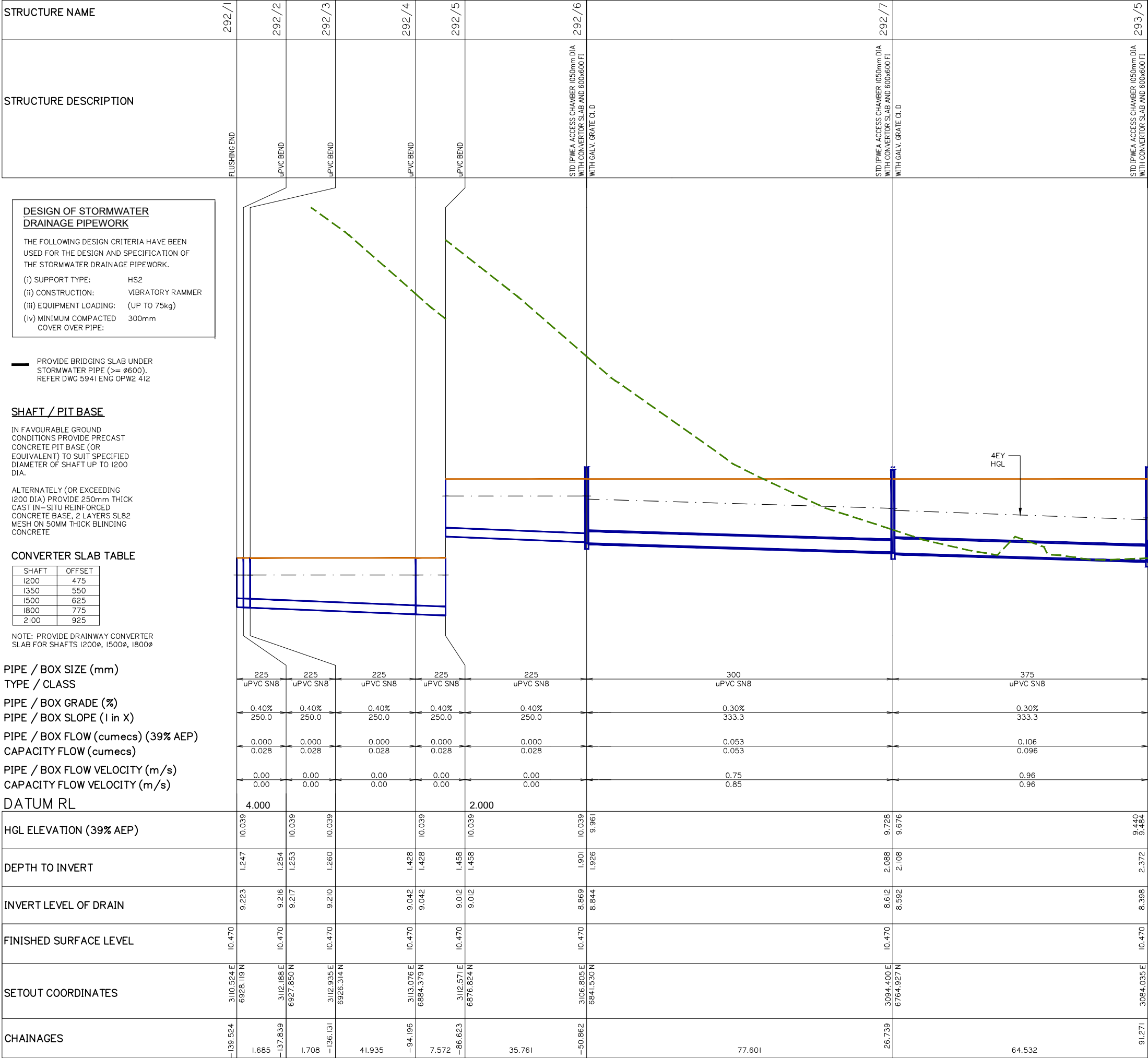
RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 521

Rev. No:
F



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Lot: 501

Plan: SP295994

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DRAWING TITLE

STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 13 OF 14

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issued	Date	Description	DRN	CHK	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HORIZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.

VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1:

AS SHOWN

Designed:

IG

Drafted:

LAB / IG

Approved:

MG

RPEQ:

16939

Signed:

Date:

20/09/2022

Drawing No:

5941 ENG OPW2 522

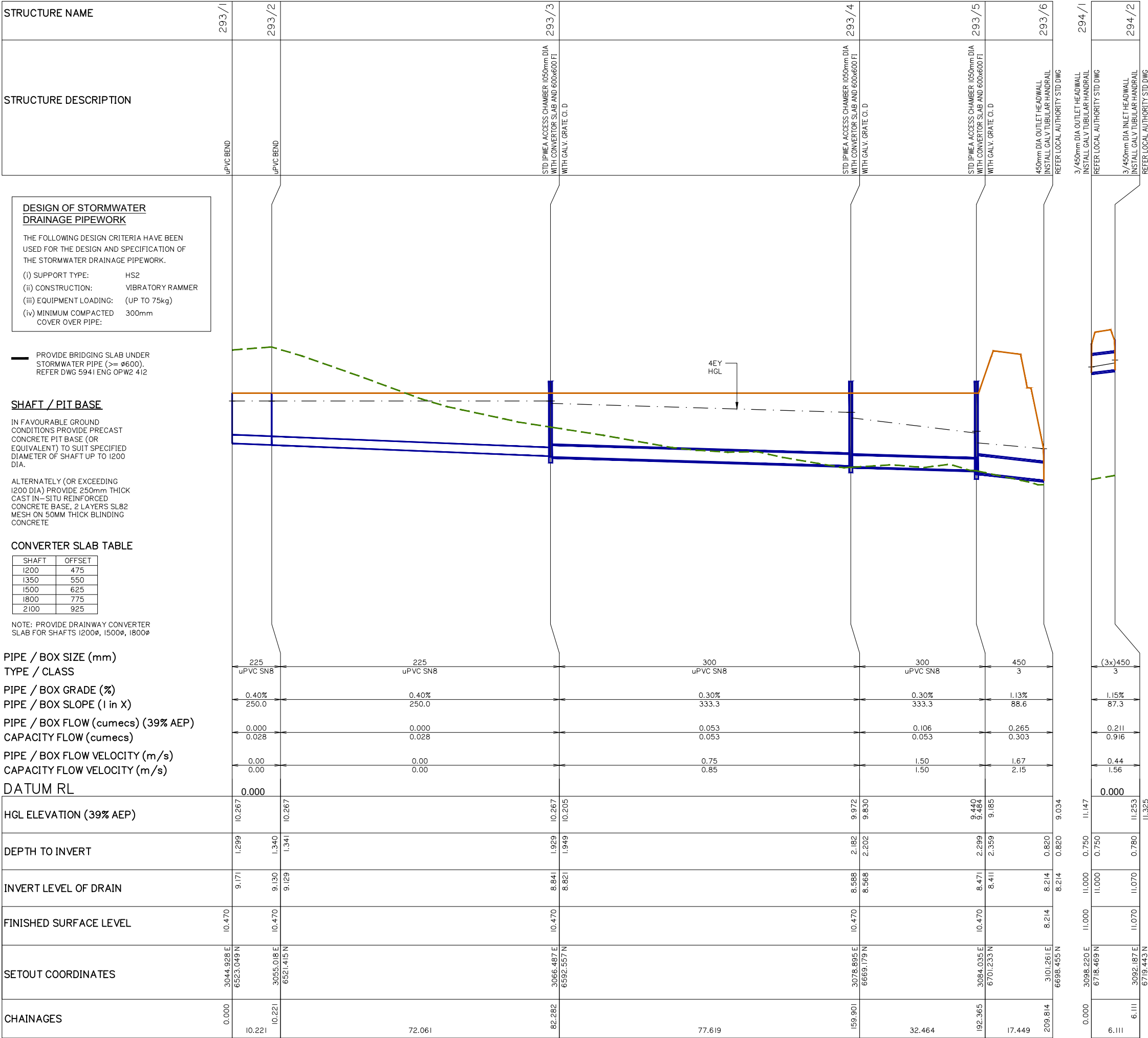
Rev. No:

B

LINE 292

STORMWATER LONGITUDINAL SECTIONS SHEET 13 OF 14

G:\Projects\5941\ENGINEERING\Acad\CIVIL WORKS STAGE 2\Current\5941 ENG OPW2 510.dwg



LINE 293

LINE 294

STORMWATER LONGITUDINAL SECTIONS SHEET 14 OF 14

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Project:

VANTAGE YATALA
STAGE 2

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Plan: SP295994
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PSM: -
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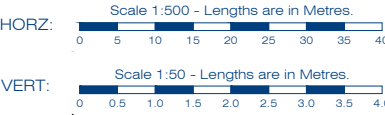
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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 14 OF 14

B	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issued	Date	Description	DRN	CHK	

SCALE IN METRES



Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 523
Rev. No: B

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STORMWATER DRAINAGE CALCULATION TABLES SHEET 2 OF 6



Project: VANTAGE YATALA
STAGE 2

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SCALE IN METRES

NOT APPLICABLE

Scale at A1: NOT APPLICABLE

Drawing No:	Rev. No
5941 ENG OPW2 551	D

12d Model RUNOFF 'C' METHOD	DIRECT	C2 VALUE	0.73	C10 VALUE	0.86	C100 VALUE	1.00
-----------------------------	--------	----------	------	-----------	------	------------	------

[illegible]

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Project:				
VANTAGE YATALA STAGE 2				
Site Address:				
60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207				
THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR				
RPD:				
Lot:	501			
Plan:	SP295994			
Local Authority:	CITY OF GOLD COAST COUNCIL			
Level Datum:	AHD			
Meridian:	-			
Contour Interval:	-			
PSM:	-			
RL:	-			
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DRAWING TITLE				
STORMWATER DRAINAGE CALCULATION TABLES SHEET 3 OF 6				
D	20/09/22	ISSUED FOR APPROVAL	JH	MG
G	19/07/22	CALC TABLE UPDATED	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CHK
SCALE IN METRES				
NOT APPLICABLE				
Scale at A1:		NOT APPLICABLE		
Designed:		IG		
Drafted:		LAB / IG		
Approved:		MG		
RPEQ:		16939		
Signed:				
Date:		20/09/2022		
Drawing No:		Rev. No:		
5941 ENG OPW2 552		D		

12d Model RUNOFF 'C' METHOD	DIRECT	C2 VALUE	0.73	C10 VALUE	0.86	C100 VALUE	1.00
-----------------------------	--------	----------	------	-----------	------	------------	------

DESIGN ARI		LOCATION				TIME				SUB-CATCHMENT RUNOFF					INLET DESIGN										DRAIN DESIGN										HEADLOSSES										PART FULL		DESIGN LEVELS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		STRUCTURE No.	DRAIN SECTION	SUB CATCHMENT'S CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	10Y RUNOFF CO-EFFICIENT	Q-EFFICIENT OF RUNOFF	SUB CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C/A)	SUB CATCHMENT DISCHARGE	FLOW IN I&C (INC BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C/A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	V2/2g	Ku	hu	Kd	hl	Kw	hw	sF	HF	DEPTH	VELOCITY	PIPE U/S LL	PIPE D/S LL	PIPE U/S H.G.L	PIPE D/S H.G.L	W.S.E	SURFACE OF I&C INVERT LEVEL	STRUCTURE No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Yrs					%	min	mm/h			ha	ha	ha	l/s	l/s	%	l/s		l/s	l/s		min	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	min	19A/X2	T4/T8	m		m		m		m		m	m/s	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

12d Model RUNOFF 'C' METHOD	DIRECT	C2 VALUE	0.73	C10 VALUE	0.86	C100 VALUE	1.00
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LOCATION					TIME		SUB-CATCHMENT RUNOFF							INLET DESIGN					DRAIN DESIGN										HEADLOSSES										PART FULL				DESIGN LEVELS										
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	JOINT RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C*A)	SUB-CATCHMENT DISCHARGE	FLOW IN I&C (INC BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C*A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCTURE HEADLOSS	W.S.E CO-EFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L-S)	DEPTH	VELOCITY	PIPE U/S I.L	PIPE D/S I.L	PIPE U/S H.G.L	PIPE D/S H.G.L	W.S.E	SURFACE OF R&C INVERT LEVEL	STRUCTURE No.	
YRS					%	min	mm/h			ha	ha	ha	l/s	l/s	%	l/s		l/s	l/s		min.	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	min.			m		m		m		m	%	m	m	m/s	m	m	m	m	m			
2 100	10a/X2	10a/X2 to 10/X2						0.73	0.73								ACC_CHA_1500				6.51 117 3.832 5.77 297 4.627	3817				2331	12.07	0.5	900 3	3.7	0.736	10a/X2		0	0	0				0	0	0	0.9	3.7	16.4	16.34	19.03 19.03	19.03 19.03	19.03 19.03	19.45	10a/X2		
2 100	1/EX1	1/EX1 to 2/EX1											W/D = 0	0	0		ACC_CHA_1050				1 175 0 1 419 0	0				0	11.68	0.51	300 3	0.0	0	1/EX1		0	0	0				0	0.51	0.059	0	0.0	20.97	20.91	20.97 20.97	20.91 20.91	20.97 20.97	21.93	1/EX1		
2 100	2/EX1	2/EX1 to 1/X2											W/D = 0	0	0		ACC_CHA_1050				1.11 172 0 1.11 415 0	0				0	54.63	3.73	300 3	0.0	0	2/EX1		0	0	0				0	3.26	1.778	0	0.0	20.89	18.85	20.89 20.89	19.11 19.51	20.89 19.51	22.2	2/EX1		
2 100	1/X2	1/X2 to 2/X2											W/D = 0	0	0		DM				1.57 157 0 1.57 400 0	0				386	1.598	0.19	750 3	0.9	0.023	1/X2		0.039	2	0.078				0.078	0.1	0.002	0.48	1.3	17.52	17.52	19.03 19.04	19.03 19.03	19.11 19.83	1/X2			
2 100	1/EX2	1/EX2 to 2/EX1											W/D = 0	0	0		ACC_CHA_1050				1 175 0 1 419 0	0				0	13.43	0.51	300 3	0.0	0	1/EX2		0	0	0				0	0.51	0.068	0	0.0	21.02	20.95	21.02 20.95	20.95 20.95	21.02 20.95	21.96	1/EX2		
2 100	2/EX1	2/EX1 to 1/X2											W/D = 0	0	0		ACC_CHA_1050				1.11 172 0 1.11 415 0	0				0	54.63	3.73	300 3	0.0	0	2/EX1		0	0	0				0	3.26	1.778	0	0.0	20.89	18.85	20.89 20.89	19.11 19.51	20.89 19.51	22.2	2/EX1		
2 100	1/EXT1	1/EXT1 to 2/EXT1				5 5	124 307	0.73 0.73	0.383 0.383	0.283 0.342	0.283 0.342	97 97 292 293	W/D = 0	0	0		GRADE_BK_4800_Lip	97	0		5 124 0.283 5 307 0.342	292				293	97	21.61	1	600 3	0.3	0.122	1/EXT1	G1	0.006	7	0.042				0.042	0.02	0.005	0.155	1.7	4.801	4.585	5.603 6.275	5.598 6.233	5.645 6.233	6.903	1/EXT1	
2 100	2/EXT1	2/EXT1 to 3/EXT1				5 5	124 307	0.73 0.73	0.383 0.383	0.004 0.004	0.003 0.004	1 1 3 3	W/D = 0	0.6	0		GRADE_BK_2400_Lip	1	0	1/EXT1	5.21 123 0.286 5.16 305 0.346	293				3	98	48.47	0.5	600 3	0.4	0.283	2/EXT1	T1	0.006	0.25	0.002				0.002	0.02	0.01	0.186	1.3	4.555	4.313	5.596 6.221	5.586 6.127	5.598 6.127	6.93	2/EXT1	
2 100	3/EXT1	3/EXT1 to 4/EXT2				5 5	124 307	0.73 0.73	0.383 0.383	0.006 0.006	0.004 0.005	2 2 5 5	W/D = 0	1	0		GRADE_BK_2400_Lip	2	0		5.83 120 0.29 5.62 299 0.351	292				5	97	4.941	0.25	600 3	0.3	0.028	3/EXT1	T1/T2	0.006	0.32	0.002				0.002	0.02	0.001	0.223	1.0	4.253	4.241	5.584 6.11	5.583 6.1	5.586 6.1	7.193	3/EXT1	
2 100	4/EXT2	4/EXT2 to 2/100											W/D = 0	0	0		ACC_CHA_1800				5.91 120 0.511 5.68 298 0.619	512				189	25.12	0.1	1050 3	0.2	0.092	4/EXT2	T2/T4	0.002	0.3	0.001				0.001	0	0.001	0.32	0.9	4.094	4.069	5.582 6.074	5.581 6.046	5.583 6.046	7.181	4/EXT2		
2 100	1/EXT2	1/EXT2 to 2/EXT2				5 5	124 307	0.73 0.73	0.383 0.383	0.057 0.057	0.042 0.051	0.042 0.051	14 14 43 43	W/D = 0	0	0		1200x1200 FI	14	0		5 124 0.042 5 307 0.051	43			43	14	9.64	1	450 3	0.1	0.014	1/EXT2	G1	0	4.79	0.002				0.002	0	0	0.066	1.0	4.693	4.596	5.592 6.675	5.592 6.673	5.594 6.673	7.984	1/EXT2	
2 100	2/EXT2	2/EXT2 to 3/EXT2				5 5	124 307	0.73 0.73	0.383 0.383	0.107 0.107	0.079 0.096	27 82 482 482	W/D = 0	0	0		GRADE_BK_4800_Lip	27	0		5.16 123 0.121 5.12 305 0.146	124				41	27.64	0.66	675 3	0.1	0.055	2/EXT2	G1/T1/T2	0.001	2.69	0.002				0.002	0	0.001	0.108	1.1	4.399	4.216	5.59 6.395	5.589 6.303	5.592 6.303	6.767	2/EXT2		
2 100	3/EXT2	3/EXT2 to 4/EXT2				5 5	124 307	0.73 0.73	0.383 0.383	0.135 0.135	0.099 0.12	34 103 169 169	W/D = 0	0	0		GRADE_BK_4800_Lip	53	0		5.58 121 0.22 5.32 303 0.267	225				93	12.57	0.15	750 3	0.2	0.044	3/EXT2	G1/T4/T8	0.002	2.43	0.005				2.48	0.006	0.01	0.001	0.227	0.8	4.153	4.134	5.584 6.141	5.583 6.1	5.589 6.1	6.686	3/EXT2	
2 100	4/EXT2	4/EXT2 to 2/100											W/D = 0	0	0		ACC_CHA_1800				5.91 120 0.511 5.68 298 0.619	512				189	25.12	0.1	1050 3	0.2	0.092	4/EXT2	T2/T4	0.002	0.3	0.001				0.001	0	0.001	0.32	0.9	4.094	4.069	5.582 6.074	5.581 6.046	5.583 6.046	7.181	4/EXT2		
2 100	2/100	2/100 to 3/100				5 5	124 307	0.73 0.73	0.383 0.383	0.072 0.072	0.053 0.065	18 55 62 62	W/D = 0	0	2		3TCS0_UNCHECKED	0	18	3/EXT2	6.41 118 0.752 6.02 293 0.91	741				62	246	1.653	1.09	1350 3	0.2	0.005	2/100	T10	0.002	2.08	0.003				2.65	0.004	0	0	0.186	2.1	4.009	3.991	5.578 5.909	5.578 5.9	5.582 5.9	7.389	2/100
2 100	1/EXT3	1/EXT3 to 2/EXT3				5 5	124 307	0.73 0.73	0.383 0.383	0.154 0.154	0.113 0.137	39 117 117 117	W/D = 0	2.25	0		GRADE_BK_4800_Lip	38	1	3/EXT3	5 124 0.113 5 307 0.137	117				117	38	12.57	4	375 3	0.3	0.071	1/EXT3	G1	0.006	7	0.042				0.042	4.48	0.368	0.08	2.2	7.553	7.05	7.693 7.767	7.13 7.171	7.735 7.171	9.		

G:\Projects\5941\ENGINEERING\Acad\CIVIL WORKS STAGE 2\Current\5941 ENG OPW2 550.dwg

STORMWATER DRAINAGE CALCULATION TABLES SHEET 6 OF 6



Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

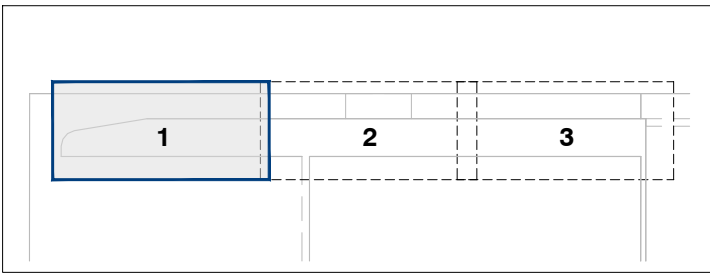
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DRAWING TITLE
STORMWATER DRAINAGE
CALCULATION TABLES
SHEET 6 OF 6

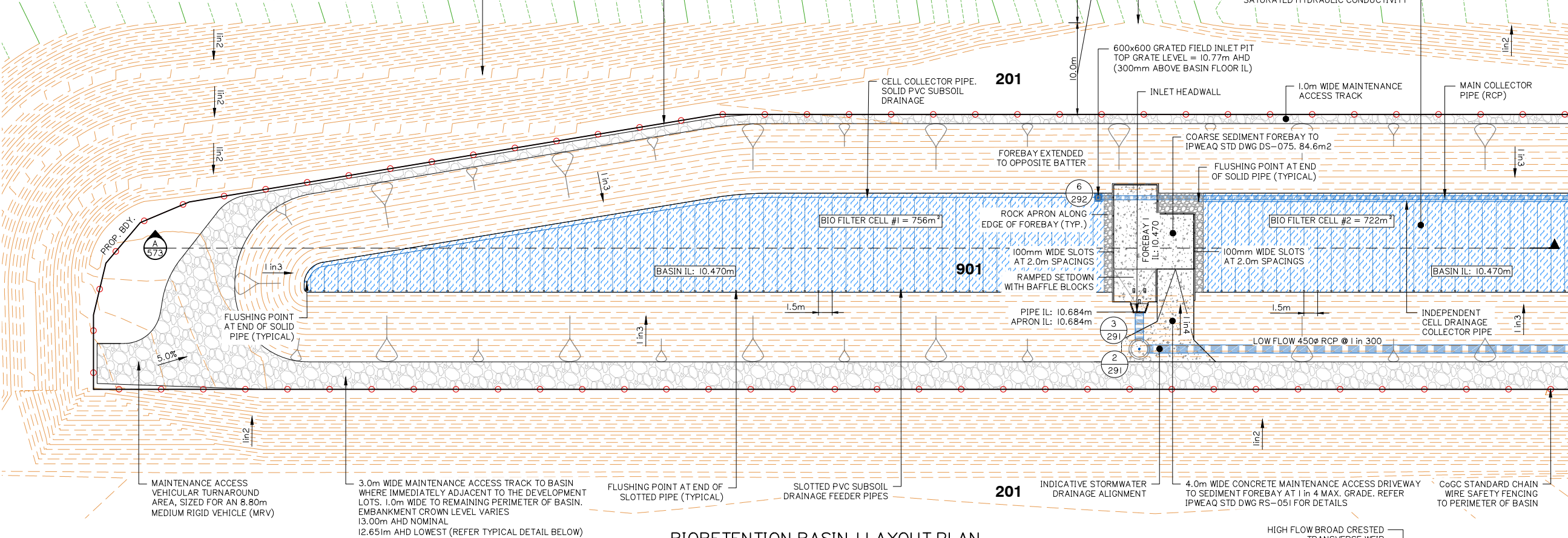
D	20/09/22	ISSUED FOR APPROVAL	JH	MC	
C	19/07/22	CALC TABLE UPDATED	JH	MC	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MC	
B	11/08/21	INFORMATION REQUEST RESPONSE	LAB	MC	
A	30/07/21	ORIGINAL ISSUE	LAB	MC	
Issue	Date	Description	DRN	CH	

NOT APPLICABLE

Drawing No:	Rev. No:
5941 ENG OPW2 555	D



KEY PLAN
SCALE 1:3000



DETENTION BASIN VOLUME TABLE *

- 14,789m³ to CROWN (RL.12.651)
- 8,076m³ to 1% AEP WSL (RL.11.946)
- 5,073m³ to WEIR LEVEL (RL.11.570)

* DEDUCTING 0.30m EXTENDED DETENTION VOLUME OF 1,446m³

BIO-RETENTION NOTES:

MINIMUM BIO-RETENTION 'PROFILE' IS TO BE 1.10m AND IS TO CONSIST OF THE FOLLOWING:

* 0.70 OF SANDY LOAM MATERIAL WITH A HYDRAULIC CONDUCTIVITY OF 200mm/h AND A PARTICLE SIZE OF 0.45-0.50mm.

* 0.15m OF COURSE SAND. PARTICLE SIZE TYPICALLY 0.5-2.0mm.

* 0.25m OF GRAVEL DRAINAGE. PARTICLE SIZE 5-7mm SCREENING.

BIO RETENTION - COARSE SEDIMENT FOREBAY SIZING GUIDE CALCULATIONS

$$V_s = A_c \times R \times L_o \times F = 11.0722 \text{ m}^3$$

$$R = 1 - \left[1 + \frac{1}{n} \times \frac{V_s}{0.7 A_r} \right]^{-n}$$

$$0.8 = 1 - \left[1 + \frac{1}{0.5} \times \frac{0.10}{2.7508 / A_r} \right]^{-0.5} \quad A_r = 330.1 \text{ m}^2$$

$$D_s = \frac{V_s}{A_r} \quad D_s = \frac{11.0722}{330.1} = 0.034 \text{ m}$$

OPTIMIZATION OF MINIMUM FOREBAY SIZE:

$$D_s = \frac{11.0722 \text{ m}^3}{253.977 \text{ m}^2} = 0.044 \text{ m}$$

CALCULATED FOR 3 FOREBAYS AT 84.659m² ea.

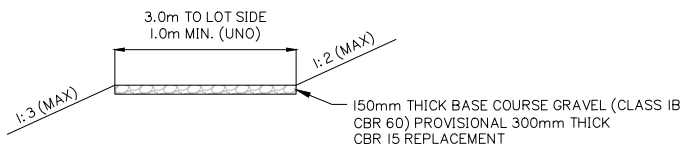
$V_s = 11.0722 \text{ m}^3$ (Workings Above)
 $A_c = 23.067 \text{ ha}$ (Refer Catchment Plans)
UNMITIGATED POST-DEVELOPMENT FLOW
 $Q = 2.7508 \text{ m}^3/\text{s}$ (3 month ARI)
 $V_s = 0.1 \text{ m/s}$ (Recommended for Imm Particle)
 $R = 0.8$ (Recommended 80% Capture)
 $L_o = 0.6$ (From Healthy Waterways Guide)
 $n = 0.5$ (Recommended Turbulence)
 $F_c = 1.0$ (Frequency of Clean Out / Yr)

REFER TO BIO RETENTION TECHNICAL DESIGN GUIDELINES FOR FURTHER INFORMATION

AEP (%)	MAX. WATER ELEVATION (m) A.H.D.	MAX. WATER DEPTH (m)
63.2	11.484	1.014
0.5EY	11.627	1.157
20	11.722	1.252
10	11.789	1.319
5	11.844	1.374
2	11.902	1.432
1	11.946	1.476

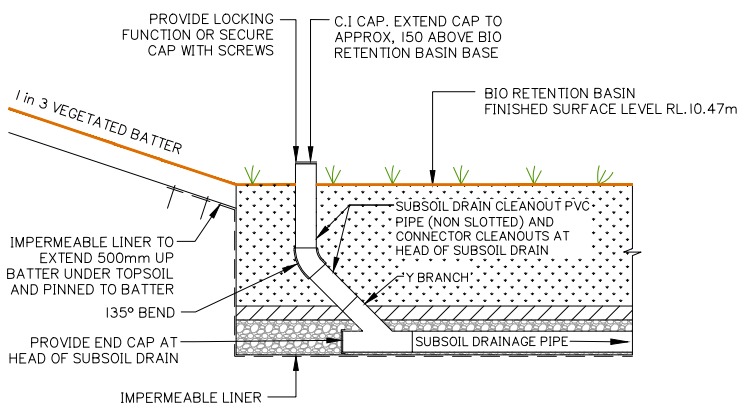
BIORETENTION BASIN I LAYOUT PLAN

SCALE 1:250 (A1)



MAINTENANCE ACCESS TRACK - TYPICAL SECTION

N.T.S. UNO DENOTES 'UNLESS NOTED OTHERWISE'

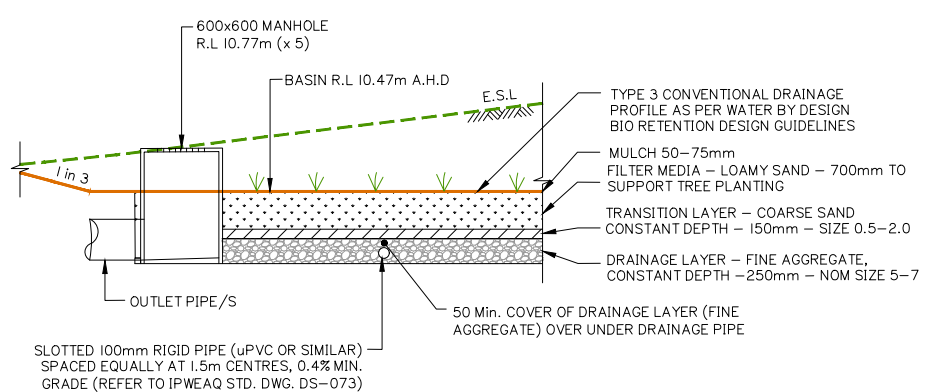
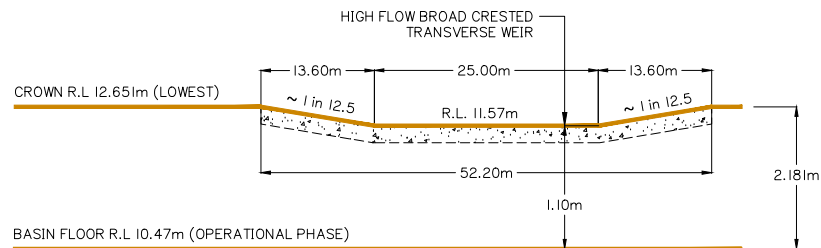


SUBSOIL DRAIN CLEANOUT - IN BASIN

N.T.S.

WEIR / SPILLWAY - TYPICAL ELEVATION

N.T.S.



TYPICAL BIO-RETENTION BASIN DETAIL

N.T.S.

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
OPERATIONAL PHASE
BIORETENTION BASIN
SHEET 1 OF 4

Rev	Date	Description	LAB	MG
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

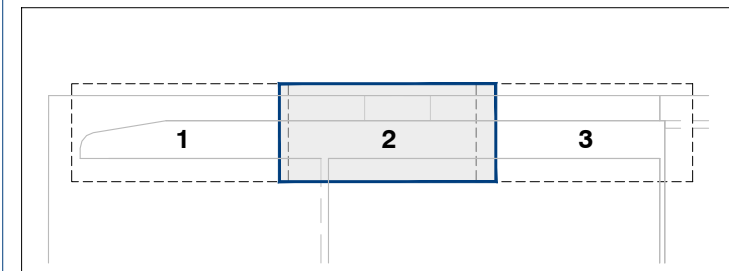


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1:500 (HALF SIZE A3)

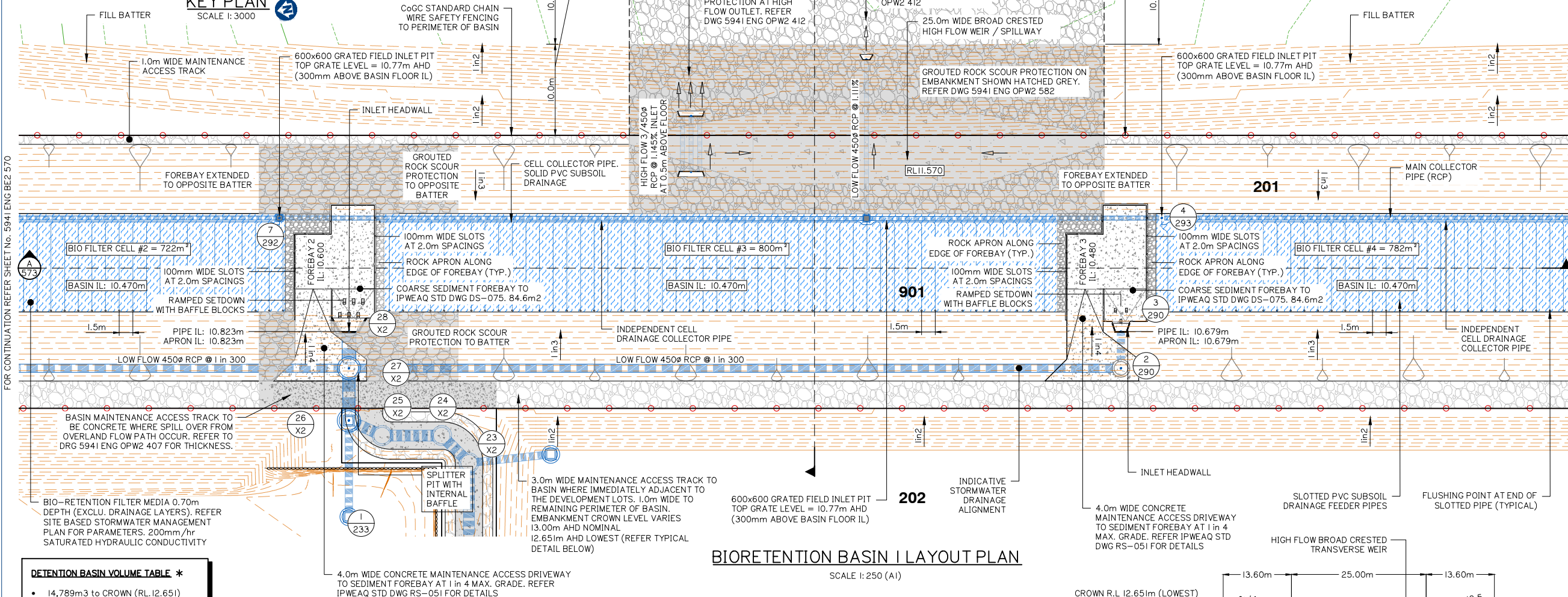
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 570 Rev. No: B



KEY PLAN
SCALE 1:3000



DEFENTION BASIN VOLUME TABLE *

- 14,789m³ TO CROWN (RL.12.651)
- 8,076m³ TO 1% AEP WSL (RL.11.946)
- 5,073m³ TO WEIR LEVEL (RL.11.570)

* DEDUCTING 0.30m EXTENDED DETENTION VOLUME OF 1,446m³

BIO-RETENTION NOTES:

MINIMUM BIO-RETENTION 'PROFILE' IS TO BE 1.10m AND IS TO CONSIST OF THE FOLLOWING:

* 0.70 OF SANDY LOAM MATERIAL WITH A HYDRAULIC CONDUCTIVITY OF 200mm/h AND A PARTICLE SIZE OF 0.45-0.50mm.

* 0.15m OF COURSE SAND. PARTICLE SIZE TYPICALLY 0.5-2.0mm.

* 0.25m OF GRAVEL DRAINAGE. PARTICLE SIZE 5-7mm SCREENING.

BIORETENTION - COARSE SEDIMENT FOREBAY SIZING GUIDE CALCULATIONS

$V_s = A_c \times R \times L_o \times F = 11.0722 \text{ m}^3$

$R = 1 - \left[1 + \frac{1}{n} \times \frac{V_s}{Q/A_c} \right]^{-n}$

$0.8 = 1 - \left[1 + \frac{0.10}{0.5 \times 2.7508/A_c} \right]^{-0.5}$ $A_f = 330.1 \text{ m}^2$

$D_s = \frac{V_s}{A_f} = \frac{11.0722}{330.1} = 0.034 \text{ m}$

OPTIMIZATION OF MINIMUM FOREBAY SIZE:

$D_s = \frac{11.0722 \text{ m}^3}{253.977 \text{ m}^2} = 0.044 \text{ m}$

CALCULATED FOR 3 FOREBAYS AT 84.659m² ea.

$V_s = 11.0722 \text{ m}^3$ (Workings Above)

$A_c = 23.067 \text{ ha}$ (Refer Catchment Plans)

UNMITIGATED POST-DEVELOPMENT FLOW $Q = 2.7508 \text{ m}^3/\text{s}$ (3 month ARI)

$V_s = 0.1 \text{ m}^3/\text{s}$ (Recommended for Imm Particle)

$R = 0.8$ (Recommended 80% Capture)

$L_o = 0.6$ (From Healthy Waterways Guide)

$n = 0.5$ (Recommended Turbulence)

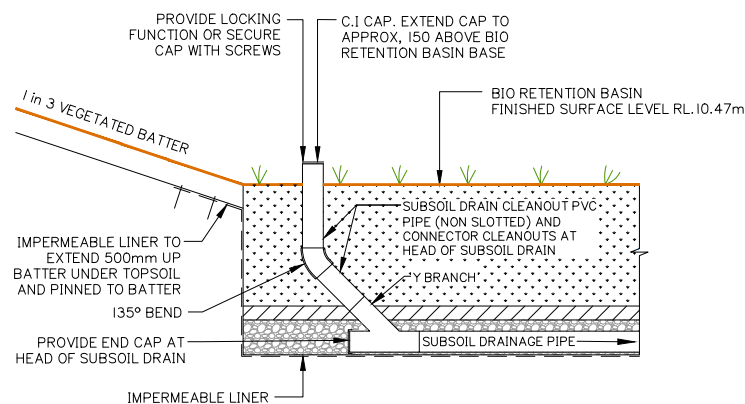
$F_c = 1.0$ (Frequency of Clean Out / Yr)

REFER TO BIO RETENTION TECHNICAL DESIGN GUIDELINES FOR FURTHER INFORMATION

AEP (%)	MAX. WATER ELEVATION (m) A.H.D.	MAX. WATER DEPTH (m)
63.2	11.484	1.014
0.5EY	11.627	1.157
20	11.722	1.252
10	11.789	1.319
5	11.844	1.374
2	11.902	1.432
1	11.946	1.476

MAINTENANCE ACCESS TRACK - TYPICAL SECTION

N.T.S. UNO DENOTES 'UNLESS NOTED OTHERWISE'

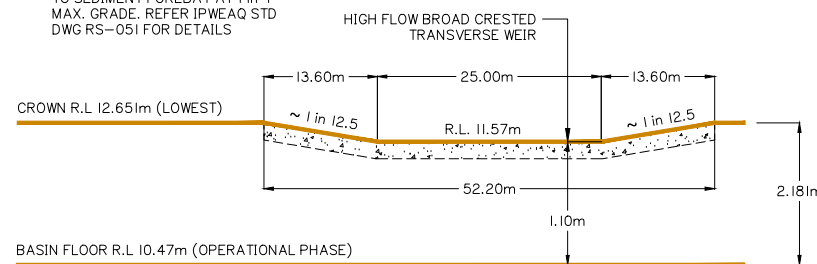


SUBSOIL DRAIN CLEANOUT - IN BASIN

N.T.S.

WEIR / SPILLWAY - TYPICAL ELEVATION

N.T.S.



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Local Authority: CITY OF GOLD COAST
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Level Datum: AHD
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DRAWING TITLE
OPERATIONAL PHASE
BIORETENTION BASIN
SHEET 2 OF 4

Rev	Date	Description	LAB	MG
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	19/07/22	STORMWATER ALIGNMENT UPDATED	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

Scale at A1:

1:250

Designed:

IG

Drafted:

LAB / IG

Approved:

MG

RPEQ:

16939

Signed:

[Signature]

Date:

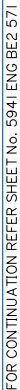
20/09/2022

Drawing No:

5941 ENG OPW2 571

Rev. No:

C



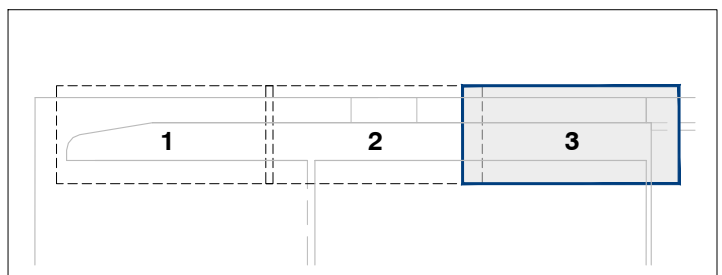
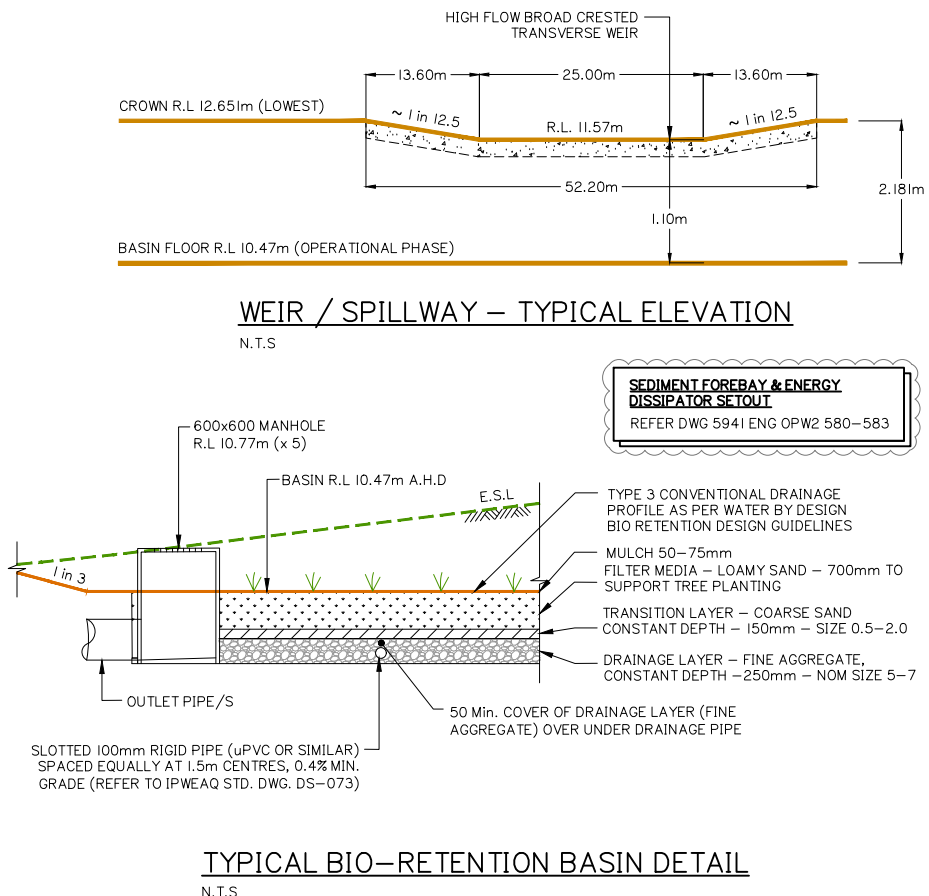
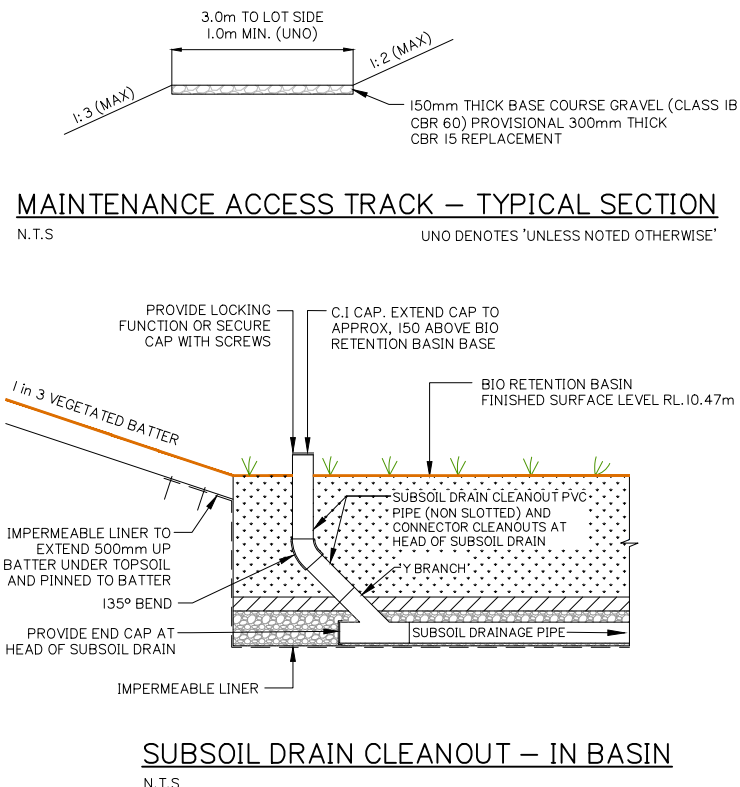
BIO-RETENTION NOTES:

MINIMUM BIO-RETENTION 'PROFILE' IS TO BE 1.0m AND IS TO CONSIST OF THE FOLLOWING:

- * 0.70 OF SANDY LOAM MATERIAL WITH A HYDRAULIC CONDUCTIVITY OF 200mm/h AND A PARTICLE SIZE OF 0.45–0.50mm.
- * 0.15m OF COARSE SAND. PARTICLE SIZE TYPICALLY 0.5–2.0mm.
- * 0.25m OF GRAVEL DRAINAGE. PARTICLE SIZE 5–7mm SCREENING.

AEP (%)	MAX. WATER ELEVATION (m) A.H.D	MAX. WATER DEPTH (m)
63.2	11.484	1.014
0.5EY	11.627	1.157
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2	11.902	1.432
1	11.946	1.476

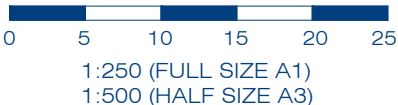
BIO RETENTION – COARSE SEDIMENT FOREBAY SIZING GUIDE CALCULATIONS	
$V_s = A_c \times R \times L_o \times F$	$= 6.495 \text{ m}^3$
$R = 1 - \left[\frac{+1}{n} \times \frac{V_s}{0.7A_r} \right]^{-n}$	
$0.8 = 1 - \left[\frac{1}{0.5} \times \frac{0.10}{1.6156/A_r} \right]^{-0.5}$	$A_r = 193.87 \text{ m}^2$
$D_s = \frac{V_s}{A_r}$	$D_s = \frac{6.495}{193.868} = 0.034 \text{ m}$
OPTIMIZATION OF <u>MINIMUM</u> FOREBAY SIZE:	
$D_s = \frac{6.495 \text{ m}^3}{145.007 \text{ m}^2}$	$= 0.045 \text{ m}$
CALCULATED FOR FOREBAY AT 145.007m²	
$V_s = 11.0722 \text{ m}^3 \text{ (Workings Above)}$	
$A_c = 13.532 \text{ ha} \text{ (Refer Catchment Plans)}$	
UNMITIGATED POST–DEVELOPMENT FLOW $Q = 1.6157 \text{ m}^3/\text{s} \text{ (3 month ARI)}$	
$V_s = 0.1 \text{ m/s (Recommended for Imm Particle)}$	
$R = 0.8 \text{ (Recommended 80% Capture)}$	
$L_o = 0.6 \text{ (From Healthy Waterways Guide)}$	
$n = 0.5 \text{ (Recommended Turbulence)}$	
$F_c = 1.0 \text{ (Frequency of Clean Out / Yr)}$	
REFER TO BIO RETENTION TECHNICAL DESIGN GUIDELINES FOR FURTHER INFORMATION	



DRAWING TITLE
OPERATIONAL PHASE
BIORETENTION BASIN
SHEET 3 OF 4

C	06/04/23	LOT BOUNDARY AMEDED	LAB	MC
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MC
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MC
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MC
A	30/07/21	ORIGINAL ISSUE	LAB	MC
Issue	Date	Description	DRN	CH

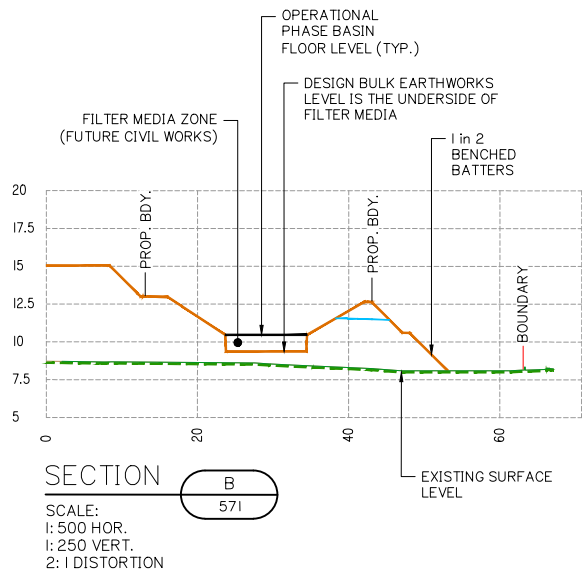
SCALE IN METRES



Scale at A1:	1:250
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

NOTE:

- I. BASIN INUNDATION DEPTHS OMITTED FROM CROSS SECTIONS FOR CLARITY. REFER TO CALCULATION TABLES ON DRAWINGS 5941 ENG BE2 570-572

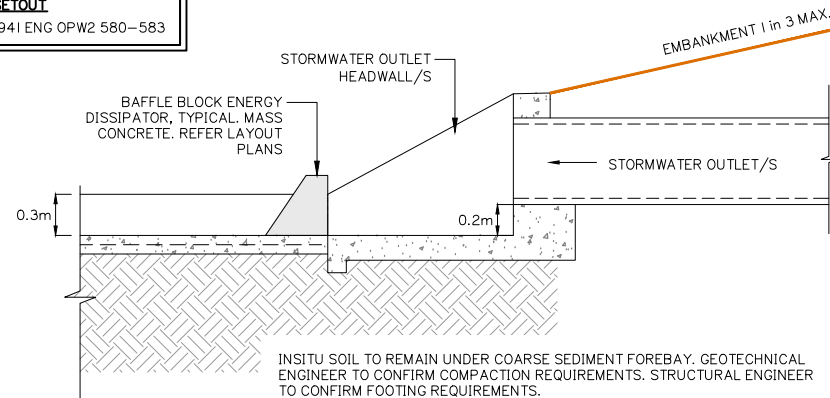


TYPICAL BIO-RETENTION BASIN DETAIL

N.T.S

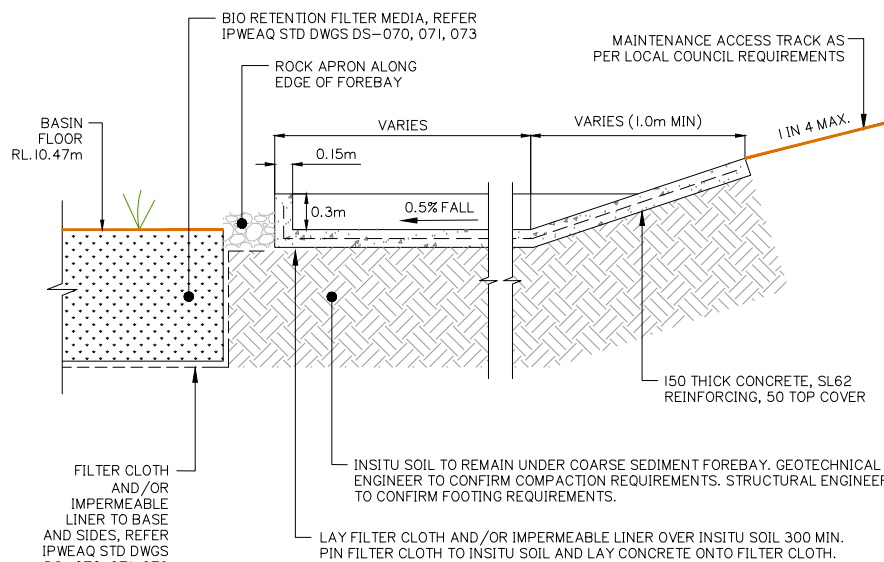
SEDIMENT FOREBAY & ENERGY DISSIPATOR SETOUT

REFER DWG 5941 ENG OPW2 580-583



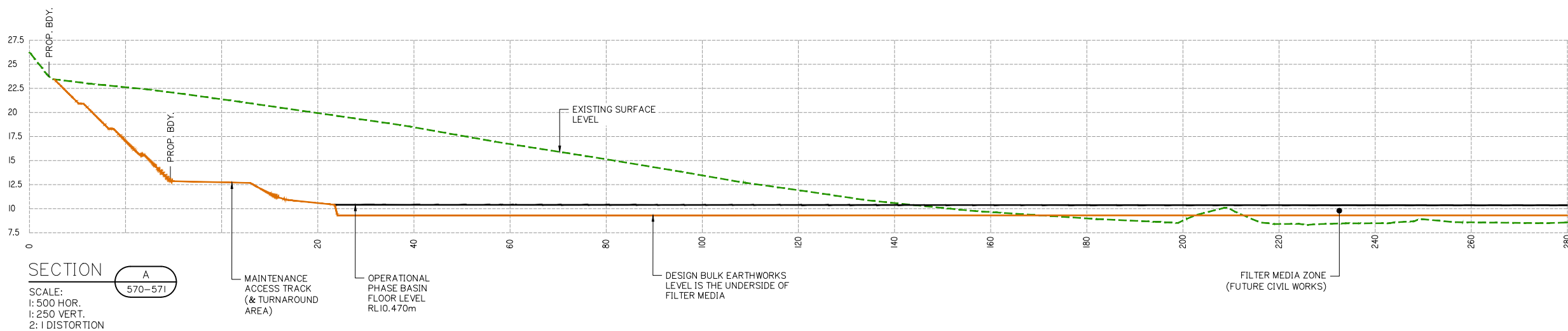
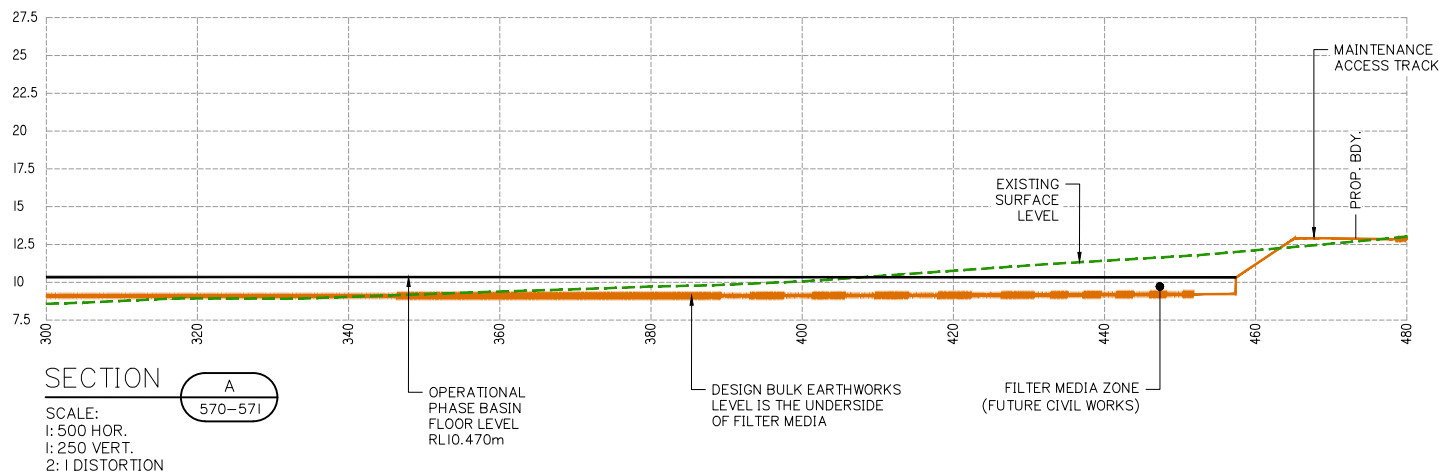
TYPICAL STORMWATER OUTLET TO SEDIMENT FOREBAY

N.T.S



COARSE SEDIMENT FOREBAY TYPICAL SECTION

N.T.S



Client:



FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

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DRAWING TITLE

OPERATIONAL PHASE BIORETENTION BASIN SHEET 4 OF 4

B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

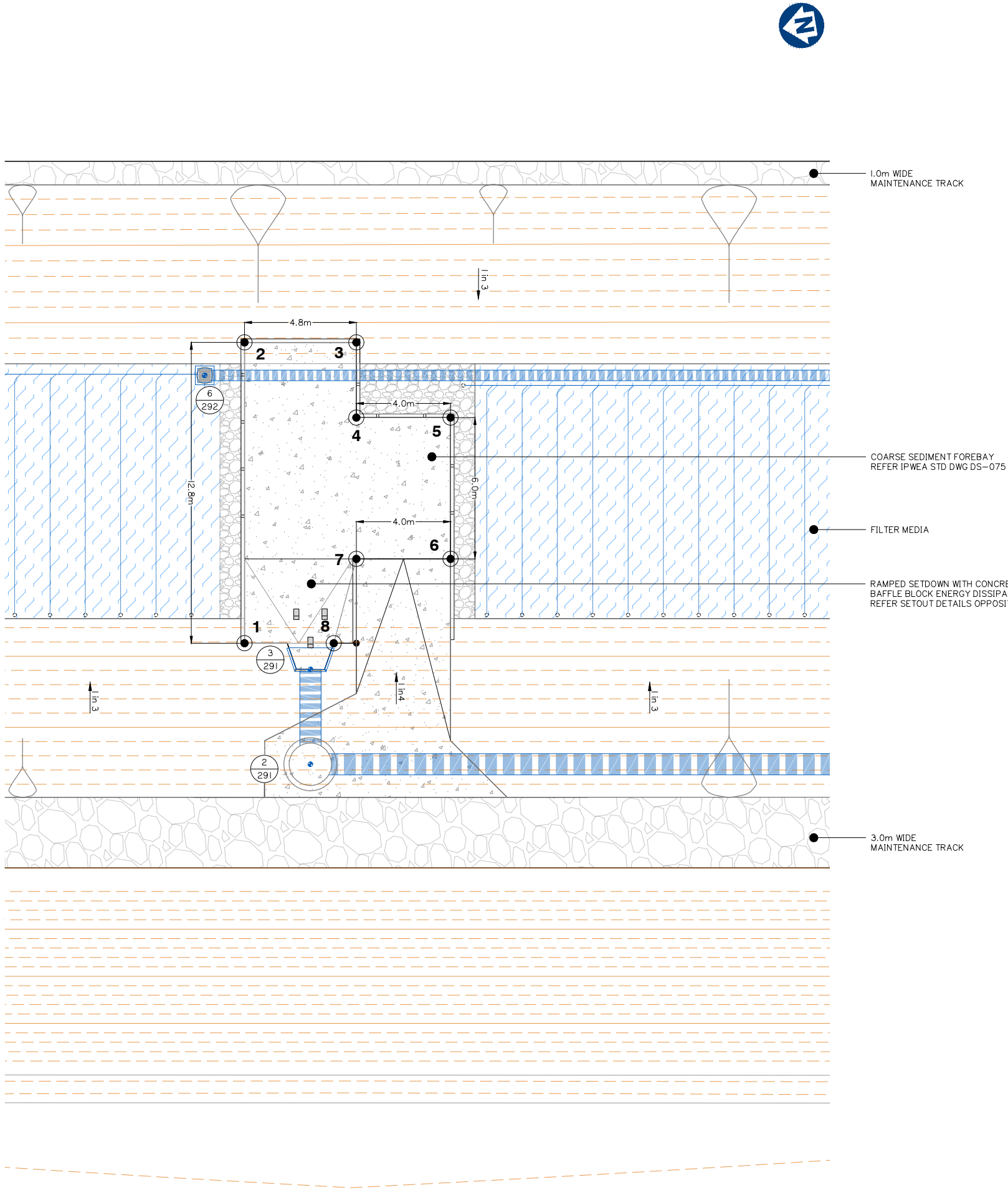


1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

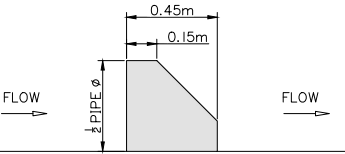
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

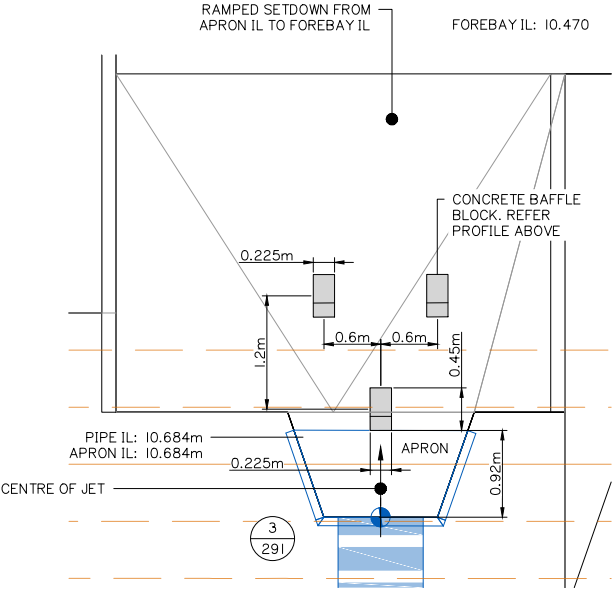
Drawing No: 5941 ENG OPW2 573 Rev. No: B



FOREBAY I – SETOUT TABLE			
SETOUT POINT	NORTHING	EASTING	RL (m, AHD)
1	3095.311	6841.680	10.684m
2	3107.917	6839.638	10.47m
3	3107.158	6834.949	10.47m
4	3104.009	6835.459	10.47m
5	3103.369	6831.511	10.47m
6	3097.447	6832.470	10.47m
7	3098.086	6836.418	10.47m
8	3094.705	6837.937	10.684m



BAFFLE BLOCK PROFILE I: 25



BAFFLE BLOCK SETOUT I: 40

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
COARSE SEDIMENT
FOREBAY 1 SETOUT
SHEET 1 OF 4

Issue	Date	Description	DRN	CHK
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG

SCALE IN METRES

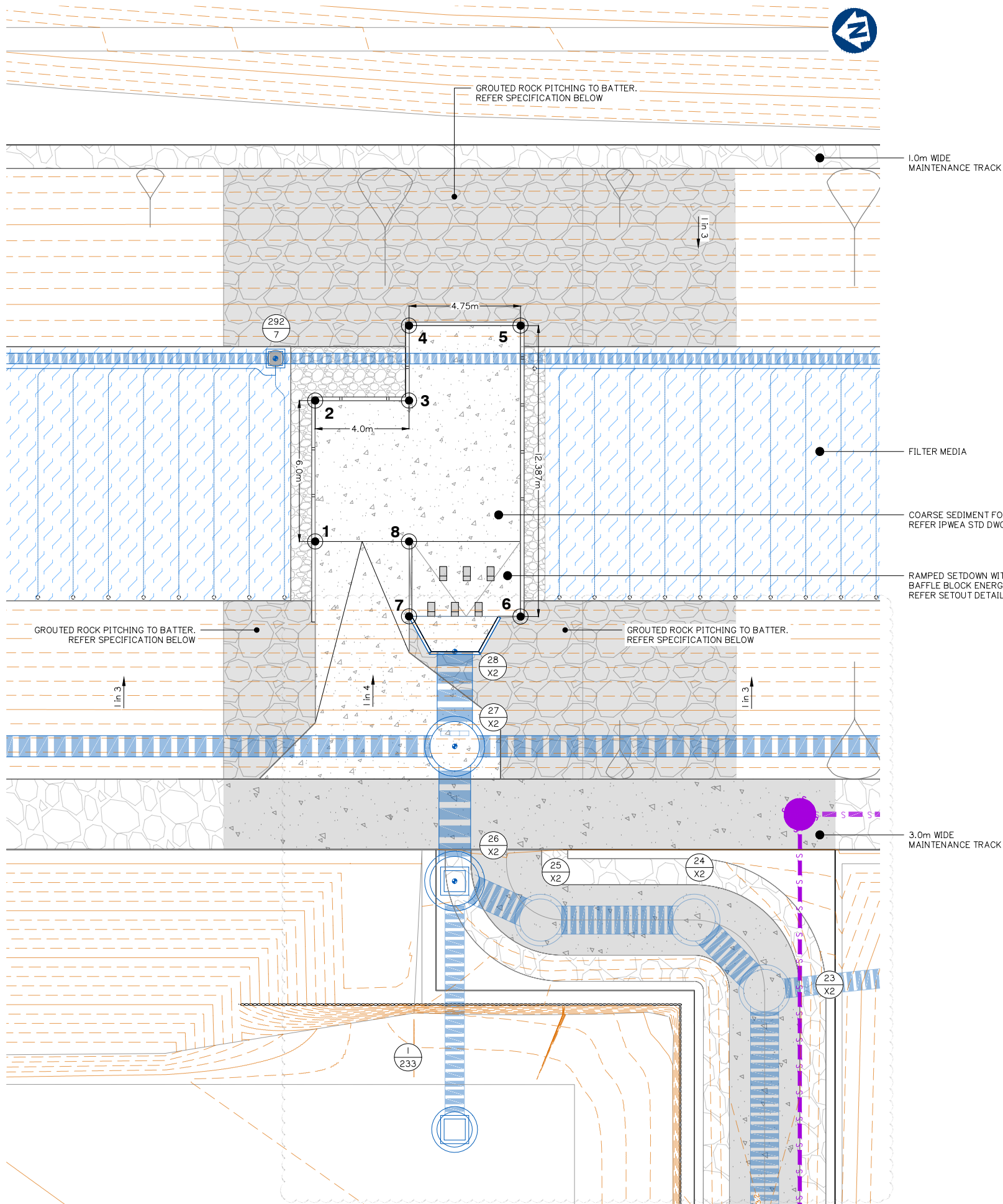


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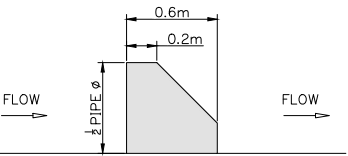
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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

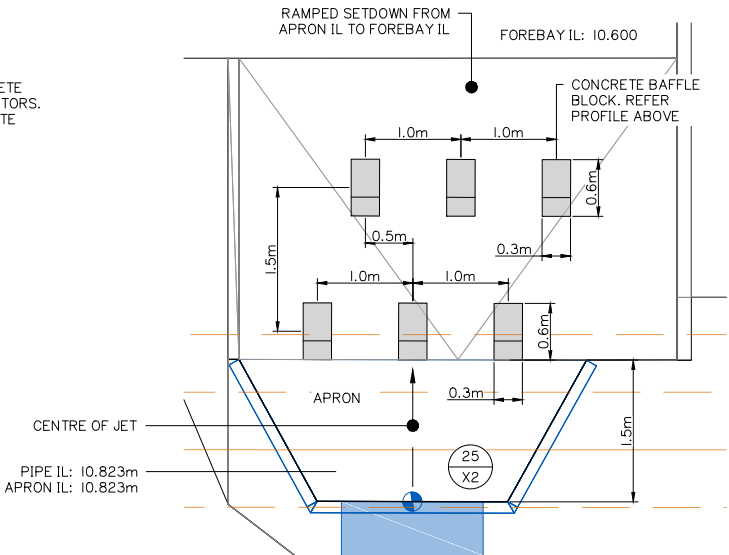
Drawing No: 5941 ENG OPW2 580
Rev. No: B



FOREBAY 2 – SETOUT TABLE			
SETOUT POINT	NORTHING	EASTING	RL (m, AHD)
1	3086.440	6764.504	10.60m
2	3092.363	6763.545	10.60m
3	3091.723	6759.596	10.60m
4	3094.872	6759.086	10.60m
5	3094.113	6754.397	10.60m
6	3081.886	6756.377	10.823m
7	3082.653	6761.065	10.823m
8	3085.800	6760.555	10.60m



BAFFLE BLOCK PROFILE 1:25



BAFFLE BLOCK SETOUT 1:40

GROUTED ROCK PITCHING

GROUTED ROCK PITCHING 450mm THICK.

ROCK SHALL BE UNWEATHERED, CLEAN, HARD AND DURABLE GRADED 150–200mm WITH ESSENTIALLY FLAT FACES. GROUT SHALL BE 20MPa CEMENT MORTAR MADE FROM 1:3 GP CEMENT / SAND MIXTURE WITH SUFFICIENT WATER ADDED TO GIVE IT A PLASTIC LIKE TEXTURE THAT WILL RETAIN ITS SHAPE AND NOT FLOW LIKE A LIQUID

GROUTED ROCK FINISH

EXPOSED SURFACES SHALL HAVE A MINIMUM 80% OF EXPOSED ROCK WITH A CLOSE FACED MAXIMUM MORTAR SETBACK OF 10mm. EXCESS CEMENT MORTAR COATING SHALL BE REMOVED. THE FINISHED SURFACE SHALL HAVE A GENERALLY FLAT, EVEN AND NEAT APPEARANCE, AND WILL NOT HAVE ANY SHARP OR ANGULAR POINTS

Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

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DRAWING TITLE
COARSE SEDIMENT
FOREBAY 2 SETOUT
SHEET 2 OF 4

Issue	Date	Description	LAB	MG	CHK
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	STORMWATER AND LOT BOUNDARY UPDATED	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1: 1:100

Designed: IG

Drafted: LAB / IG

Approved: MG

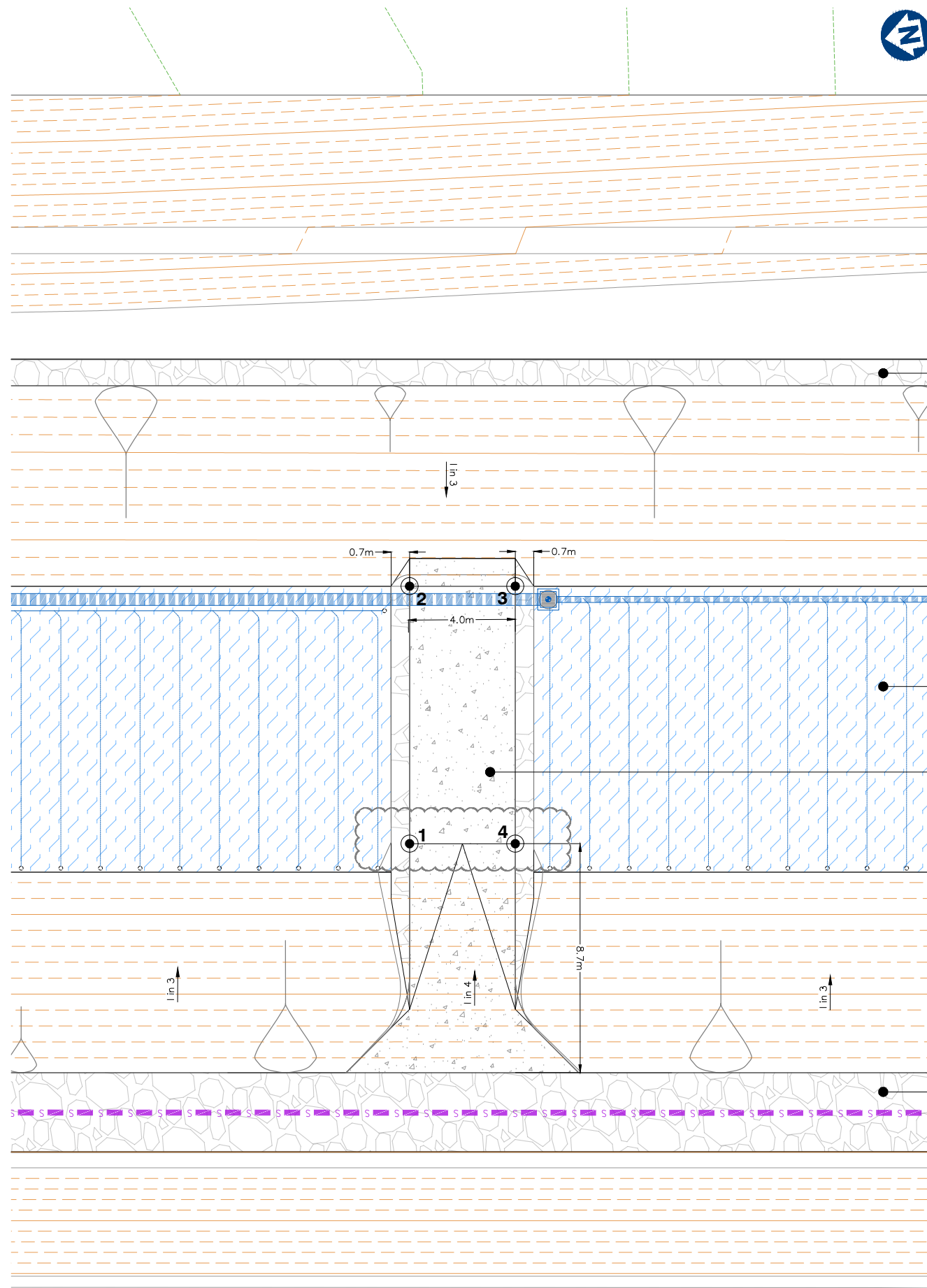
RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 581

Rev. No:
C



SETOUT POINT	NORTHING	EASTING	TOP RL (m, AH)
1	3058.202	6599.217	10.82m
2	3067.820	6597.660	10.82m
3	3067.81	6593.71	10.82m
4	3057.562	6595.269	10.82m



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Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:



FRASERS
PROPERTY

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Project:

VANTAGE YATALA STAGE 2

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60 STAPYLTON JACOBS WELL
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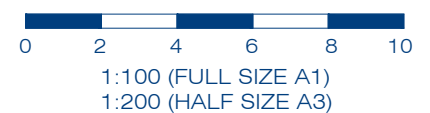
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DRAWING TITLE

INTERNAL MAINTENANCE BUND SETOUT

C	08/02/23	SETPOINT POINTS UPDATED	JH	MG		
B	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	13/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		
Issue	Date	Description	DRN	CHK		

SCALE IN METRES

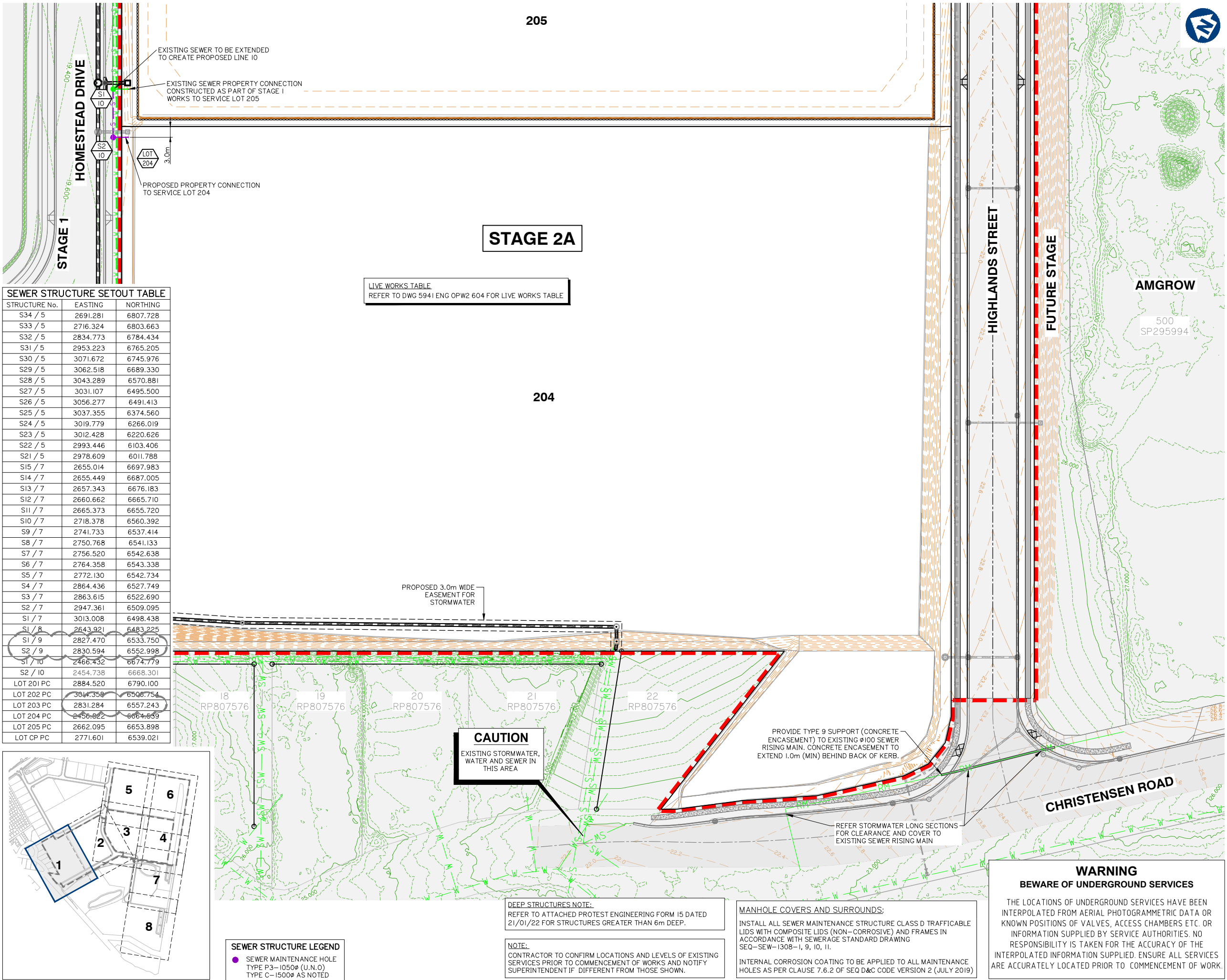


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Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
5941 ENG OPW2 584	C

205



Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

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BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 1 OF 8

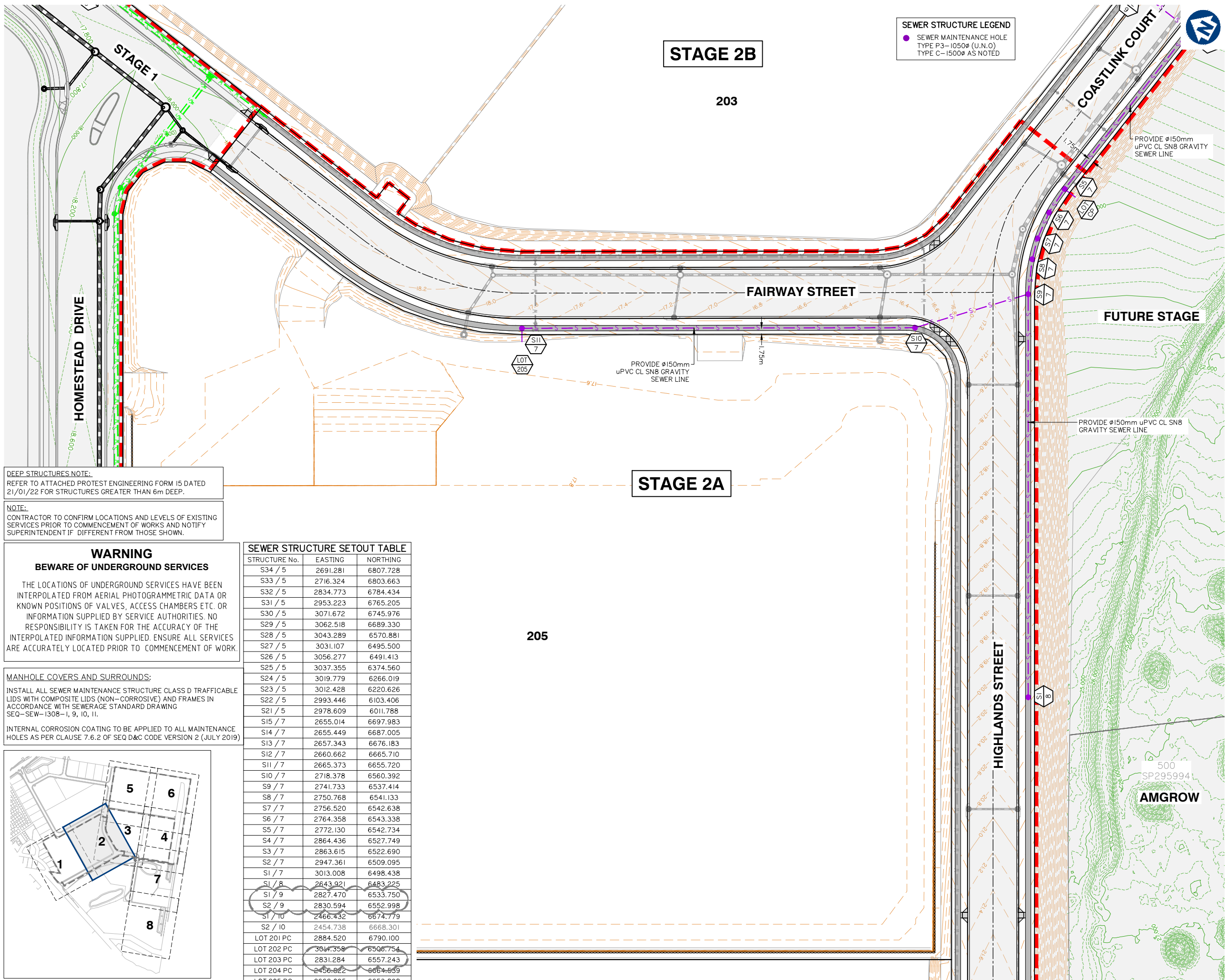
SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG
Drafted: LAB / IG
Approved: MG
RPEQ: 16939
Signed:
Date: 20/09/2022

Drawing No: 5941 ENG OPW2 600
Rev. No: G



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 2 OF 8

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	19/07/22	LOT NUMBER, LOT BOUNDARY AND SEWER UPDATED	LAB	MG	
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 601

Rev. No:
F

201

EXISTING POTABLE WATER MAIN AND ELECTRICAL AND COMMS TO BE PROTECTED AT ALL TIMES

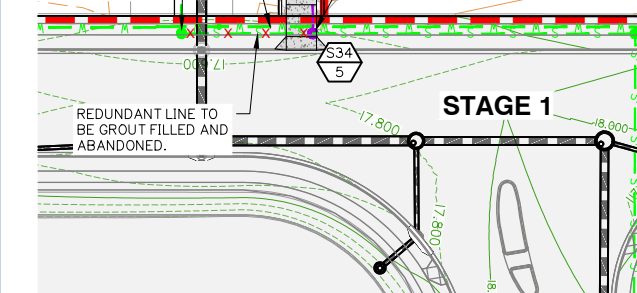
EXISTING STRUCTURE TO BE KNOCKED DOWN 1000mm BELOW FSL AND VERGE TO BE REINSTATED

REDUNDANT LINE TO BE GROUT FILLED AND ABANDONED.

PROVIDE Ø150mm uPVC CL SN8 GRAVITY SEWER LINE

PROPOSED STRUCTURE S34/5 TO BE CONSTRUCTED OVER EXISTING LIVE BUILD AS PART OF STAGE 1.

PMT / RMU SITE



SEWER STRUCTURE SETOUT TABLE		
STRUCTURE No.	EASTING	NORTHING
S34 / 5	2691.281	6807.728
S33 / 5	2716.324	6803.663
S32 / 5	2834.773	6784.434
S31 / 5	2953.223	6765.205
S30 / 5	3071.672	6745.976
S29 / 5	3062.518	6689.330
S28 / 5	3043.289	6570.881
S27 / 5	3031.107	6495.500
S26 / 5	3056.277	6491.413
S25 / 5	3037.355	6374.560
S24 / 5	3019.779	6266.019
S23 / 5	3012.428	6220.626
S22 / 5	2993.446	6103.406
S21 / 5	2978.609	6011.788
S15 / 7	2655.014	6697.983
S14 / 7	2655.449	6687.005
S13 / 7	2657.343	6676.183
S12 / 7	2660.662	6665.710
S11 / 7	2665.373	6655.720
S10 / 7	2718.378	6560.392
S9 / 7	2741.733	6537.414
S8 / 7	2750.768	6541.133
S7 / 7	2756.520	6542.638
S6 / 7	2764.358	6543.338
S5 / 7	2772.130	6542.734
S4 / 7	2864.436	6527.749
S3 / 7	2863.615	6522.690
S2 / 7	2947.361	6509.095
S1 / 7	3013.008	6498.438
S1 / 8	2643.921	6483.225
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LOT 201 PC	2884.520	6790.100
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LOT 203 PC	2831.284	6557.243
LOT 204 PC	2456.822	6664.539
LOT 205 PC	2662.095	6653.898
LOT CP PC	2771.601	6539.021

KEY PLAN
SCALE 1: 7500

SEWER STRUCTURE LEGEND

- SEWER MAINTENANCE HOLE
- TYPE P3-1050Ø (U.N.O)
- TYPE C-1500Ø AS NOTED

LIVE WORKS TABLE
REFER TO DWG 5941 ENG OPW2 604 FOR LIVE WORKS TABLE

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 603

WARNING
BEWARE OF UNDERGROUND SERVICES

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MANHOLE COVERS AND SURROUNDS:

INSTALL ALL SEWER MAINTENANCE STRUCTURE CLASS D TRAFFICABLE LIDS WITH COMPOSITE LIDS (NON-CORROSIVE) AND FRAMES IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING SEQ-SEW-1308-1, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 7.6.2 OF SEQ D&C CODE VERSION 2 (JULY 2019)

NOTE:

CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

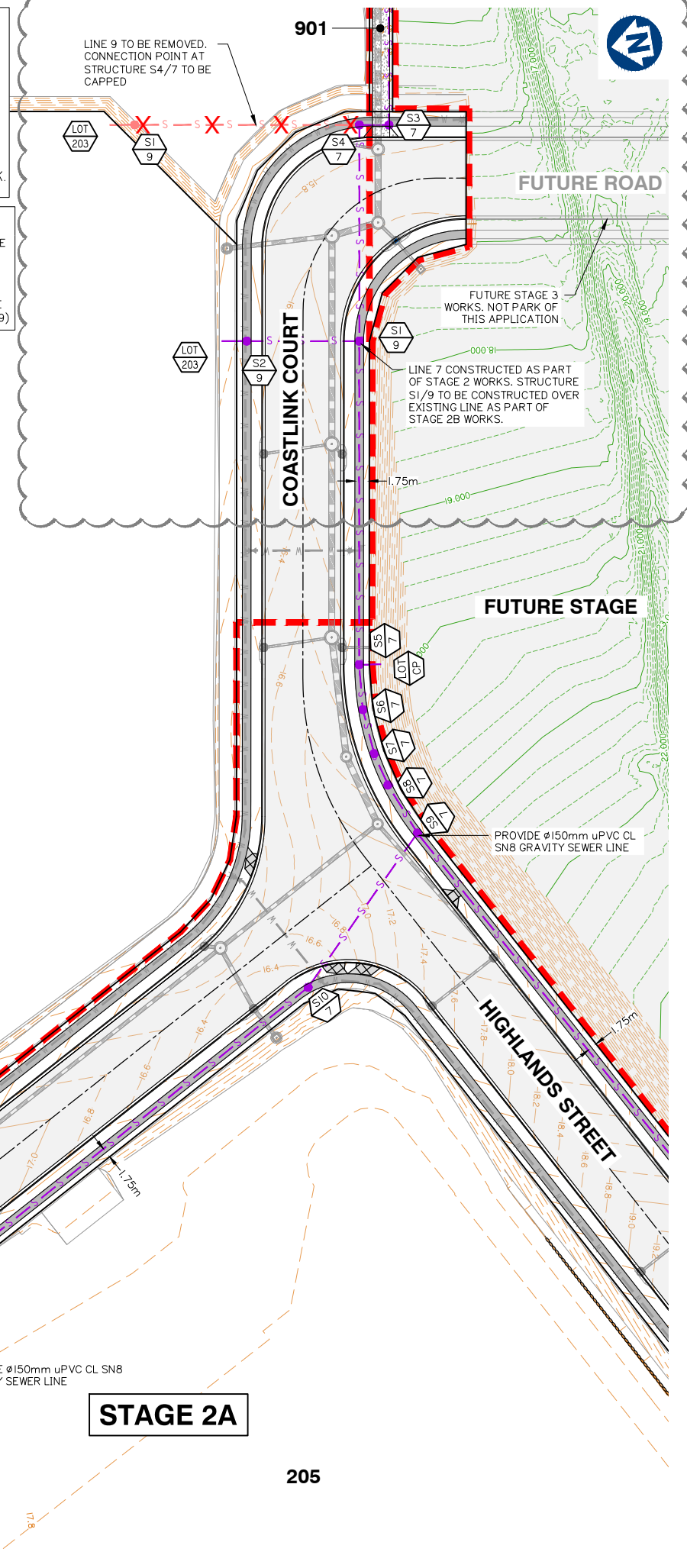
DEEP STRUCTURES NOTE:

REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP.

203

STAGE 2B

LINE 9 TO BE REMOVED.
CONNECTION POINT AT
STRUCTURE S4/7 TO BE
CAPPED

**STAGE 2A**

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 601

SEWER RETICULATION LAYOUT PLAN SHEET 3 OF 8

Client:

FRASERS
PROPERTY

FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum: AHD
Meridian: -
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 3 OF 8

Rev	Date	Description	Lab	MG
G	06/04/23	STAGE BOUNDARY AND LINE 9 AMENDED	JH	MG
F	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
E	05/09/22	NOTE AMENDED	JH	MG
D	18/07/22	LOT BOUNDARY, LOT NUMBER, SEWER UPDATED	LAB	MG
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG
A	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
A	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	Lab	MG

SCALE IN METRES

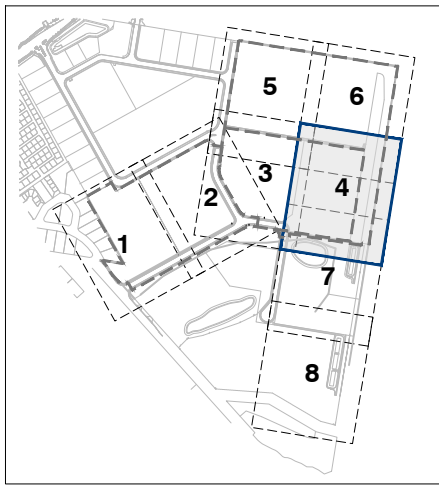
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1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 602
Rev. No: G



KEY PLAN
SCALE 1: 7500

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MANHOLE COVERS AND SURROUNDS:

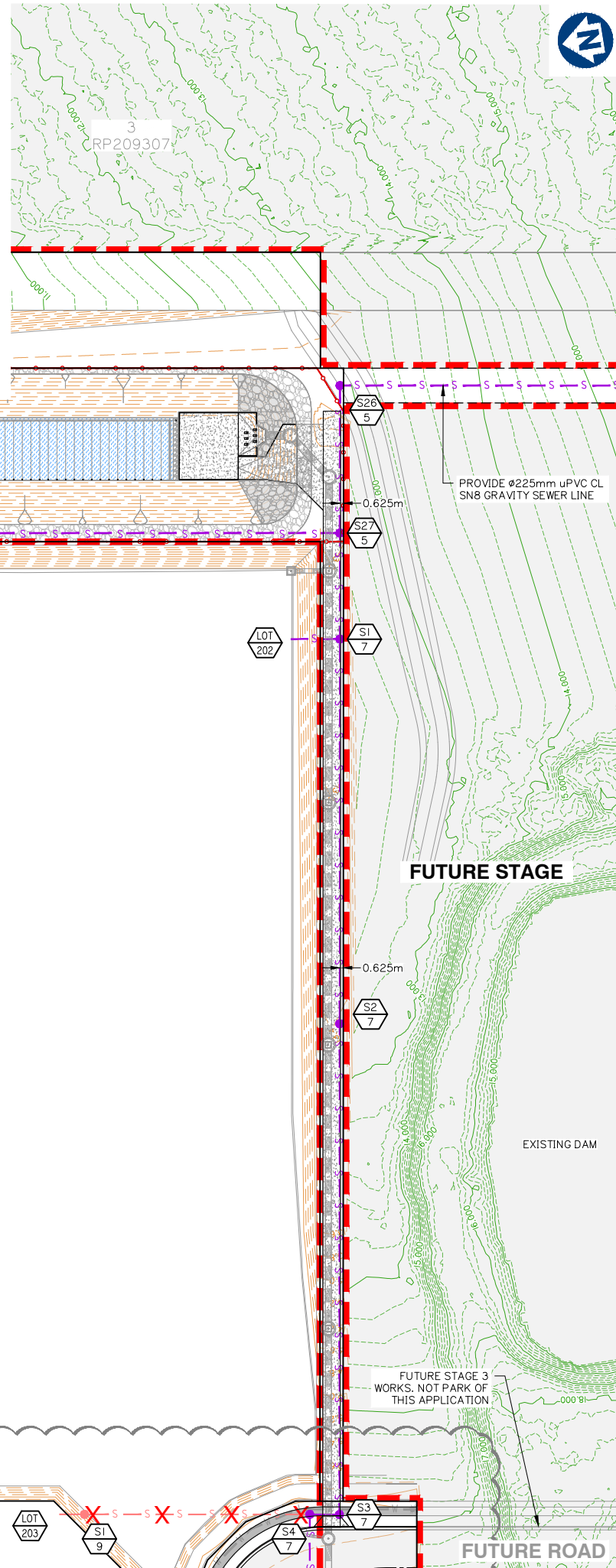
INSTALL ALL SEWER MAINTENANCE STRUCTURE CLASS D TRAFFICABLE LIDS WITH COMPOSITE LIDS (NON-CORROSIVE) AND FRAMES IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING SEQ-SEW-1308-I, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 7.6.2 OF SEQ D&C CODE VERSION 2 (JULY 2019)

SEWER STRUCTURE SETOUT TABLE

STRUCTURE No.	EASTING	NORTHING
S34 / 5	2691.281	6807.728
S33 / 5	2716.324	6803.663
S32 / 5	2834.773	6784.434
S31 / 5	2953.223	6765.205
S30 / 5	3071.672	6745.976
S29 / 5	3062.518	6689.330
S28 / 5	3043.289	6570.881
S27 / 5	3031.107	6495.500
S26 / 5	3056.277	6491.413
S25 / 5	3037.355	6374.560
S24 / 5	3019.779	6266.019
S23 / 5	3012.428	6220.626
S22 / 5	2993.446	6103.406
S21 / 5	2978.609	6011.788
S15 / 7	2655.014	6697.983
S14 / 7	2655.449	6687.005
S13 / 7	2657.343	6676.183
S12 / 7	2660.662	6665.710
S11 / 7	2665.373	6655.720

S10 / 7	2718.378	6560.392
S9 / 7	2741.733	6537.414
S8 / 7	2750.768	6541.133
S7 / 7	2756.520	6542.638
S6 / 7	2764.358	6543.338
S5 / 7	2772.130	6542.734
S4 / 7	2864.436	6527.749
S3 / 7	2863.615	6522.690
S2 / 7	2947.361	6509.095
S1 / 7	3013.008	6498.438
S1 / 8	2643.921	6483.225
S1 / 9	2827.470	6533.750
S2 / 9	2830.594	6552.998
S1 / 10	2466.432	6674.779
S2 / 10	2454.738	6668.301
LOT 201 PC	2884.520	6790.100
LOT 202 PC	3014.358	6506.754
LOT 203 PC	2831.284	6557.243
LOT 204 PC	2456.822	6664.539
LOT 205 PC	2662.095	6653.898
LOT CP PC	2771.601	6539.021



DEEP STRUCTURES NOTE:
REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP.

SEWER STRUCTURE LEGEND
● SEWER MAINTENANCE HOLE
TYPE P3-1050ø (U.N.O)
TYPE C-1500ø AS NOTED

STAGE 2B

FUTURE STAGE

STAGE 2A

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 605

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 606

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 602

SEWER RETICULATION LAYOUT PLAN SHEET 4 OF 8

Client:



Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
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PSM: -
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 4 OF 8

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	19/07/22	LOT NUMBER, LOT BOUNDARY AND SEWER UPDATED	LAB	MG	
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 603
Rev. No: F

SEWER STRUCTURE SETOUT TABLE		
STRUCTURE No.	EASTING	NORTHING
S34 / 5	2691.281	6807.728
S33 / 5	2716.324	6803.663
S32 / 5	2834.773	6784.434
S31 / 5	2953.223	6765.205
S30 / 5	3071.672	6745.976
S29 / 5	3062.518	6689.330
S28 / 5	3043.289	6570.881
S27 / 5	3031.107	6495.500
S26 / 5	3056.277	6491.413
S25 / 5	3037.355	6374.560
S24 / 5	3019.779	6266.019
S23 / 5	3012.428	6220.626
S22 / 5	2993.446	6103.406
S21 / 5	2978.609	6011.788
S15 / 7	2655.014	6697.983
S14 / 7	2655.449	6687.005
S13 / 7	2657.343	6676.183
S12 / 7	2660.662	6665.710
S11 / 7	2665.373	6655.720

S10 / 7	2718.378	6560.392
S9 / 7	2741.733	6537.414
S8 / 7	2750.768	6541.133
S7 / 7	2756.520	6542.638
S6 / 7	2764.358	6543.338
S5 / 7	2772.130	6542.734
S4 / 7	2864.436	6527.749
S3 / 7	2863.615	6522.690
S2 / 7	2947.361	6509.095
S1 / 7	3013.008	6498.438
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LOT 205 PC	2662.095	6653.898
LOT CP PC	2771.601	6539.021

WARNING

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INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 7.6.2 OF SEQ D&C CODE VERSION 2 (JULY 2019)

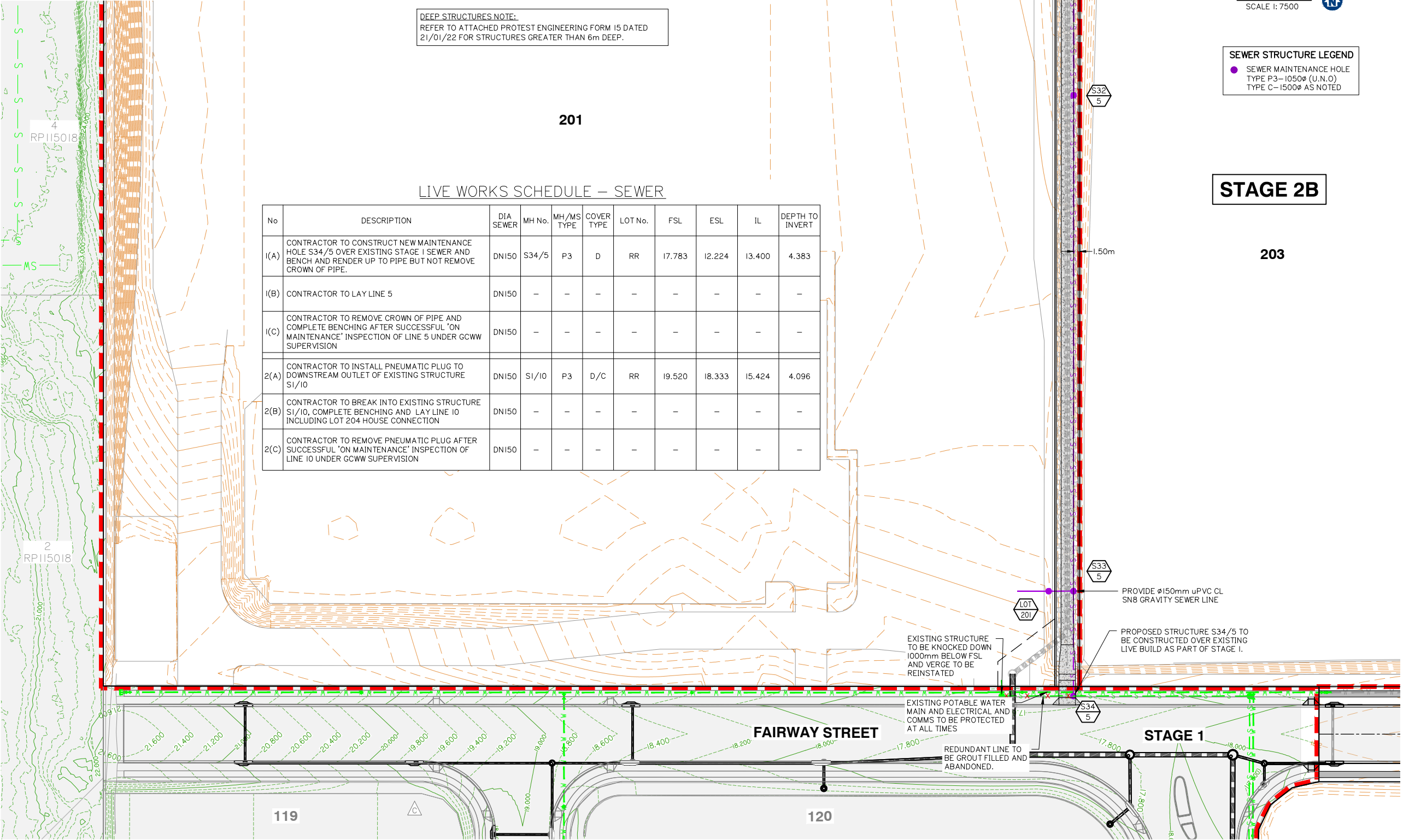
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DEEP STRUCTURES NOTE:
REFER TO ATTACHED PROTECT ENGINEERING FORM IS DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP.

LIVE WORKS SCHEDULE – SEWER

No	DESCRIPTION	DIA SEWER	MH No.	MH/MS TYPE	COVER TYPE	LOT No.	FSL	ESL	IL	DEPTH TO INVERT
I(A)	CONTRACTOR TO CONSTRUCT NEW MAINTENANCE HOLE S34/5 OVER EXISTING STAGE 1 SEWER AND BENCH AND RENDER UP TO PIPE BUT NOT REMOVE CROWN OF PIPE.	DN150	S34/5	P3	D	RR	17.783	12.224	13.400	4.383
I(B)	CONTRACTOR TO LAY LINE 5	DN150	-	-	-	-	-	-	-	-
I(C)	CONTRACTOR TO REMOVE CROWN OF PIPE AND COMPLETE BENCHING AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION OF LINE 5 UNDER GCWW SUPERVISION	DN150	-	-	-	-	-	-	-	-
2(A)	CONTRACTOR TO INSTALL PNEUMATIC PLUG TO DOWNSTREAM OUTLET OF EXISTING STRUCTURE S1/10	DN150	S1/10	P3	D/C	RR	19.520	18.333	15.424	4.096
2(B)	CONTRACTOR TO BREAK INTO EXISTING STRUCTURE S1/10, COMPLETE BENCHING AND LAY LINE 10 INCLUDING LOT 204 HOUSE CONNECTION	DN150	-	-	-	-	-	-	-	-
2(C)	CONTRACTOR TO REMOVE PNEUMATIC PLUG AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION OF LINE 10 UNDER GCWW SUPERVISION	DN150	-	-	-	-	-	-	-	-



Client:

FRASERS
PROPERTY

FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 5 OF 8

Issue	Date	Description	LAB	MG	CHK
H	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
G	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
F	05/09/22	NOTE AMENDED	JH	MG	
E	19/07/22	LOT NUMBER, LOT BOUNDARY AND SEWER UPDATED	LAB	MG	
D	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
D	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	16/09/21	CONTOURS AMENDED	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

0 10 20 30 40 50

1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed: *Michael*

Date: 20/09/2022

Drawing No: 5941 ENG OPW2 604

Rev. No: H

WARNING
BEWARE OF UNDERGROUND SERVICES

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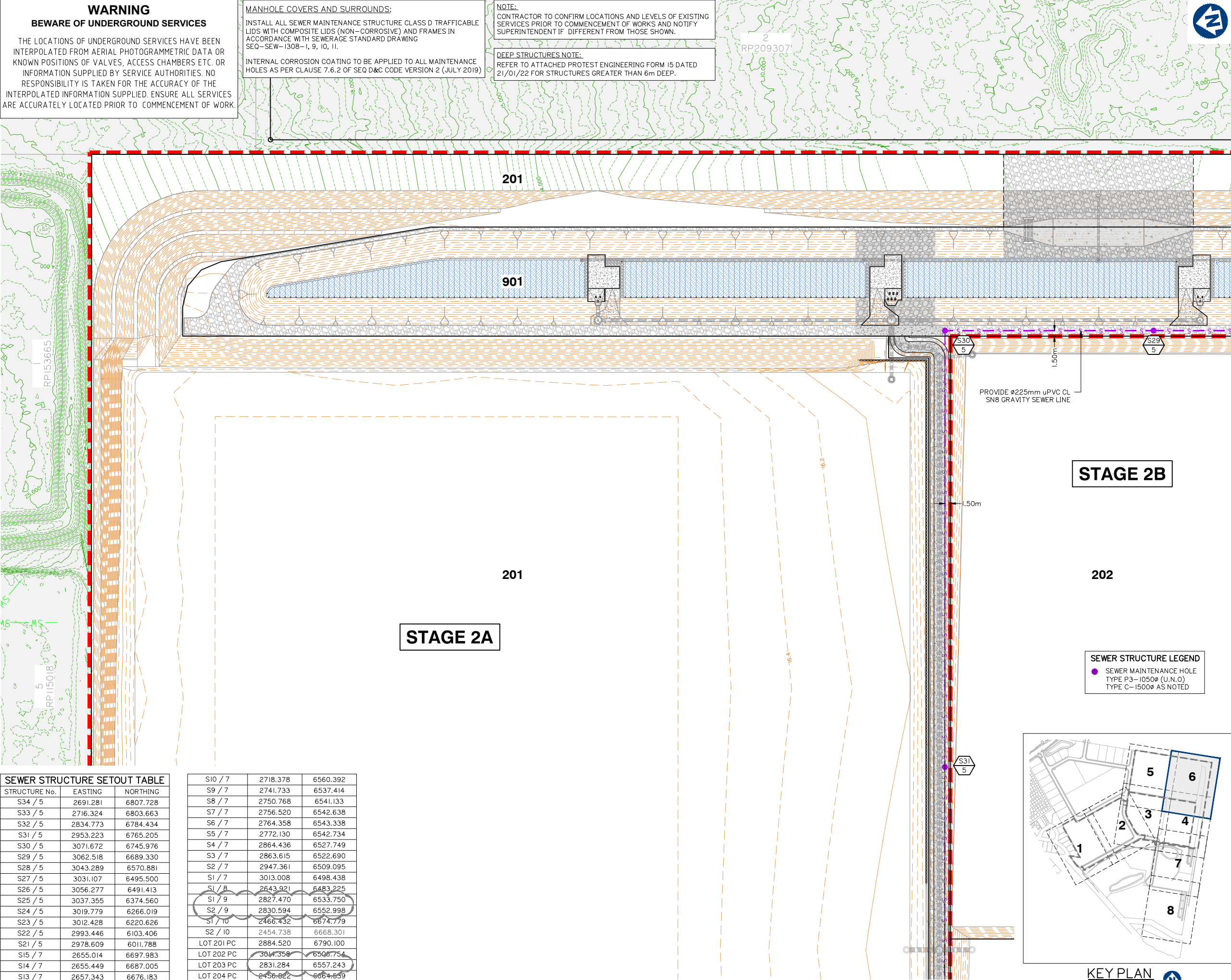
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DEEP STRUCTURES NOTE:

REFER TO ATTACHED PROTEST ENGINEERING FORM I5 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP.



SEWER STRUCTURE SETOUT TABLE		
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S7 / 7	2756.520	6542.638
S6 / 7	2764.358	6543.338
S5 / 7	2772.130	6542.734
S4 / 7	2864.436	6527.749
S3 / 7	2863.615	6522.690
S2 / 7	2947.361	6509.095
S1 / 7	3013.008	6498.438
S1 / 8	2643.921	6483.225
S1 / 9	2827.470	6533.750
S2 / 9	2830.594	6552.998
S1 / 10	2466.432	6674.779
S2 / 10	2454.738	6668.301
LOT 201 PC	2884.520	6790.100
LOT 202 PC	3011.358	6508.754
LOT 203 PC	2831.284	6557.243
LOT 204 PC	2456.822	6664.639
LOT 205 PC	2662.095	6653.898
LOT CP PC	2771.601	6539.021

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 604

SEWER RETICULATION LAYOUT PLAN SHEET 6 OF 8

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 6 OF 8

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/05/22	ISSUED FOR CONSTRUCTION	JH	MG	
D	19/07/22	LOT NUMBER, LOT BOUNDARY AND SEWER UPDATED	LAB	MG	
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/05/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
5941 ENG OPW2 605

Rev. No:
F

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 603



Client:



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Project:

VANTAGE YATALA STAGE 2

Site Address:

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ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 7 OF 8

E	06/04/23	STAGE BOUNDARY AMENDED	JH	M	
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	M	
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	M	
C	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	M	
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	M	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	M	
A	30/07/21	ORIGINAL ISSUE	LBN	M	
Issue	Date	Description	Drawn	Checked	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
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Drafted:	LAB / IG
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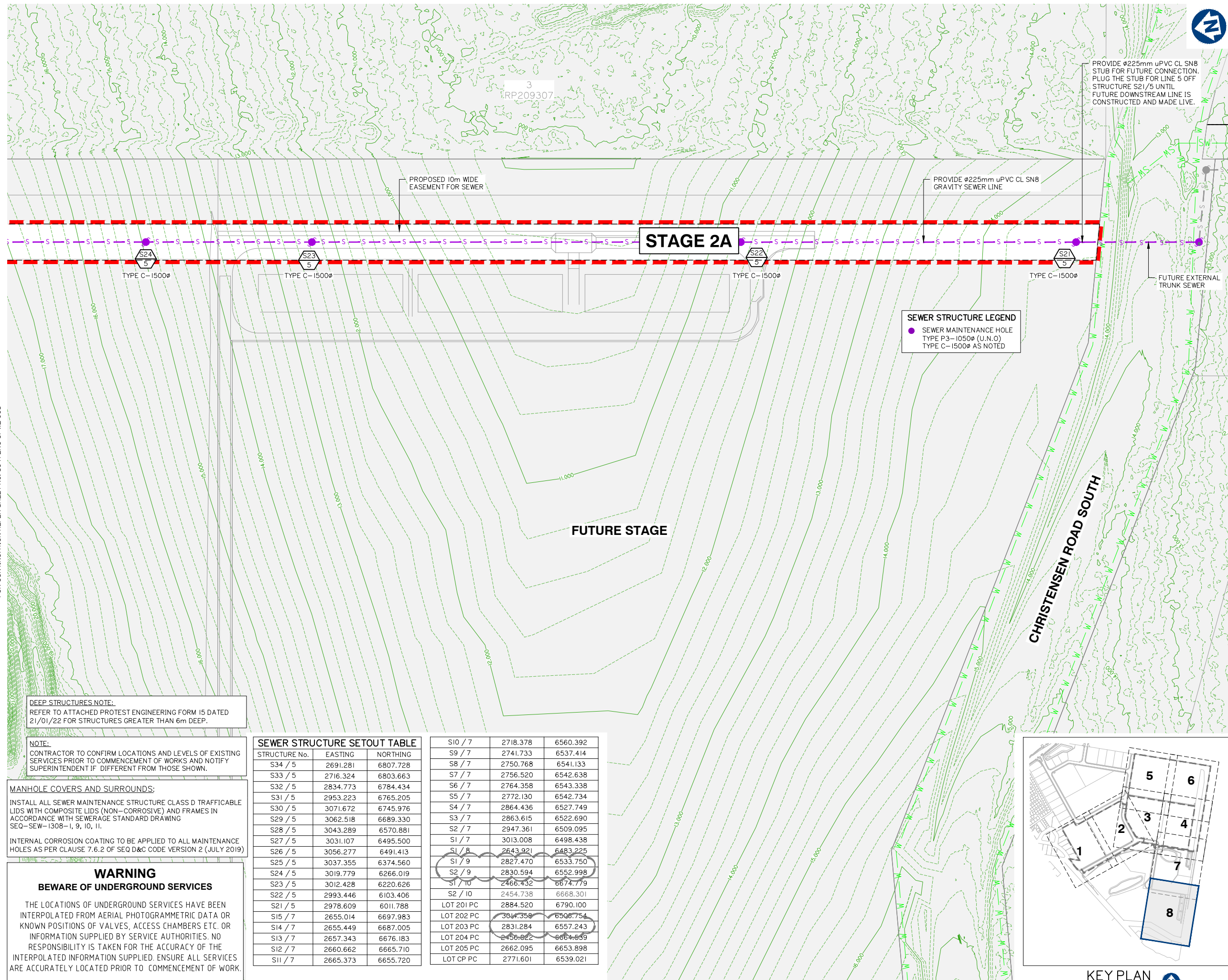
Approved:	MG
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RPEQ:	16939
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Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 606

Rev. No:
E



planning | environment | landscape | engineering | survey
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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 8 OF 8

C							
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG			
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG			
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG			
C	31/01/22	DEEP STRUCTURES NOTE ADDED	JH	MG			
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG			
B	11/09/21	INFORMATION REQUEST RESPONSE	LBN	MG			
A	30/07/21	ORIGINAL ISSUE	LAB	MG			
1500-1A	Date	Description	DRN	CHK			

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 607

Rev. No:
E

LINE 5

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 2

Site Address:

50 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 1 OF 10

C	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	31/01/22	NOTE 13 ADDED	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
ISSUE	Date	Description	DRN	CHK

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 610

Rev. No:
C

MAINTENANCE HOLE / SHAFT No.		S22/5	S23/5	S24/5	S25/5
MH / MS COVER TYPE	D/C	D/C	D/C	D/C	D/C
MH / MS TYPE	C	C	C	C	P3
MH / MS DROP TYPE	V	V	V	V	V
LINE DEFLECTION & BRANCHES	-	-	-	-	I
INTERNAL CORROSION PROTECTION	Y	Y	Y	Y	Y
PROPERTY CONNECTION TYPE	-	-	GB	-	I
RIGSS STRUCTURE DROPS VSTRAIGHT THROUGH SEWER SEQ STD DWG SEQ-SEW-1303-1 WOBLIQUE 45° "Y" JUNCTION SEQ STD DWG SEQ-SEW-1303-1 XINTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1 ZVERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1 RIGSS STRUCTURE LIDS BNON-TRAFFICABLE LID DTRAFFICABLE LID C COMPOSITE CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS		REFER NOTE I2	REFER NOTE I2	REFER NOTE I2	
RIGSS STRUCTURE TYPES P31050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL CLASS D 'COMPOSITE' COVER. SEQ STD DWG SEQ-SEW-1300-1 C1500mm DIA. CAST IN-SITU MAINTENANCE HOLE INSTALL DUCTILE IRON CLASS D 'COMPOSITE' COVER. REFER SEQ STD DWG SEQ-SEW-1307-1. REFER NOTE I2 J1TYPE "J1" MAINTENANCE SHAFT (3.0m MAXIMUM DEPTH TO IL) SEQ STD DWG SEQ-SEW-1314-2 BNDLONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3					
RIGSS PROPERTY CONNECTION TYPES VSTRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1 WOBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1 XINTERNAL BACKDROP (600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1 ZDROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2					
RIGSS GENERAL NOTES 1ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS. 2EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1 3ALL BENDS TO BE LONG RADIUS BEND,3.0m RADIUS. REFER DWG SEQ-SEW-1314-3 4ALL MAINTENANCE SHAFTS (MS) SHALL HAVE 300mm# PVC RISERS, AND NOT EXCEED 3.0m DEPTH (FSL TO INVERT LEVEL). 5CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK. 6POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A&2-B 7WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW2 410 8WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE. 9ALL PROPERTY CONNECTIONS TO BE 150# uPVC CLASS SN8 UNLESS NOTED OTHERWISE. 10DESIGN OF DEEP SEWER STRUCTURES GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2, AND PE LINING REQUIREMENTS. REFER ALSO NOTE I2. 11ALL MAINTAINANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(I) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST. 12MAINTENANCE HOLES OVER 6.0m DEEP REQUIRE SPECIAL DESIGN & CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ) AS PER SEQ STD DWG SEQ-SEW-1307-1 13REFER TO ATTACHED PROTEST ENGINEERING FORM I5 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP					
DATUM RL	3.000				
PROPERTY DESCRIPTION	PRIVATE LOT	PRIVATE LOT	PRIVATE LOT	PRIVATE LOT	
PIPE SIZE (mm), CLASS	DN225 uPVC SN8	DN225 uPVC SN8	DN225 uPVC SN8	DN225 uPVC SN8	
GRADE (1 IN X) CTR - CTR OF STRUCTURE	1 IN 300	1 IN 300	1 IN 300	1 IN 300	
LENGTH	118.747	45.985		109.955	
EMBEDMENT TYPE	4	4		4	
PIPE GRADE (%)	0.333%	0.333%		0.333%	
DEPTH TO INVERT	6.383 6.363	5.966 5.966	6.576 6.556		5.566
INVERT LEVEL	7.536 7.556	7.952 7.973	8.125 8.145		8.511
FINISHED SURFACE LEVEL	13.918	13.936	14.700		14.075
EXISTING SURFACE LEVEL	11.291	12.355	14.938		18.070
CHAINAGE	1407.129	1525.876	1571.860		1681.815

LINE 5

Project: VANTAGE YATALA
STAGE 2

Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 3 OF 10

C					
C	2/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
C	2/20/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	3/10/22	NOTE 13 ADDED	JH	MG	
B	26/1/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	1/00/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/7/21	ORIGINAL ISSUE	LAB	MG	
Issue#	Date	Description	DRN	CHK	

SCALE IN METRES

HORZ: 

Scale 1:50 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
5941 ENG OPW2 612	C

LINE 5

MAINTENANCE HOLE / SHAFT No.

S30/5

MH / MS COVER TYPE	D/C
MH / MS TYPE	P3
MH / MS DROP TYPE	V
LINE DEFLECTION & BRANCHES	-90°
INTERNAL CORROSION PROECTION	Y
PROPERTY CONNECTION TYPE	I

RIGSS STRUCTURE DROPS		RIGSS STRUCTURE LIDS	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-1	B	NON-TRAFFICABLE LID
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-1	D	TRAFFICABLE LID
X	INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1	C	COMPOSITE
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
		TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS	

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL CLASS D 'COMPOSITE' COVER. SEQ STD DWG SEQ-SEW-1300-1
C	1500mm DIA. CAST IN-SITU MAINTENANCE HOLE INSTALL DUCTILE IRON CLASS D 'COMPOSITE' COVER. REFER SEQ STD DWG SEQ-SEW-1307-1. REFER NOTE 12
J1	TYPE "J1" MAINTENANCE SHAFT (3.0m MAXIMUM DEPTH TO IL) SEQ STD DWG SEQ-SEW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
W	OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2

RIGSS GENERAL NOTES	
1	ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3	ALL BENDS TO BE LONG RADIUS BEND, 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4	ALL MAINTENANCE SHAFTS (MS) SHALL HAVE 300mmø PVC RISERS, AND NOT EXCEED 3.0m DEPTH (FSL TO INVERT LEVEL).
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW2 410
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150ø uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWER STRUCTURES GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2, AND PE LINING REQUIREMENTS. REFER ALSO NOTE 12.
11	ALL MAINTAINANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(I) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.
12	MAINTENANCE HOLES OVER 6.0m DEEP REQUIRE SPECIAL DESIGN & CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ) AS PER SEQ STD DWG SEQ-SEW-1307-1
13	REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP

DATUM RL 4.000

PROPERTY DESCRIPTION			
PIPE SIZE (mm), CLASS	DN150 uPVC SN8	DN150 uPVC SN8	
GRADE (I IN X) CTR - CTR	1 IN 180	1 IN 180	
LENGTH	120.000	120.000	
EMBEDMENT TYPE			
PIPE GRADE (%)	0.556%	0.556%	
DEPTH TO INVERT	2.920 2.600	3.041 3.021	3.443
INVERT LEVEL	10.059 10.379	11.046 11.066	11.733
FINISHED SURFACE LEVEL	12.987	14.087	15.177
EXISTING SURFACE LEVEL	10.082	10.632	
CHAINAGE	2079.430	2199.430	2319.430

LINE 5

S31/5

MH / MS COVER TYPE	D/C
MH / MS TYPE	P3
MH / MS DROP TYPE	V
LINE DEFLECTION & BRANCHES	-
INTERNAL CORROSION PROECTION	Y
PROPERTY CONNECTION TYPE	-

RIGSS STRUCTURE DROPS		RIGSS STRUCTURE LIDS	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-1	B	NON-TRAFFICABLE LID
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-1	D	TRAFFICABLE LID
X	INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1	C	COMPOSITE
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
		TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS	

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL CLASS D 'COMPOSITE' COVER. SEQ STD DWG SEQ-SEW-1300-1
C	1500mm DIA. CAST IN-SITU MAINTENANCE HOLE INSTALL DUCTILE IRON CLASS D 'COMPOSITE' COVER. REFER SEQ STD DWG SEQ-SEW-1307-1. REFER NOTE 12
J1	TYPE "J1" MAINTENANCE SHAFT (3.0m MAXIMUM DEPTH TO IL) SEQ STD DWG SEQ-SEW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
W	OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2

RIGSS GENERAL NOTES	
1	ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3	ALL BENDS TO BE LONG RADIUS BEND, 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4	ALL MAINTENANCE SHAFTS (MS) SHALL HAVE 300mmø PVC RISERS, AND NOT EXCEED 3.0m DEPTH (FSL TO INVERT LEVEL).
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW2 410
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150ø uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWER STRUCTURES GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2, AND PE LINING REQUIREMENTS. REFER ALSO NOTE 12.
11	ALL MAINTAINANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(I) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.
12	MAINTENANCE HOLES OVER 6.0m DEEP REQUIRE SPECIAL DESIGN & CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ) AS PER SEQ STD DWG SEQ-SEW-1307-1
13	REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP

DATUM RL 4.000

PROPERTY DESCRIPTION			
PIPE SIZE (mm), CLASS	DN150 uPVC SN8	DN150 uPVC SN8	
GRADE (I IN X) CTR - CTR	1 IN 180	1 IN 180	
LENGTH	120.000	120.000	
EMBEDMENT TYPE			
PIPE GRADE (%)	0.556%	0.556%	
DEPTH TO INVERT	2.920 2.600	3.041 3.021	3.443
INVERT LEVEL	10.059 10.379	11.046 11.066	11.733
FINISHED SURFACE LEVEL	12.987	14.087	15.177
EXISTING SURFACE LEVEL	10.082	10.632	
CHAINAGE	2079.430	2199.430	2319.430

LINE 5

S32/5

MH / MS COVER TYPE	D/C
MH / MS TYPE	P3
MH / MS DROP TYPE	V
LINE DEFLECTION & BRANCHES	-
INTERNAL CORROSION PROECTION	Y
PROPERTY CONNECTION TYPE	-

RIGSS STRUCTURE DROPS		RIGSS STRUCTURE LIDS	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-1	B	NON-TRAFFICABLE LID
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-1	D	TRAFFICABLE LID
X	INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1	C	COMPOSITE
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
		TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS	

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL CLASS D 'COMPOSITE' COVER. SEQ STD DWG SEQ-SEW-1300-1
C	1500mm DIA. CAST IN-SITU MAINTENANCE HOLE INSTALL DUCTILE IRON CLASS D 'COMPOSITE' COVER. REFER SEQ STD DWG SEQ-SEW-1307-1. REFER NOTE 12
J1	TYPE "J1" MAINTENANCE SHAFT (3.0m MAXIMUM DEPTH TO IL) SEQ STD DWG SEQ-SEW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
W	OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2

RIGSS GENERAL NOTES	
1	ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3	ALL BENDS TO BE LONG RADIUS BEND, 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4	ALL MAINTENANCE SHAFTS (MS) SHALL HAVE 300mmø PVC RISERS, AND NOT EXCEED 3.0m DEPTH (FSL TO INVERT LEVEL).
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW2 410
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150ø uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWER STRUCTURES GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2, AND PE LINING REQUIREMENTS. REFER ALSO NOTE 12.
11	ALL MAINTAINANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(I) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.
12	MAINTENANCE HOLES OVER 6.0m DEEP REQUIRE SPECIAL DESIGN & CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ) AS PER SEQ STD DWG SEQ-SEW-1307-1
13	REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP

DATUM RL 4.000

PROPERTY DESCRIPTION			
PIPE SIZE (mm), CLASS	DN150 uPVC SN8	DN150 uPVC SN8	
GRADE (I IN X) CTR - CTR	1 IN 180	1 IN 180	
LENGTH	120.000	120.000	
EMBEDMENT TYPE			
PIPE GRADE (%)	0.556%	0.556%	
DEPTH TO INVERT	2.920 2.600	3.041 3.021	3.443
INVERT LEVEL	10.059 10.379	11.046 11.066	11.733
FINISHED SURFACE LEVEL	12.987	14.087	15.177
EXISTING SURFACE LEVEL	10.082	10.632	
CHAINAGE	2079.430	2199.430	2319.430

LINE 5



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Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Meridian: -
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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 5 OF 10

Issue	Date	Description	DRN	CHK
E	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
D	05/09/22	DROP TYPE AMENDED	JH	MG
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	31/01/22	NOTE 13 ADDED	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.
0 5 10 15 20 25 30 35 40

VERT: Scale 1:50 - Lengths are in Metres.
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 614
Rev. No: E

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VANTAGE YATALA STAGE 2

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 6 OF 10

E	20/09/22	ISSUED FOR CONSTRUCTION	JH	M	
D	19/07/22	SEWER UPDATED	JH	M	
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	M	
C	31/01/22	NOTE 13 ADDED	JH	M	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	M	
B	11/09/21	INFORMATION REQUEST RESPONSE	LAB	M	
A	30/07/21	ORIGINAL ISSUE	LAB	M	
Issue	Date	Description	DRN	Ch	

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

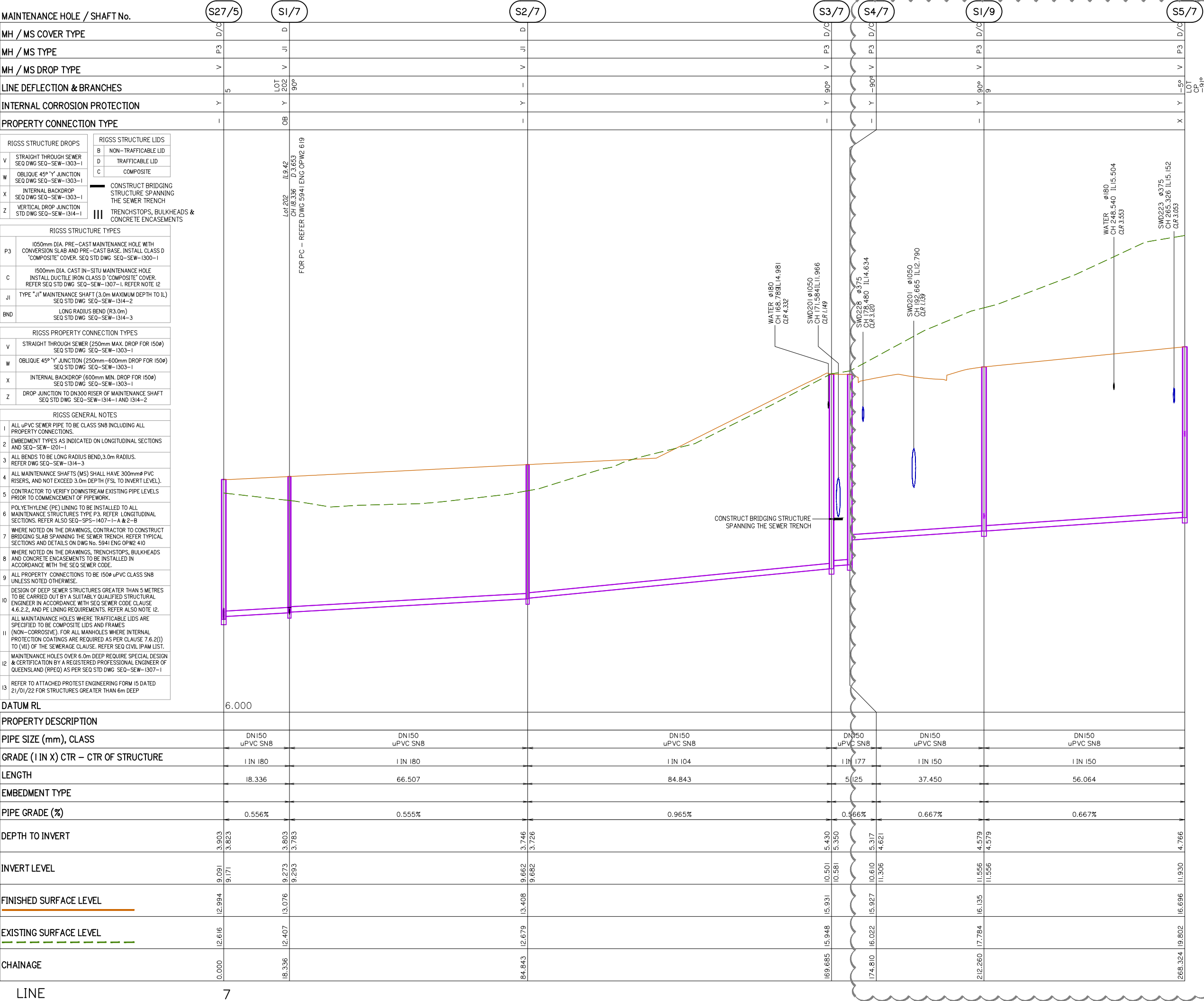
VERT:

Scale at A1: AS SHOWN

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DRAWING TITLE

SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 7 OF 10

Issue	Date	Description	LAB	MG	DRN	CHK
E	06/04/23	STRUCTURE S1/9 ADDED	JH	MG		
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG		
D	05/09/22	DROP TYPE AMENDED	JH	MG		
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG		
C	31/01/22	NOTE 13 ADDED	JH	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

VERT: Scale 1:50 - Lengths are in Metres.

Scale at A1:

AS SHOWN

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Rev. No: E

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MAINTENANCE HOLE / SHAFT No.

MH / MS COVER TYPE

MH / MS TYPE

MH / MS DROP TYPE

LINE DEFLECTION & BRANCHES

INTERNAL CORROSION PROECTION

PROPERTY CONNECTION TYPE

RIGSS STRUCTURE DROPS		RIGSS STRUCTURE LIDS	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-1	B	NON-TRAFFICABLE LID
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-1	D	TRAFFICABLE LID
X	INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1	C	COMPOSITE
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
		TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS	

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL CLASS D 'COMPOSITE' COVER. SEQ STD DWG SEQ-SEW-1300-1
C	1500mm DIA. CAST IN-SITU MAINTENANCE HOLE INSTALL DUCTILE IRON CLASS D 'COMPOSITE' COVER. REFER SEQ STD DWG SEQ-SEW-1307-1. REFER NOTE 12
J1	TYPE "J1" MAINTENANCE SHAFT (3.0m MAXIMUM DEPTH TO IL) SEQ STD DWG SEQ-SEW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
W	OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-1
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2

RIGSS GENERAL NOTES	
1	ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3	ALL BENDS TO BE LONG RADIUS BEND, 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4	ALL MAINTENANCE SHAFTS (MS) SHALL HAVE 300mmø PVC RISERS, AND NOT EXCEED 3.0m DEPTH (FSL TO INVERT LEVEL).
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW2 410
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150ø uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWER STRUCTURES GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2, AND PE LINING REQUIREMENTS. REFER ALSO NOTE 12.
11	ALL MAINTAINANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.
12	MAINTENANCE HOLES OVER 6.0m DEEP REQUIRE SPECIAL DESIGN & CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ) AS PER SEQ STD DWG SEQ-SEW-1307-1
13	REFER TO ATTACHED PROTEST ENGINEERING FORM 15 DATED 21/01/22 FOR STRUCTURES GREATER THAN 6m DEEP

DATUM RL

PROPERTY DESCRIPTION

PIPE SIZE (mm), CLASS

GRADE (I IN X) CTR – CTR

LENGTH

EMBEDMENT TYPE

PIPE GRADE (%)

DEPTH TO INVERT

INVERT LEVEL

FINISHED SURFACE LEVEL

EXISTING SURFACE LEVEL

CHAINAGE

LINE

7

Client:



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VANTAGE YATALA
STAGE 2

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 8 OF 10

E	06/04/23	LAYOUT AMENDED	JH	MG
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG
D	19/07/22	SEWER UPDATED	JH	MG
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	31/01/22	NOTE 13 ADDED	JH	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.
0 5 10 15 20 25 30 35 40

VERT: Scale 1:50 - Lengths are in Metres.
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 617 Rev. No: E

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 9 OF 10

E	06/04/23	LINE 9 ASSESSMENT	JH MG
D	20/09/22	ISSUED FOR CONSTRUCTION	JH MG
D	19/07/22	SEWER UPDATED	LAB MG
C	22/04/22	ISSUED FOR CONSTRUCTION	LAB MG
C	31/01/22	NOTE 13 ADDED	JH MG
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB MG
A	30/07/21	ORIGINAL ISSUE	LH MG
ISSUE		Description	DRN CHK

HORZ: Scale 1:500 - Lengths are in Metres.

HORZ:

VERT:

Scale at A1: AS SHOWN

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Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:
5941 ENG OPW2 618

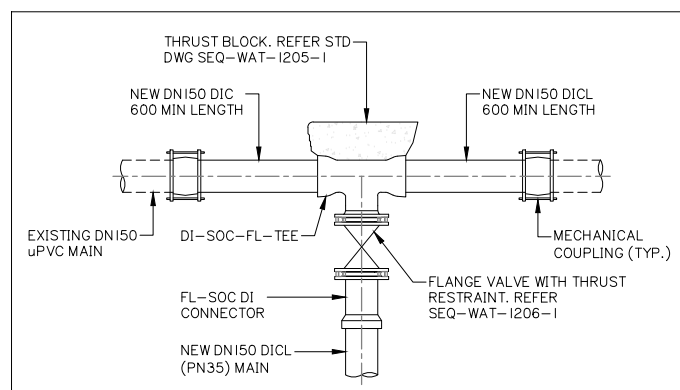
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205

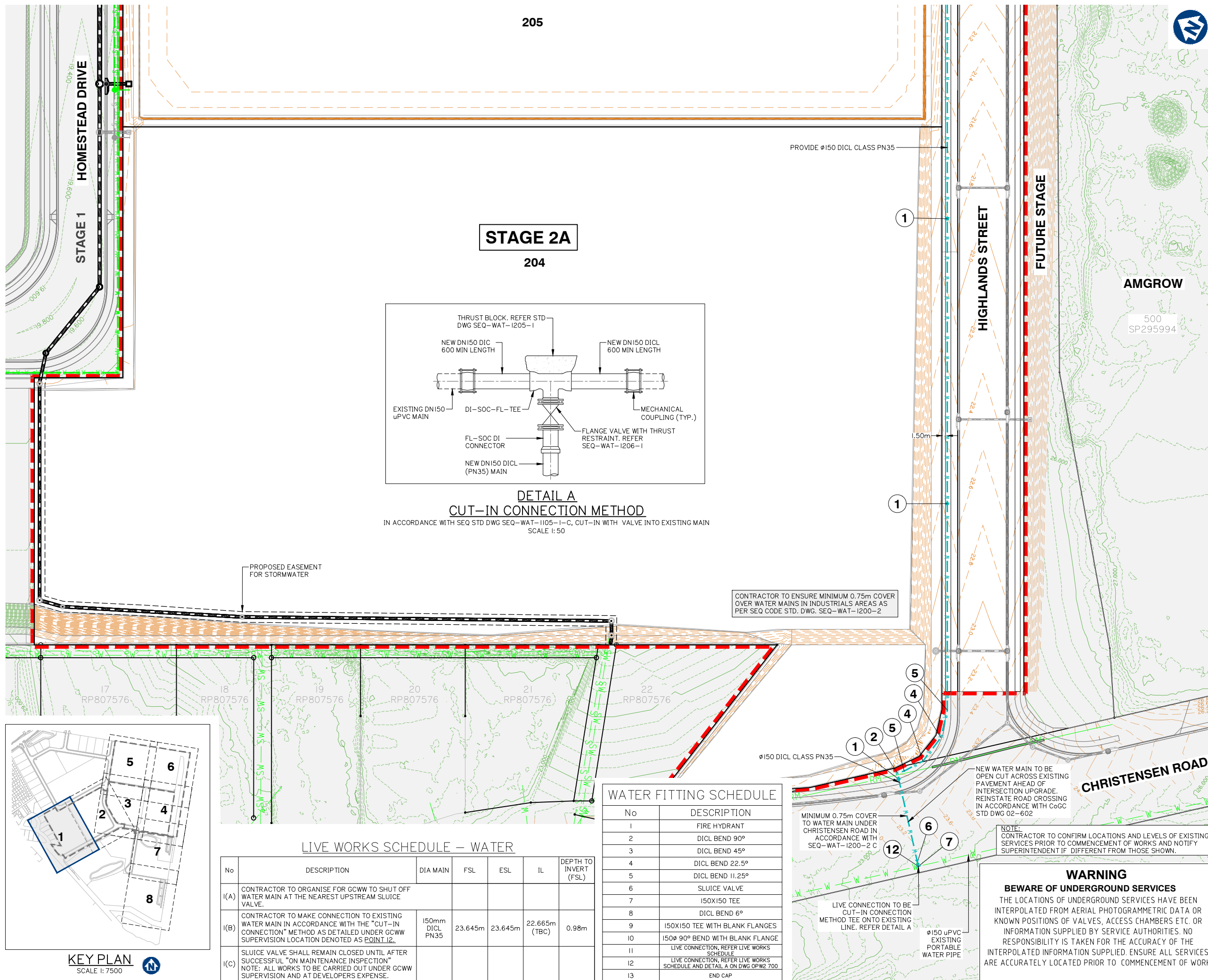
STAGE 2A

204



DETAIL A

CUT-IN CONNECTION METHOD

IN ACCORDANCE WITH SEQ STD DWG SEQ-WAT-I105-I-C, CUT-IN WITH VALVE INTO EXISTING MAIN
SCALE 1:50KEY PLAN
SCALE 1:7500

LIVE WORKS SCHEDULE – WATER

No	DESCRIPTION	DIA MAIN	FSL	ESL	IL	DEPTH TO INVERT (FSL)
I(A)	CONTRACTOR TO ORGANISE FOR GCWW TO SHUT OFF WATER MAIN AT THE NEAREST UPSTREAM SLUICE VALVE.					
I(B)	CONTRACTOR TO MAKE CONNECTION TO EXISTING WATER MAIN IN ACCORDANCE WITH THE "CUT-IN CONNECTION" METHOD AS DETAILED UNDER GCWW SUPERVISION LOCATION DENOTED AS POINT 12.	150mm DICL PN35	23.645m	23.645m	22.665m (TBC)	0.98m
I(C)	SLUICE VALVE SHALL REMAIN CLOSED UNTIL AFTER SUCCESSFUL "ON MAINTENANCE INSPECTION" NOTE: ALL WORKS TO BE CARRIED OUT UNDER GCWW SUPERVISION AND AT DEVELOPERS EXPENSE.					

WATER FITTING SCHEDULE

No	DESCRIPTION
1	FIRE HYDRANT
2	DICL BEND 90°
3	DICL BEND 45°
4	DICL BEND 22.5°
5	DICL BEND 11.25°
6	SLUICE VALVE
7	150X150 TEE
8	DICL BEND 6°
9	150X150 TEE WITH BLANK FLANGES
10	150° 90° BEND WITH BLANK FLANGE
11	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE
12	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE AND DETAIL A ON DWG OPW2 700
13	END CAP

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

Client:

FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207THIS DRAWING IS INTENDED TO
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DRAWING TITLE

WATER RETICULATION
LAYOUT PLAN SHEET 1 OF 4

SCALE IN METRES

1:500 (FULL SIZE A1)

1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

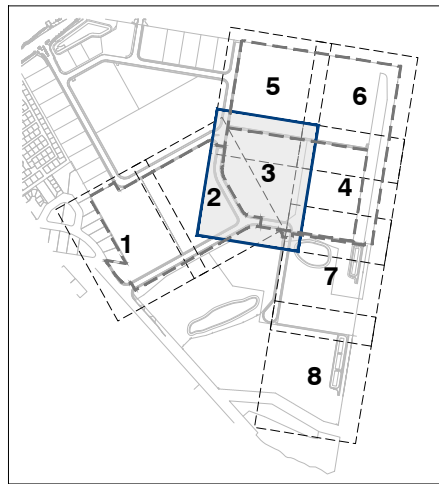
Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No:
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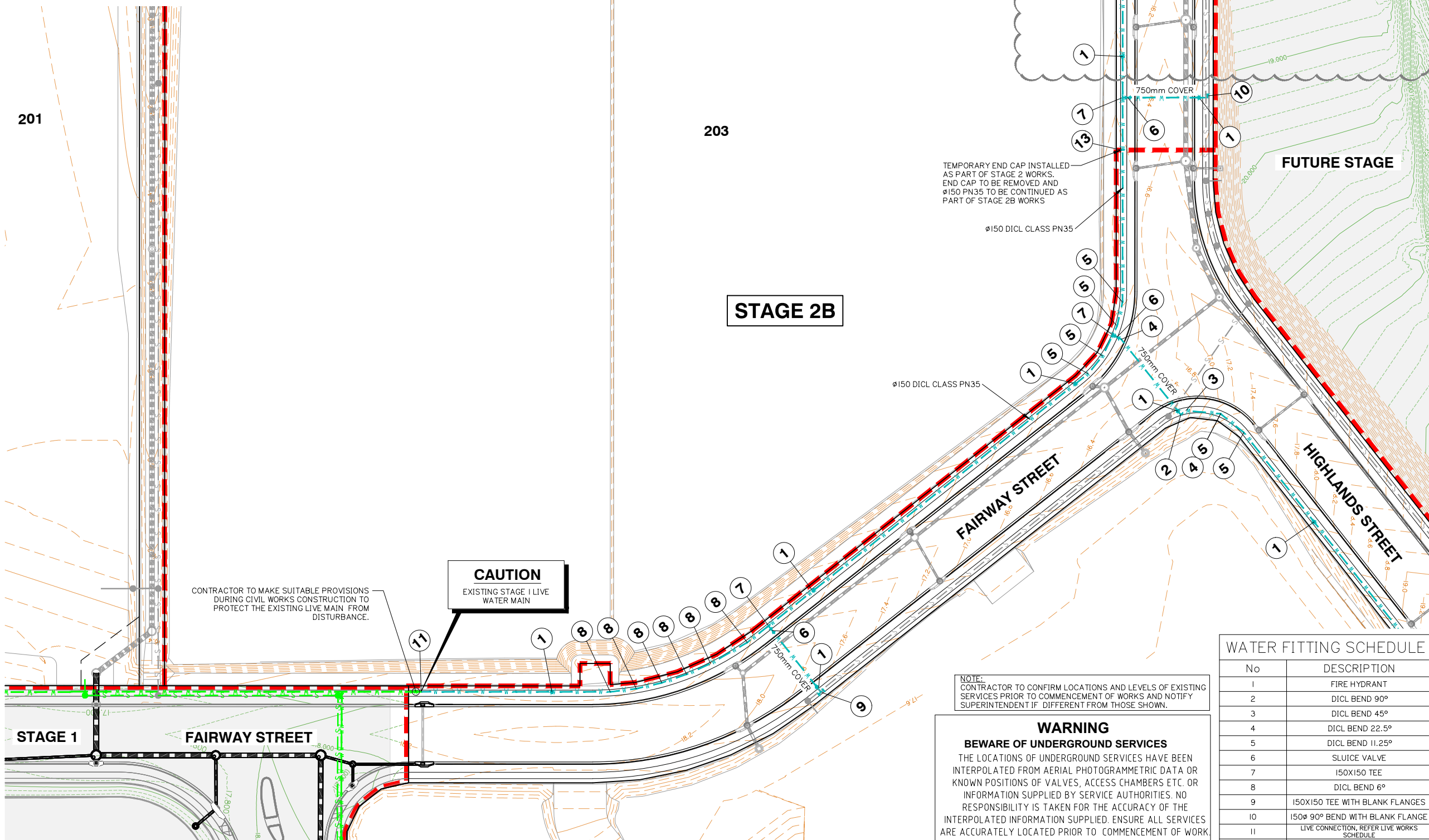


KEY PLAN
SCALE 1: 7500

LIVE WORKS SCHEDULE – WATER

No	DESCRIPTION	DIA MAIN	FSL	ESL	IL	DEPTH TO INVERT (FSL)
I(A)	CONTRACTOR TO ORGANISE FOR GCWW TO SHUT OFF WATER MAIN AT THE NEAREST UPSTREAM SLUICE VALVE.					
I(B)	CONTRACTOR TO CONNECT TO EXISTING LIVE Ø150 WATER MAIN AT EXISTING BLANK FLANGE LOCATION DENOTED AS POINT 11.	150mm DICL	18.319m	13.376m	17.339m	0.98m
I(C)	SLUICE VALVE SHALL REMAIN CLOSED UNTIL AFTER SUCCESSFUL "ON MAINTENANCE INSPECTION" NOTE: ALL WORKS TO BE CARRIED OUT UNDER GCWW SUPERVISION AND AT DEVELOPER'S EXPENSE.					

CONTRACTOR TO ENSURE MINIMUM 0.75m COVER OVER WATER MAINS IN INDUSTRIALS AREAS AS PER SEQ CODE STD. DWG. SEQ-WAT-1200-2



STAGE 2B

CAUTION

EXISTING STAGE 1 LIVE WATER MAIN

CONTRACTOR TO MAKE SUITABLE PROVISIONS DURING CIVIL WORKS CONSTRUCTION TO PROTECT THE EXISTING LIVE MAIN FROM DISTURBANCE.

NOTE:
CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

WATER FITTING SCHEDULE

No	DESCRIPTION
1	FIRE HYDRANT
2	DICL BEND 90°
3	DICL BEND 45°
4	DICL BEND 22.5°
5	DICL BEND 11.25°
6	SLUICE VALVE
7	ISOX150 TEE
8	DICL BEND 6°
9	ISOX150 TEE WITH BLANK FLANGES
10	ISOØ 90° BEND WITH BLANK FLANGE
11	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE
12	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE AND DETAIL A ON DWG OPW2 700
13	END CAP

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR CONSTRUCTION

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DRAWING TITLE

WATER RETICULATION
LAYOUT PLAN SHEET 3 OF 4

Rev	Date	Description	LAB	CHK
E	06/04/23	LAYOUT AMENDED	JH	MG
D	20/08/22	ISSUED FOR CONSTRUCTION	JH	MG
C	19/07/22	LOT NUMBER UPDATED	LAB	MG
B	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG

SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

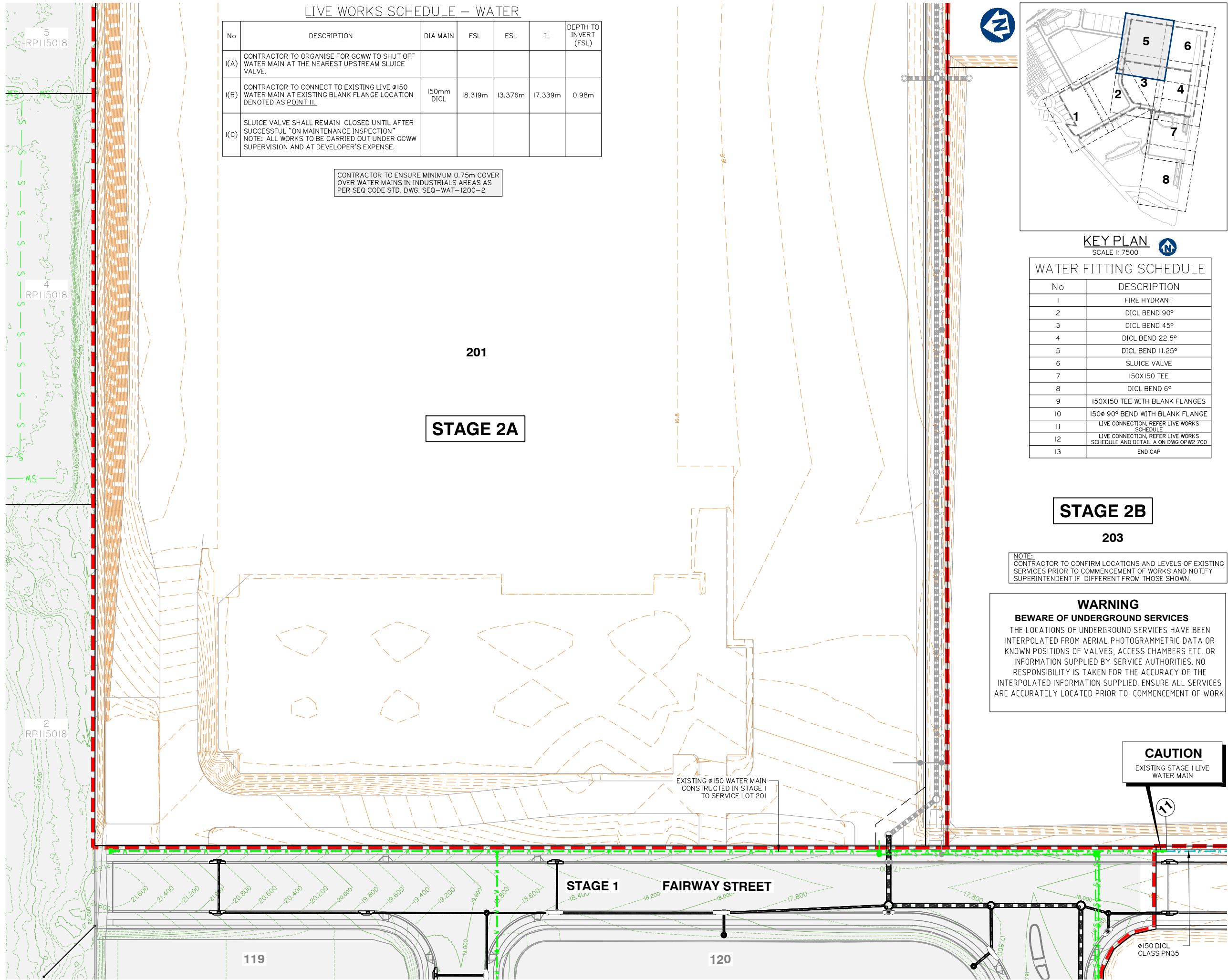
RPEQ: 16939

Signed:

Date: 20/09/2022

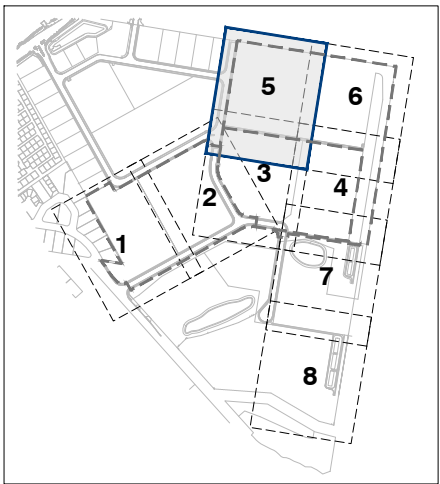
Drawing No: 5941 ENG OPW2 702

Rev. No: E



LIVE WORKS SCHEDULE – WATER						
No	DESCRIPTION	DIA MAIN	FSL	ESL	IL	DEPTH TO INVERT (FSL)
I(A)	CONTRACTOR TO ORGANISE FOR GCWW TO SHUT OFF WATER MAIN AT THE NEAREST UPSTREAM SLUICE VALVE.					
I(B)	CONTRACTOR TO CONNECT TO EXISTING LIVE Ø150 WATER MAIN AT EXISTING BLANK FLANGE LOCATION DENOTED AS POINT 11.	150mm DICL	18.319m	13.376m	17.339m	0.98m
I(C)	SLUICE VALVE SHALL REMAIN CLOSED UNTIL AFTER SUCCESSFUL "ON MAINTENANCE INSPECTION" NOTE: ALL WORKS TO BE CARRIED OUT UNDER GCWW SUPERVISION AND AT DEVELOPER'S EXPENSE.					

CONTRACTOR TO ENSURE MINIMUM 0.75m COVER OVER WATER MAINS IN INDUSTRIALS AREAS AS PER SEQ CODE STD. DWG. SEQ-WAT-1200-2



KEY PLAN
SCALE 1: 7500

WATER FITTING SCHEDULE	
No	DESCRIPTION
1	FIRE HYDRANT
2	DICL BEND 90°
3	DICL BEND 45°
4	DICL BEND 22.5°
5	DICL BEND 11.25°
6	SLUICE VALVE
7	150X150 TEE
8	DICL BEND 6°
9	150X150 TEE WITH BLANK FLANGES
10	150Ø 90° BEND WITH BLANK FLANGE
11	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE
12	LIVE CONNECTION, REFER LIVE WORKS SCHEDULE AND DETAIL A ON DWG OPW2 700
13	END CAP

STAGE 2B

203

NOTE:
CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

WARNING
BEWARE OF UNDERGROUND SERVICES
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CAUTION
EXISTING STAGE 1 LIVE WATER MAIN

FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 702

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
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PSM: -
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DRAWING TITLE

WATER RETICULATION
LAYOUT PLAN SHEET 4 OF 4

Issue	Date	Description	LAB	MG	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
D	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
C	19/07/22	LOT BOUNDARY UPDATED	LAB	MG	
B	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No: 5941 ENG OPW2 703
Rev. No: E

Client:



Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
WATER RETICULATION
TYPICAL DETAILS SHEET 1
OF 2

A	20/09/22	ISSUED FOR CONSTRUCTION	JH	MG	
A	22/04/22	ISSUED FOR CONSTRUCTION	LAB	MG	
A	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES
NOT APPLICABLE

Scale at A1:	NTS
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 710 Rev. No: A

THRUST BLOCK LENGTH

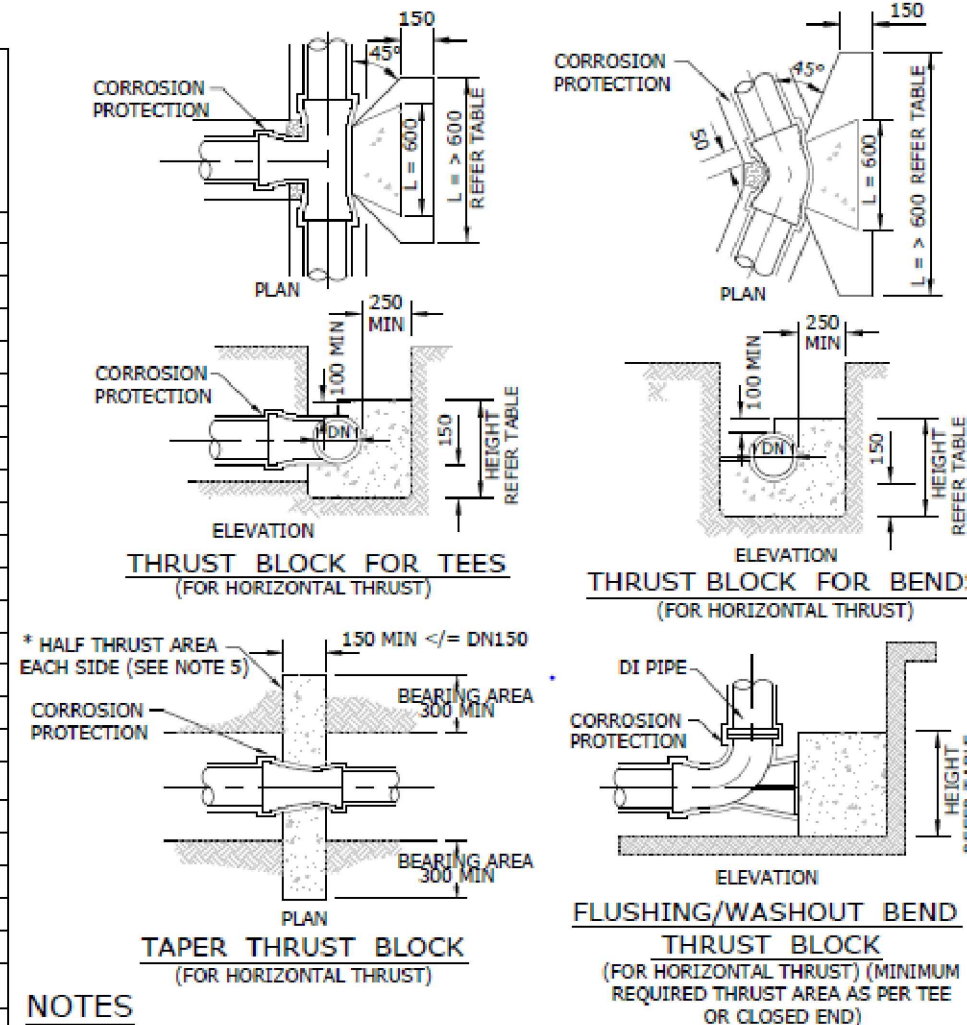
PIPE DN.	FITTING	MAX. THRUST IN KN	THRUST BLOCK HEIGHT	STIFF CLAY 50 KPa.	VERY STIFF CLAY SANDY LOAM 100KPa.	SAND & GRAVEL HARDCLAY 150KPa.	SAND & GRAVEL CEMENTED WITH CLAY 200KPa.	ROCK 240KPa
100	90° BEND	19.8	400	1000	•	•	•	•
	60° BEND	14.0		700	•	•	•	•
	45° BEND	10.7		•	•	•	•	•
	22.5° BEND	5.5		•	•	•	•	•
	11.25° BEND	2.7		•	•	•	•	•
	TEE OR CLOSED END	14.0		700	•	•	•	•
150	90° BEND	41.7	450	1860	930	•	•	•
	60° BEND	29.5		1320	660	•	•	•
	45° BEND	22.6		1000	•	•	•	•
	22.5° BEND	11.5		•	•	•	•	•
	11.25° BEND	5.8		•	•	•	•	•
	TEE OR CLOSED END	29.5		1300	660	•	•	•
200	90° BEND	71.7	550	•	1300	870	650	•
	60° BEND	50.7		1850	920	•	•	•
	45° BEND	38.8		1410	700	•	•	•
	22.5° BEND	19.8		720	•	•	•	•
	11.25° BEND	9.9		•	•	•	•	•
	TEE OR CLOSED END	50.7		1850	920	•	•	•
225	90° BEND	89.4	600	•	1500	1000	750	•
	60° BEND	63.2		2110	1060	700	•	•
	45° BEND	48.4		1620	810	•	•	•
	22.5° BEND	24.6		830	•	•	•	•
	11.25° BEND	12.4		•	•	•	•	•
	TEE OR CLOSED END	63.2		210	1060	700	•	•
250	90° BEND	109.0	650	•	1700	1120	840	700
	60° BEND	77.1		2400	1200	800	•	•
	45° BEND	59.0		1820	910	•	•	•
	22.5° BEND	30.1		930	•	•	•	•
	11.25° BEND	15.1		•	•	•	•	•
	TEE OR CLOSED END	77.1		2400	1200	800	•	•
300	90° BEND	158.6	700	•	2270	1510	1140	950
	60° BEND	112.2		•	1600	1070	800	670
	45° BEND	85.9		2453	1230	820	•	•
	22.5° BEND	43.8		1250	630	•	•	•
	11.25° BEND	22.0		630	•	•	•	•
	TEE OR CLOSED END	112.2		•	1600	1070	800	750

THRUST BLOCK DIMENSIONS - 1200kPa

- INDICATES BLOCK LENGTH OF 600
- * = SPECIAL DESIGN

THRUST BLOCK LENGTH

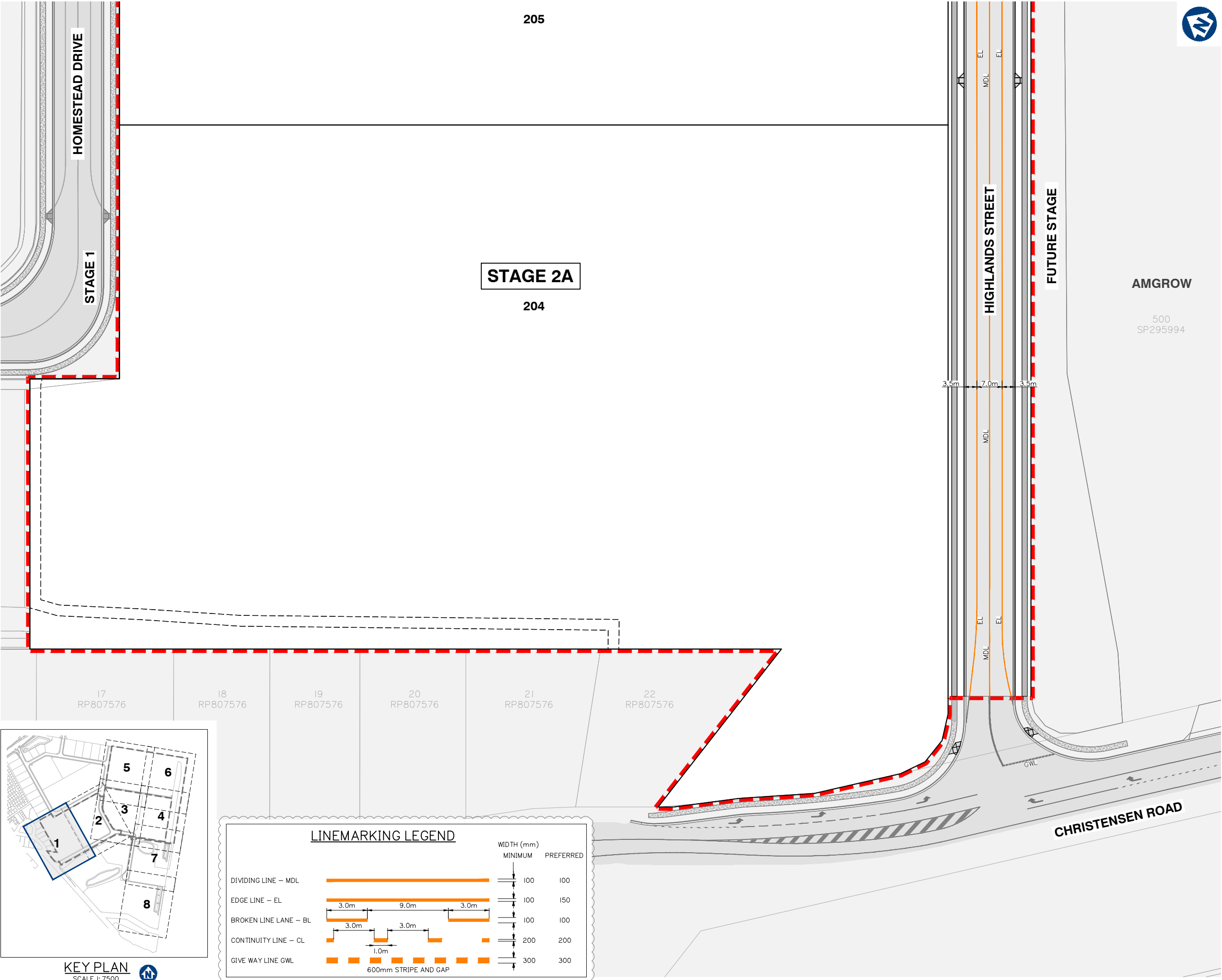
PIPE DN.	FITTING	MAX. THRUST IN KN	THRUST BLOCK HEIGHT	STIFF CLAY 50 KPa.	VERY STIFF CLAY SANDY LOAM 100KPa.	SAND & GRAVEL HARDCLAY 150KPa.	SAND & GRAVEL CEMENTED WITH CLAY 200KPa.	ROCK 240KPa
375	90° BEND	241.9	800	•	•	2220	1510	1260
	60° BEND	171.0		•	2140	1430	1070	890
	45° BEND	130.9		•	1640	1090	820	680
	22.5° BEND	66.7		1670	840	•	•	•
	11.25° BEND	33.5		840	•	•	•	•
	TEE OR CLOSED END	171.0		•	2140	1430	1070	890
450	90° BEND	342.6	900	•	•	2540	1900	1590
	60° BEND	242.3		•	2690	1800	1350	1120
	45° BEND	185.4		•	2060	1375	1030	860
	22.5° BEND	94.5		2100	1050	700	•	•
	11.25° BEND	47.5		1060	•	•	•	•
	TEE OR CLOSED END	242.3		•	2690	1800	1350	1120
500	90° BEND	418	1000	•	•	2790	2090	1740
	60° BEND	295.6		•	•	1970	1480	1230
	45° BEND	226.2		•	2260	1510	1130	940
	22.5° BEND	115.3		2310	1150	770	•	•
	11.25° BEND	58.0		1160	•	•	•	•
	TEE OR CLOSED END	295.5		•	•	1970	1480	1230
600	90° BEND	593	1100	•	•	•	2700	2250
	60° BEND	419		•	•	2540	1910	1590
	45° BEND	320		•	2920	1950	1460	1220
	22.5° BEND	164		2980	1490	990	750	620
	11.25° BEND	82.2		1500	750	•	•	•
	TEE OR CLOSED END	419		•	•	2540	1910	1590
750	90° BEND	909	1300	•	•	•	•	2920
	60° BEND	643		•	•	•	2480	2060
	45° BEND	492		•	•	2530	1890	1580
	22.5° BEND	251		•	1930	1290	970	810
	11.25° BEND	126.1		1940	970	650	•	•
	TEE OR CLOSED END	643		•	•	•	2480	2060
900 (Ø960 MSCL)	90° BEND	1,228	1500	•	•	•	•	3420
	60° BEND	868		•	•	•	2900	2420
	45° BEND	664		•	•	2960	2220	1850
	22.5° BEND	339		•	2260	1510	1130	940
	11.25° BEND	170		2270	1140	760	•	•
	TEE OR CLOSED END	868		•	•	•	3300	2650



NOTES

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
- CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL. SOIL CLASSIFICATIONS USED ON THIS DRAWING ARE EXPLAINED IN SEQ-WAT-1200-1. DO NOT USE STANDARD THRUST BLOCKS AS SPECIFIED IN THIS DRAWING IN SOILS WITH < 50kPa BEARING CAPACITY EG;
 - VERY SOFT, SOFT OR FIRM CLAY.
 - LOOSE CLEAN SAND,
 - UNCOMPACTED FILL OR REFUSE.A GEOTECHNICAL ASSESSMENT AND INDIVIDUAL DESIGN IS REQUIRED FOR THESE SOILS.
- THRUST BLOCKS NOT TO INTERFERE WITH OTHER SERVICES OR BE LOCATED OUTSIDE THE WATER MAIN ALLOCATION WITHOUT WATER AGENCY APPROVAL.
- ALL CONCRETE GRADE N20. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL DI CL PIPE DIAMETERS.
- THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCKS TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREAS FOR TEES OR CLOSED ENDS OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. THE DETAIL SHOWN IS FOR < OR = DN150 MAINS. FOR LARGER MAINS, THE TAPER THRUST BLOCK SHALL BE REINFORCED AND OF A SIZE AS SHOWN IN SEQ-WAT-1206-1.
- FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN.
- WHEN POURING CONCRETE AGAINST FITTINGS PLACE A MEMBRANE OF POLYETHYLENE, PVC OR FELT BETWEEN THE FITTING AND CONCRETE TO PREVENT DAMAGE TO THE FITTING. PIPE JOINTS TO BE CLEAR OF CONCRETE.
- CONCRETE THRUST BLOCK ANCHORS FOR VALVES TO BE AS DETAILED ON SEQ-WAT-1206-1.

[IN ACCORDANCE WITH SEQ-WAT-1205-1]





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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:



FRASERS
PROPERTY

FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:	
Lot:	501
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DRAWING TITLE

LINEMARKING AND
SIGNAGE PLAN
SHEET 1 OF 3

F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
E	19/07/22	LOT NUMBER LOT BOUNDARY UPDATED	LAB	MG	
D	28/03/22	LINEMARKING AMENDED	LAB	MG	
C	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	25/11/21	DIVIDING LINEMARKING ADDED	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	LAB	CHK	DRN

SCALE IN METRES



0 10 20 30 40 50

1:500 (FULL SIZE A1)

1:1000 (HALF SIZE A3)

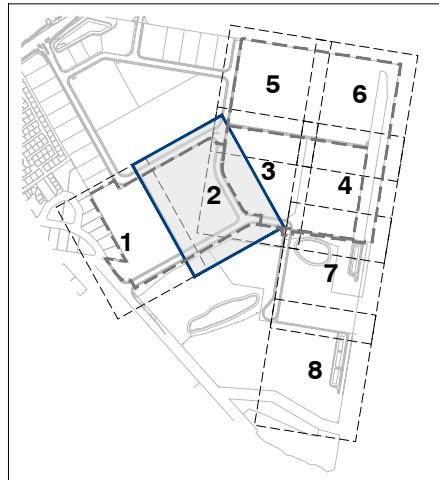
Scale at A1:		1:500
Designed:	IG	
Drafted:	LAB / IG	
Approved:	MG	
RPEQ:	16939	
Signed:		
Date:	20/09/2022	

Drawing No:

5941 ENG OPW2 800

Rev. No:

F

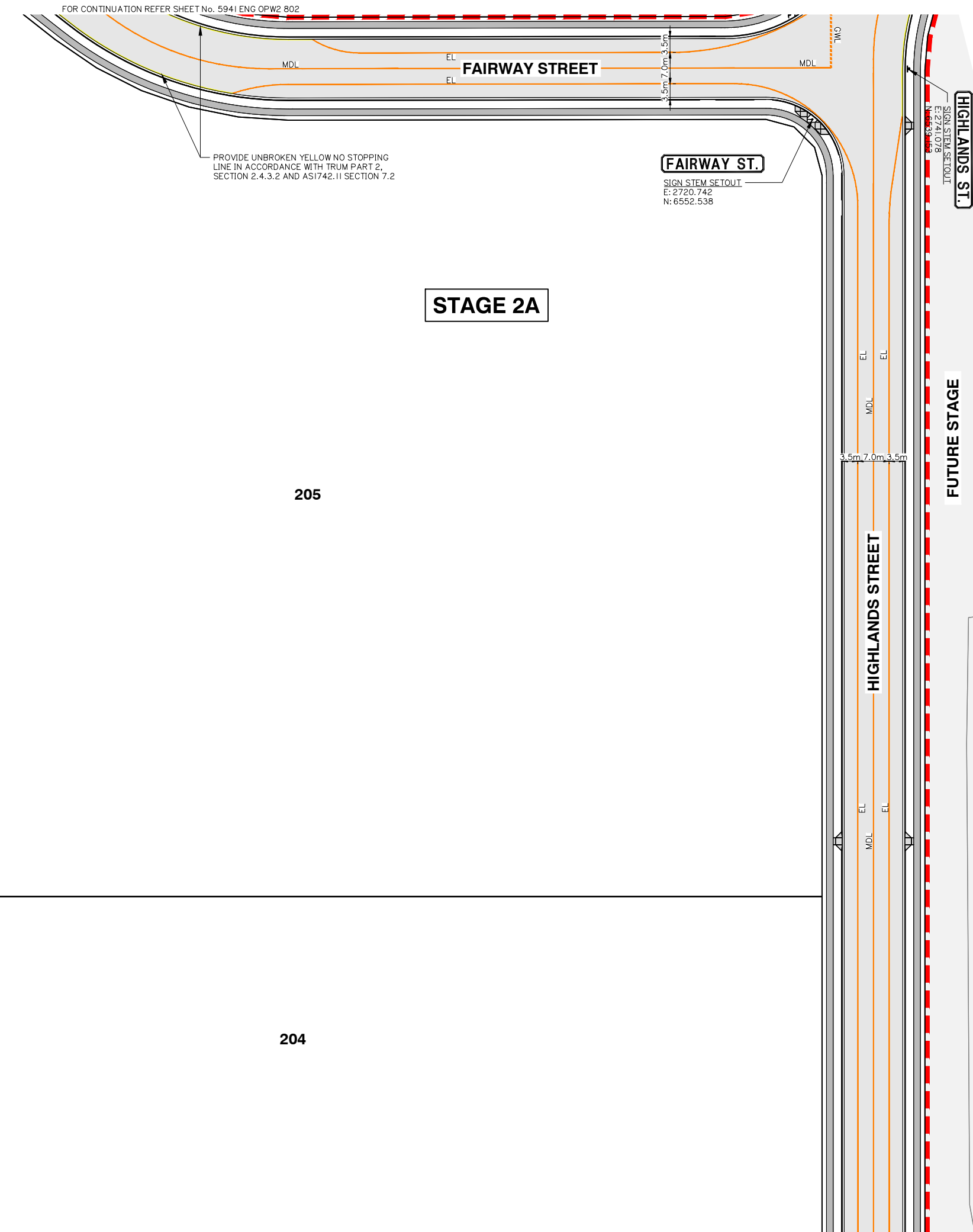


KEY PLAN
SCALE 1: 7500



LINEMARKING LEGEND

		WIDTH (mm)	
		MINIMUM	PREFERRED
DIVIDING LINE – MDL		100	100
EDGE LINE – EL		100	150
BROKEN LINE LANE – BL		100	100
CONTINUITY LINE – CL		200	200
GIVE WAY LINE GWL		300	300
	600mm STRIPE AND GAP		



Client:



FRASERS PROPERTY
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Project:

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DRAWING TITLE LINEMARKING AND SIGNAGE PLAN SHEET 2 OF 3

Issue	Date	Description	LAB	MG	CHK
F	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
E	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
E	19/07/22	LOT NUMBER, LOT BOUNDARY UPDATED	LAB	MG	
D	28/03/22	LOT RECONFIGURATION	LAB	MG	
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
C	25/11/21	DIVIDING LINEMARKING ADDED	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES

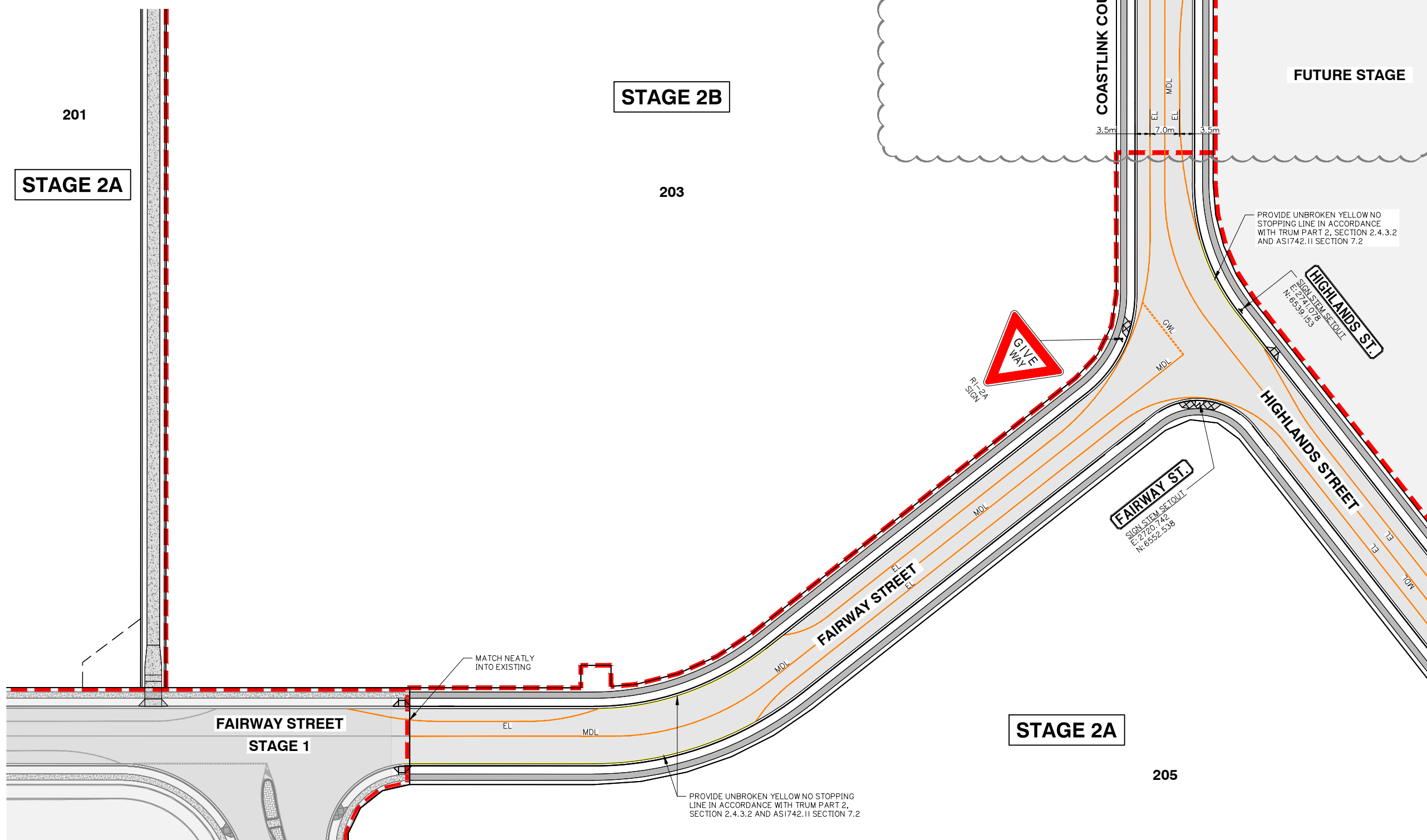
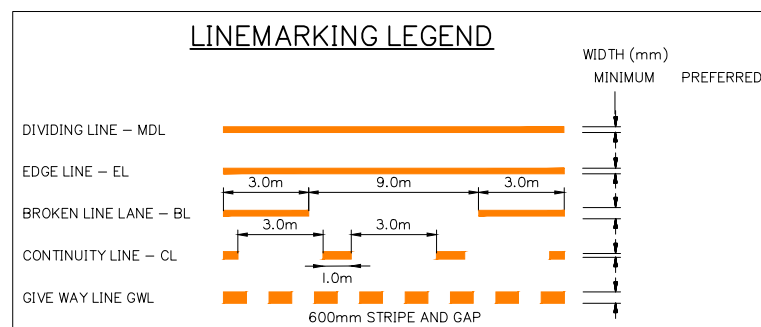


1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 801
Rev. No: F



FOR CONTINUATION REFER SHEET No. 5941 ENG OPW2 80

LINEMARKING AND SIGNAGE PLAN SHEET 3 OF 3

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE
LINEMARKING AND
SIGNAGE PLAN
SHEET 3 OF 3

G	06/04/23	LAYOUT AMENDED	JH	MG	
F	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
E	19/07/22	LOT NUMBER LOT BOUNDARY UPDATED	LAB	MG	
D	28/03/22	LINEMARKING AMENDED	LAB	MG	
C	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	25/11/21	DIVIDING LINE MARKING ADDED	LAB	MG	
A	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue Date	Date	Description	DRN	CHN	

SCALE IN METRES

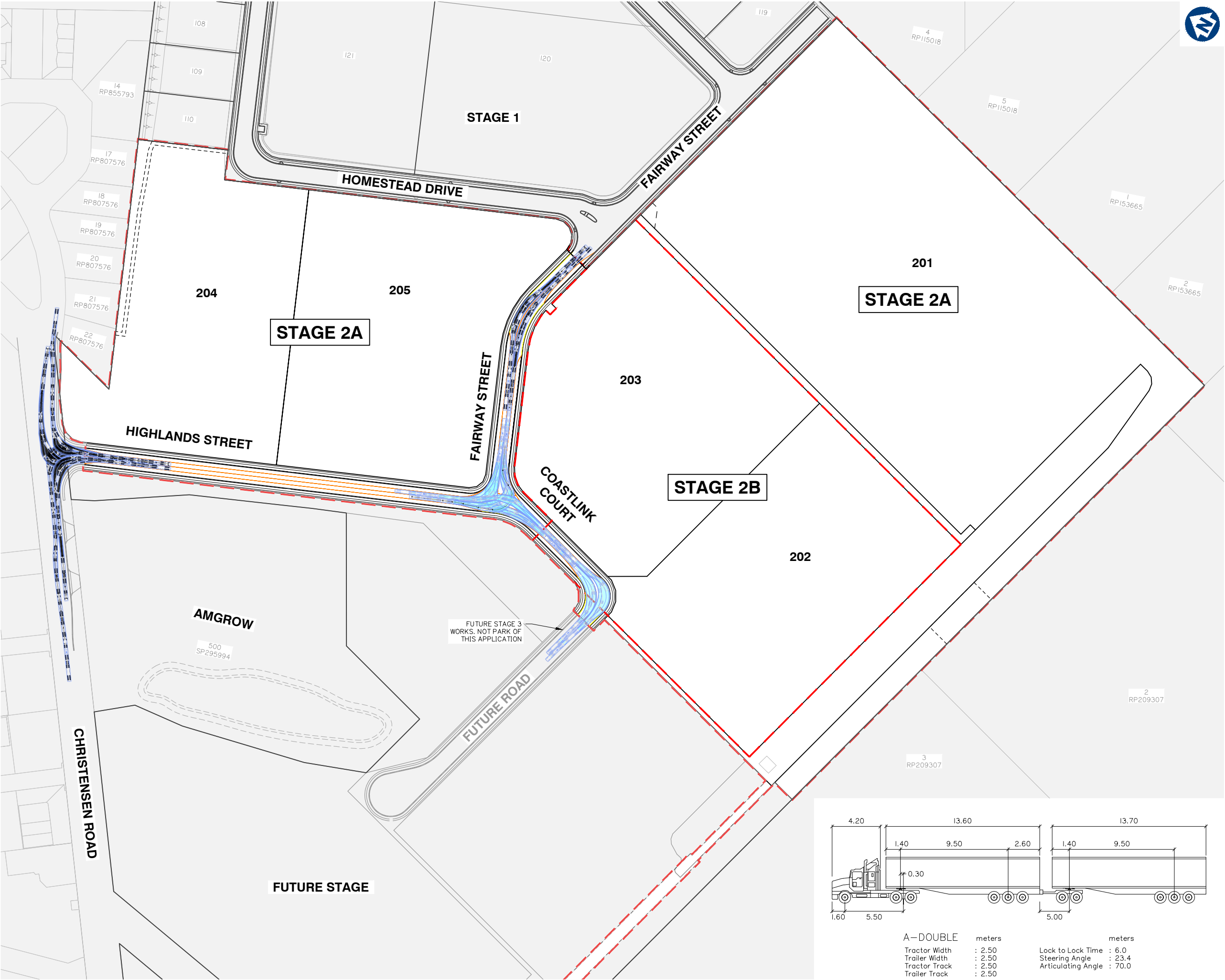


1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

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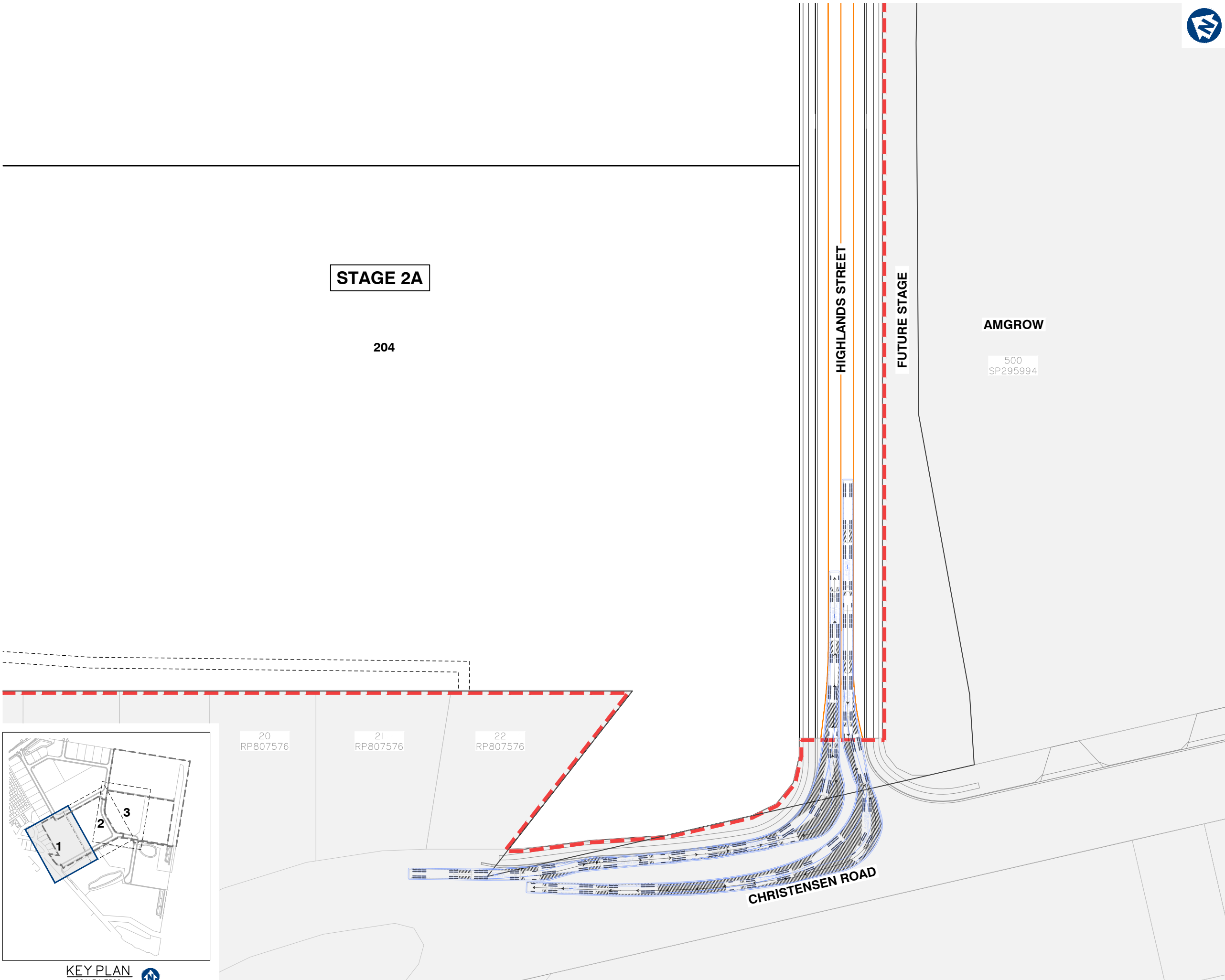
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No:	Rev. No:
5941 ENG OPW2 802	G



Issue	Date	Description	LAB	MG	CHK
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	LOT BOUNDARY AND LOT NUMBER UPDATED	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

Scale at A1:	1:1500
Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022



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Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 2

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

A-DOUBLE SWEEP PATH
ANALYSIS SHEET 1 OF 5

Issue	Date	Description	LAB	MG	DRN	CHK
D	06/04/23	STAGE BOUNDARY AMENDED	JH	MG		
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG		
C	19/07/22	LOT BOUNDARY AND LOT NUMBER UPDATED	LAB	MG		
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG		
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG		
A	30/07/21	ORIGINAL ISSUE	LAB	MG		

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

Approved: MG

RPEQ: 16939

Signed:

Date: 20/09/2022

Drawing No: 5941 ENG OPW2 901
Rev. No: D

KEY PLAN
SCALE 1: 7500



A-DOUBLE SWEEP PATH ANALYSIS SHEET 1 OF 5



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VANTAGE YATALA STAGE 2

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A-DOUBLE SWEEP PATH
ANALYSIS SHEET 2 OF 5

D	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	LOT BOUNDARY AND LOT NUMBER UPDATED	LAB	MG	
B	28/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	13/09/21	INFORMATION REQUEST RESPONSE	LAB	MO	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	
Issue	Date	Description	DRN	CHK	

1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
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Drafted:	LAB / IG
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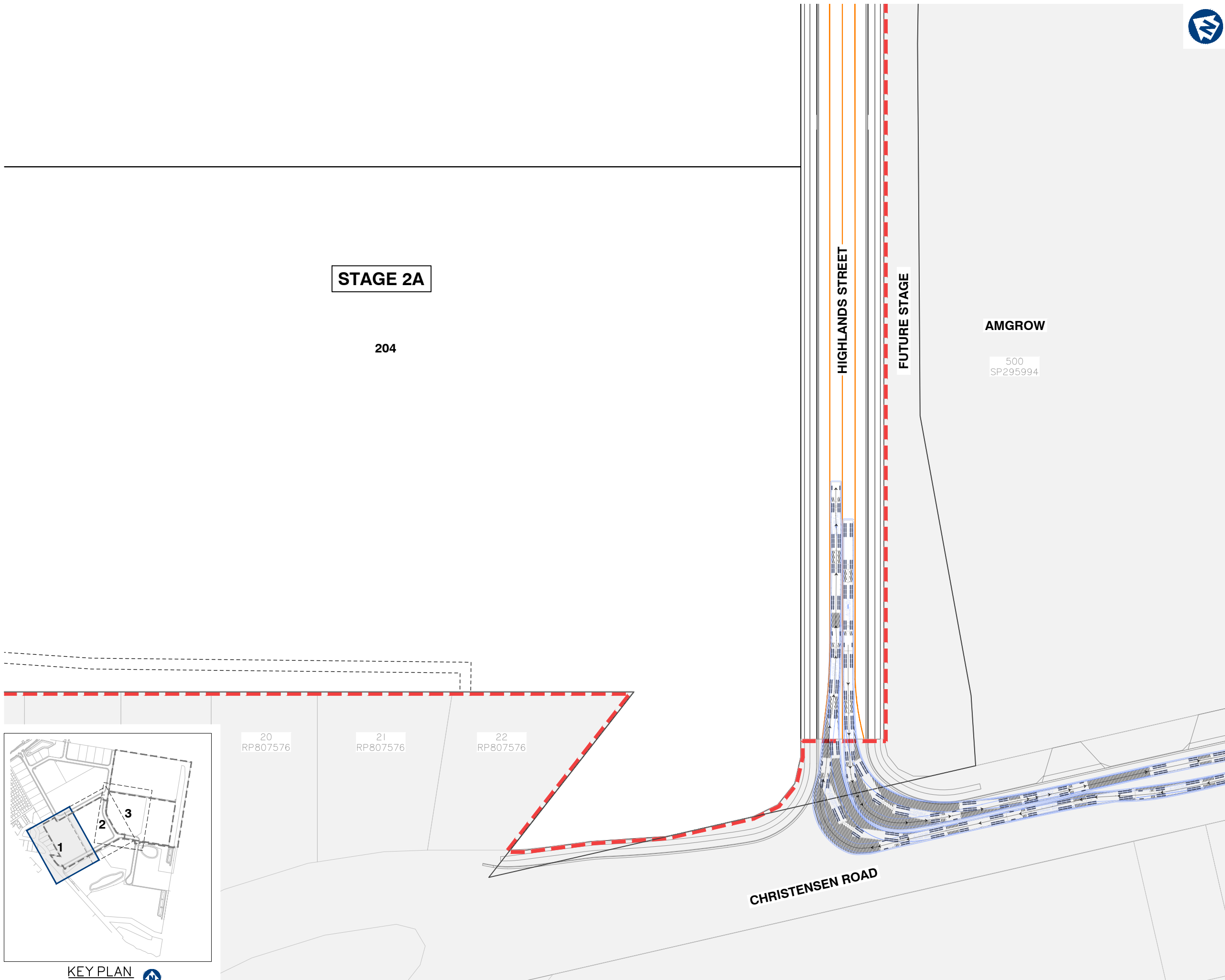
Approved:	MG
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RPEQ:	16939
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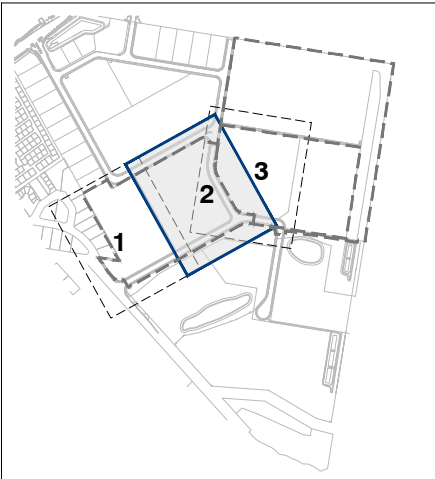
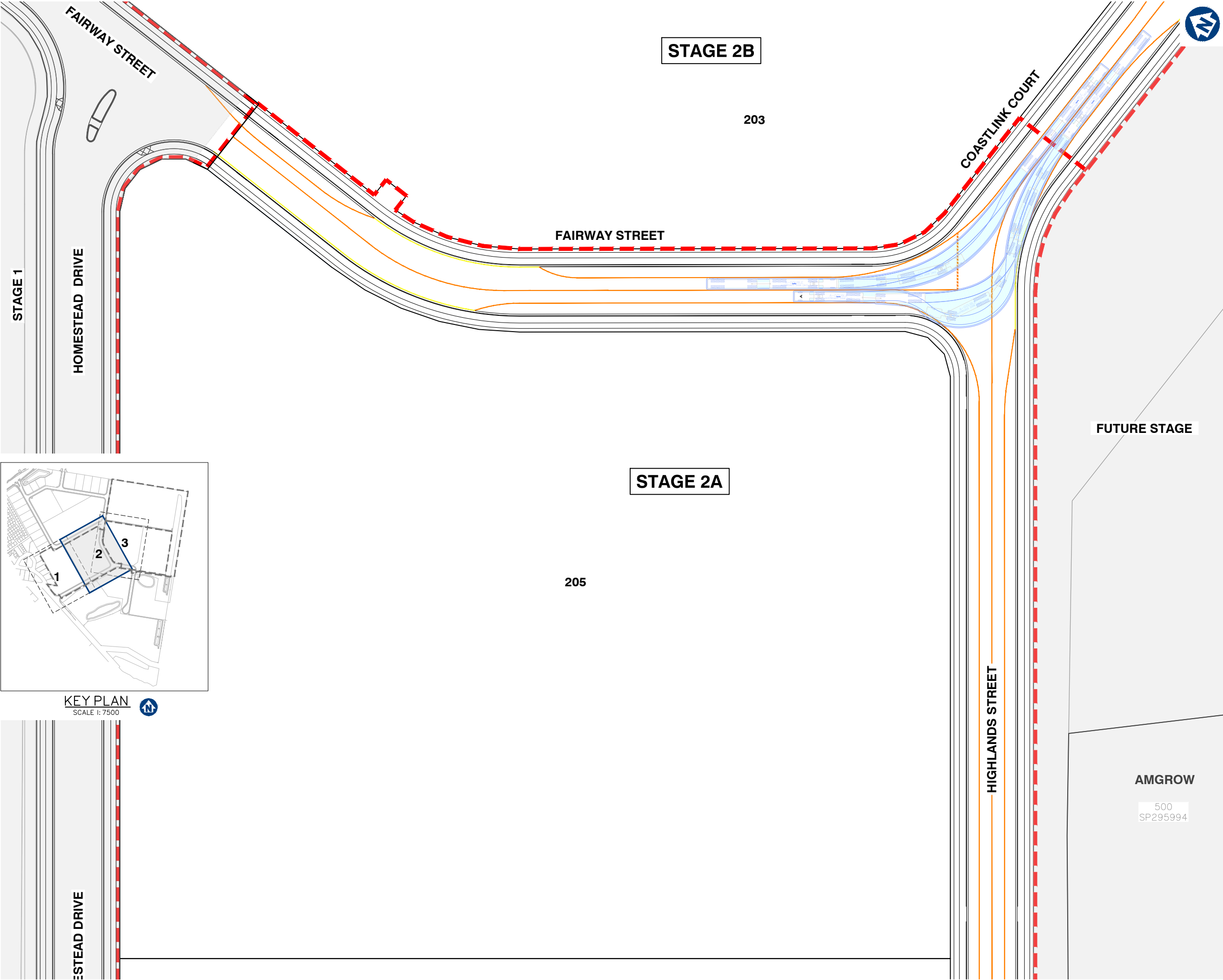
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Date:	20/09/2022
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Drawing No:	Rev. No:
5941 ENG OPW2 902	D



KEY PLAN
SCALE 1: 7500



KEY PLAN
SCALE 1: 7500



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STAGE 2

Site Address:

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Lot: 501
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DRAWING TITLE

A-DOUBLE SWEEP PATH
ANALYSIS SHEET 4 OF 5

Issue	Date	Description	LAB	MG	CHK
D	06/04/23	STAGE BOUNDARY AMENDED	JH	MG	
C	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG	
C	19/07/22	LOT BOUNDARY AND LOT NUMBER UPDATED	LAB	MG	
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG	
B	10/09/21	INFORMATION REQUEST RESPONSE	LAB	MG	
A	30/07/21	ORIGINAL ISSUE	LAB	MG	

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: LAB / IG

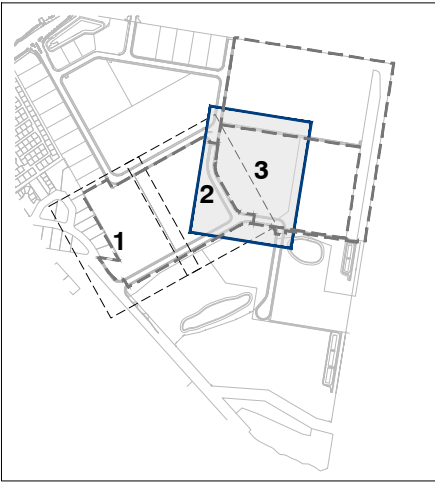
Approved: MG

RPEQ: 16939

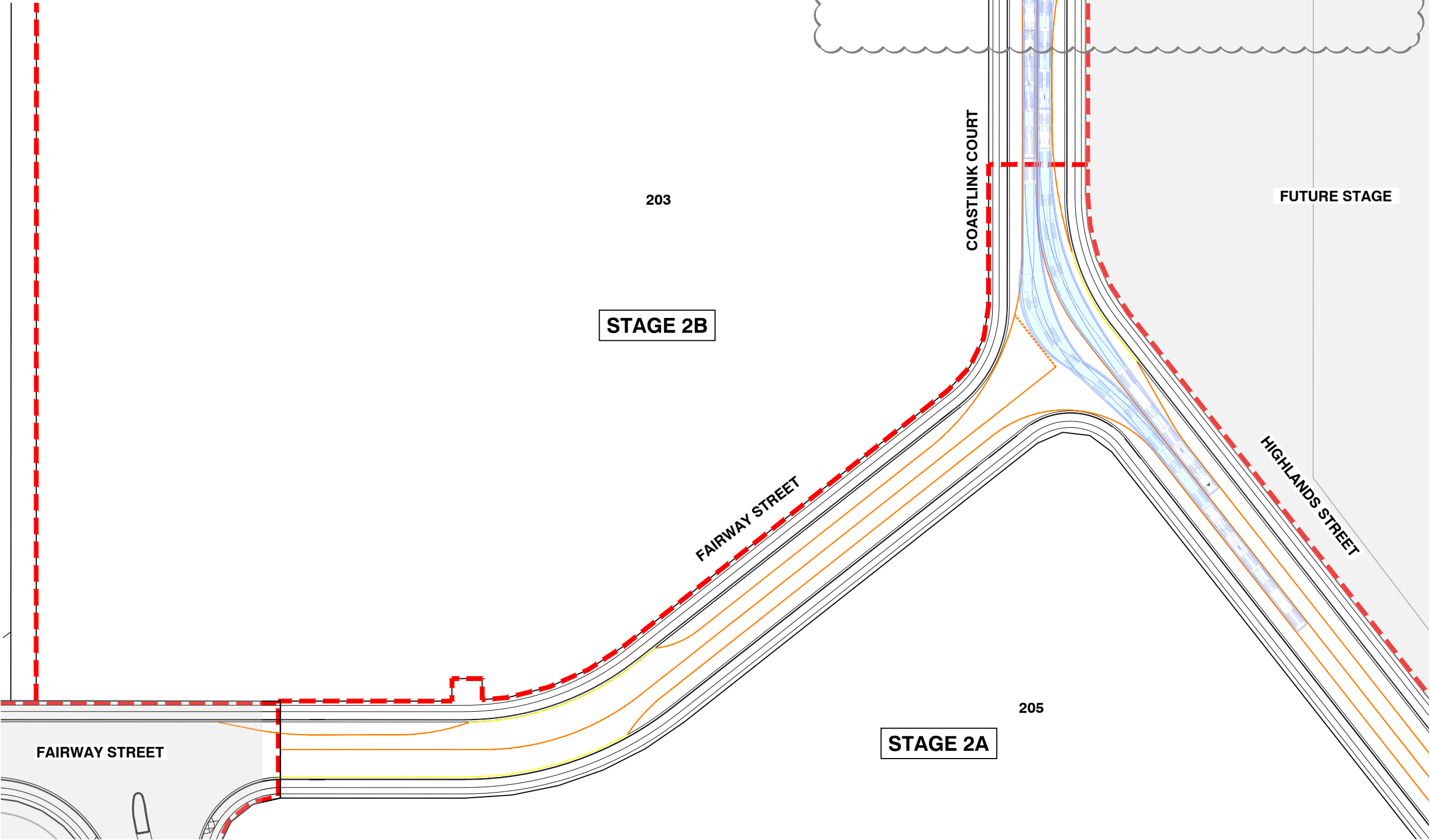
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Date: 20/09/2022

Drawing No: 5941 ENG OPW2 904
Rev. No: C



KEY PLAN
SCALE 1: 7500



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DRAWING TITLE

A-DOUBLE SWEEP PATH
ANALYSIS SHEET 5 OF 5

Rev	Date	Description	LAB	MG
E	06/04/23	STAGE BOUNDARY AMENDED	JH	MG
D	20/09/22	ISSUED FOR CONSTRUCTION	LAB	MG
C	19/07/22	LOT BOUNDARY AND LOT NUMBER UPDATED	LAB	MG
B	26/11/21	ISSUED FOR CONSTRUCTION	LAB	MG
A	30/07/21	ORIGINAL ISSUE	LAB	MG

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
Drafted:	LAB / IG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/09/2022

Drawing No: 5941 ENG OPW2 905
Rev. No: E