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Southport QLD 4215

Attention: **Development Assessment**

Job No: 6098

All revisions supersede any revision of the same document.

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☐ Hand ☒ FTP Site

Issued for:

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P	- Preliminary	C	- Construction	T	- Tender
A	- Approval	I	- Information	O	- Other

EP	EP	EP							
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D - Disk	P Print	CP -CAD&PDF
ED - DWG/DXF	EP - PDF	

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I hereby acknowledge receipt of the documents listed above.

Name & Company: _____ Signed: _____ Dated: / /

Project Manager: Mitchell Gassman - mgassman@gasmmman.com.au

Sent by: Mitchell Gassman - mgassman@gasmman.com.au

CIVIL OPERATIONAL WORKS ASSOCIATED WITH A 3 INTO 3 RECONFIGURATION OF LOT



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

DRAWING INDEX		
DRAWING No.	Rev.	DRAWING TITLE
6098 ENG OPW 001	B	DRAWING INDEX AND LOCALITY PLAN
6098 ENG OPW 002	A	GENERAL NOTES SHEET 1 OF 2
6098 ENG OPW 003	A	GENERAL NOTES SHEET 2 OF 2
6098 ENG OPW 004	A	LEGEND
6098 ENG OPW 010	A	EXISTING SURFACE LAYOUT PLAN
6098 ENG OPW 020	B	SEDIMENT AND EROSION CONTROL PLAN AND TYPICAL DETAILS
6098 ENG OPW 400	B	ROADWORKS AND DRAINAGE LAYOUT PLAN AND DETAILS
6098 ENG OPW 550	A	STORMWATER CALCULATIONS TABLE
6098 ENG OPW 600	B	SEWER RETICULATION LAYOUT PLAN AND DETAILS

CLIENT



FPI QUEENSLAND PTY. LTD.

VantageYatala

SITE ADDRESS

LOT 121 & 122 on SP316168
HOMESTEAD DRIVE
STAPYLTON QLD 4207

DWG No. 6098 ENG OPW 001 – REV B

AUGUST 2022



LOCALITY PLAN
SCALE 1: 1000 (A1)

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 SEEDED 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 SEEDED, 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.

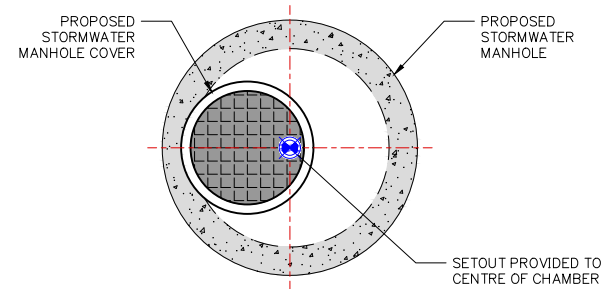
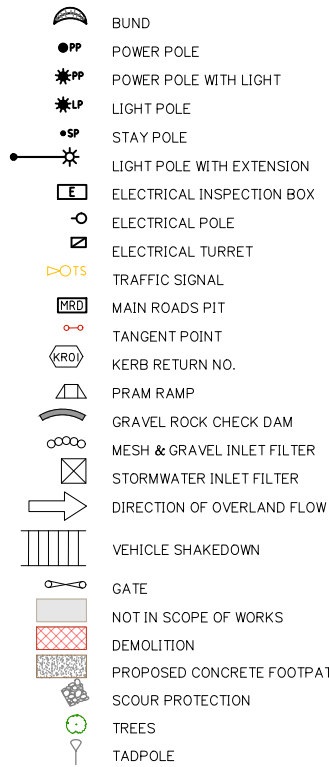
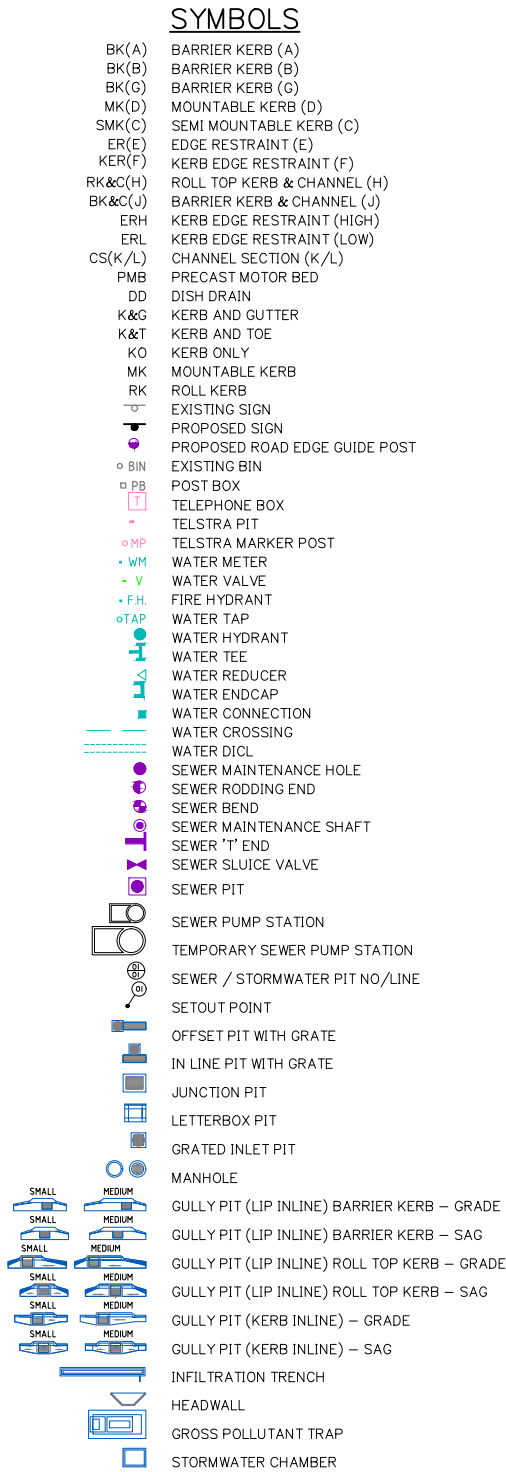
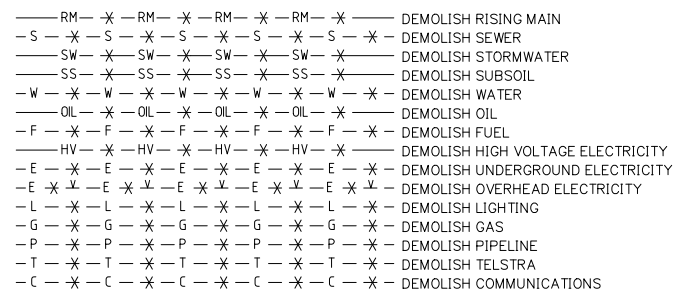
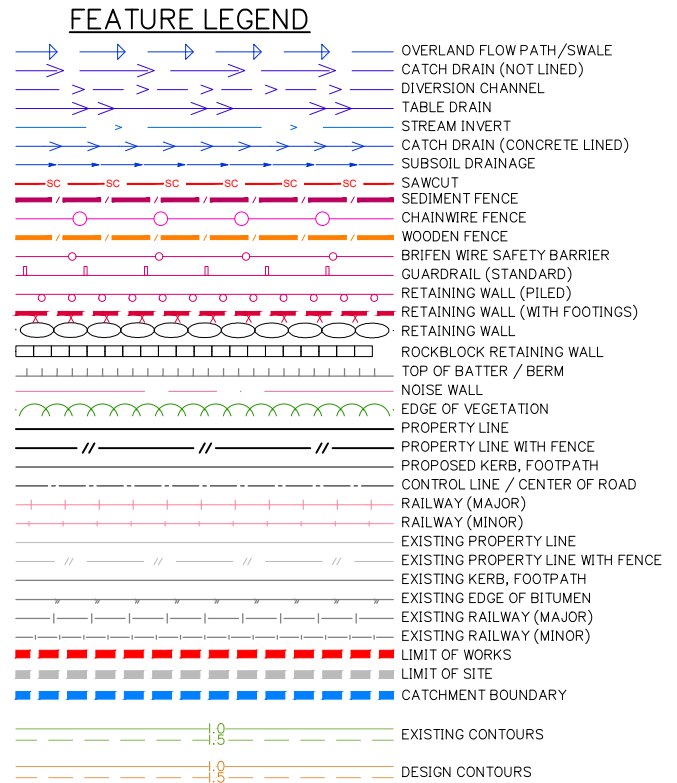
e. CONSTRUCT ROCK CHECK DAMS AND SILT FENCE DOWN STREAM OF BASIN.

f. CONSTRUCT BASIN TO FULL DEPTH.

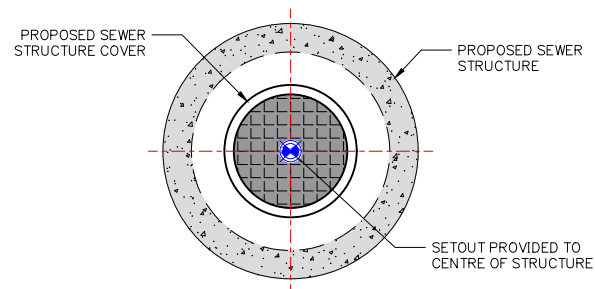
g. CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS.

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).





TYPICAL DETAIL
STORMWATER MANHOLE SETOUT
NOT TO SCALE



TYPICAL DETAIL
SEWER STRUCTURE SETOUT
NOT TO SCALE

Client:



FPI QUEENSLAND PTY. LTD.

Project:

LOTS 121 & 122 CIVIL WORKS
ASSOCIATED WITH 3 INTO 3 ROL

Site Address:

HOMESTEAD DRIVE,
STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 120 - 122
Plan: SP316168
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

LEGEND

Rev	Date	Description	LAB	MG
A	24-03-2022	ISSUED FOR TENDER	JH	MG
A	11-03-2022	ORIGINAL ISSUE	JH	MG
Issue	Date	Description	DRN	CHK

NOT APPLICABLE

Scale at A1:	NTS
Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	16939
Signed:	
Date:	11-03-2022
Drawing No:	6098 ENG OPW 004
Rev. No:	A



Client:



FPI QUEENSLAND PTY. LTD.

Project:
LOTS 121 & 122 CIVIL WORKS
ASSOCIATED WITH 3 INTO 3 ROL

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RL:	-

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DRAWING TITLE

EXISTING SURFACE LAYOUT PLAN

A	24-03-2022	ISSUED FOR TENDER		LAB	MO
A	11-03-2022	ORIGINAL ISSUE		JH	MG
Issue	Date	Description		DRN	CHK

SCALE IN METRES

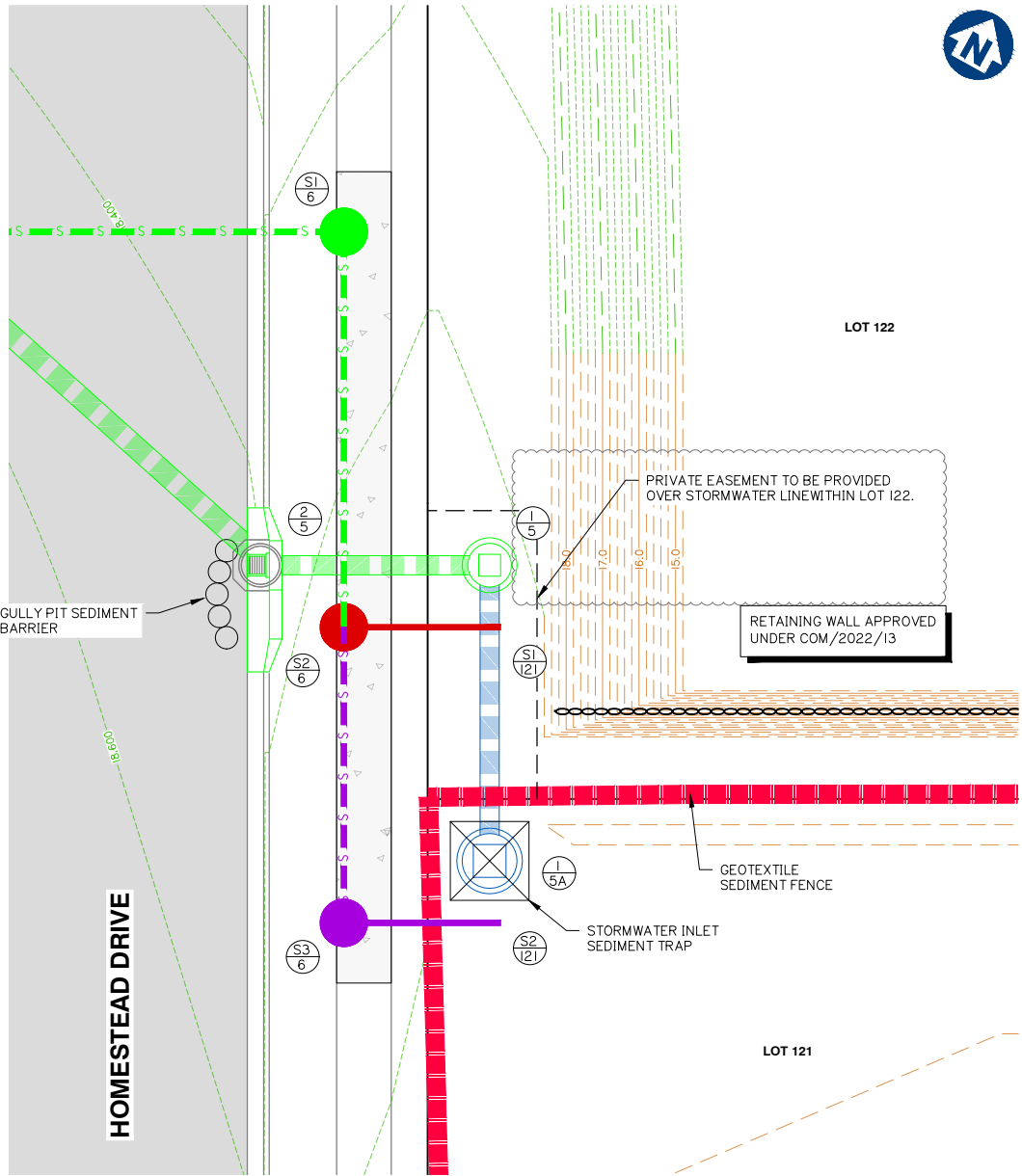


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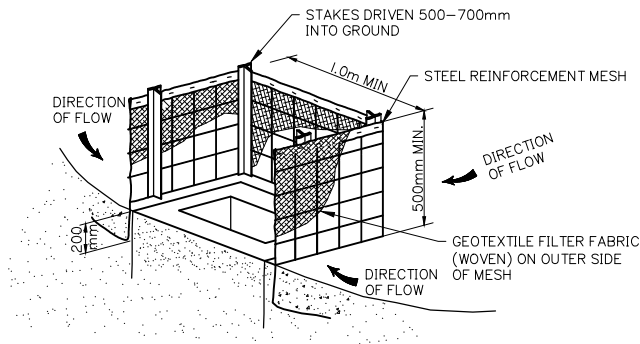
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Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	16939
Signed:	
Date:	11-03-2022

Drawing No:	Rev. No:
6098 ENG OPW 010	A

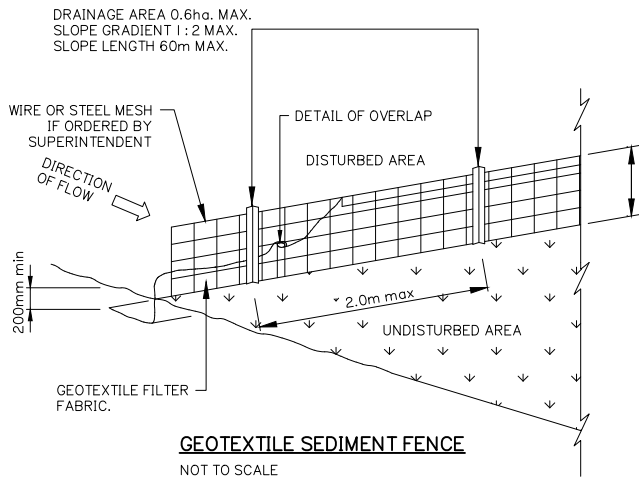


- NOTES
1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ONSITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
 2. CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL COUNCIL AND STATE REQUIREMENTS AND BE IN LINE WITH IECA 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.
 5. EARTHWORKS EXTENT TO BE PAVEMENT SPRAYED IF BUILDING WORKS DO NOT IMMEDIATELY FOLLOW



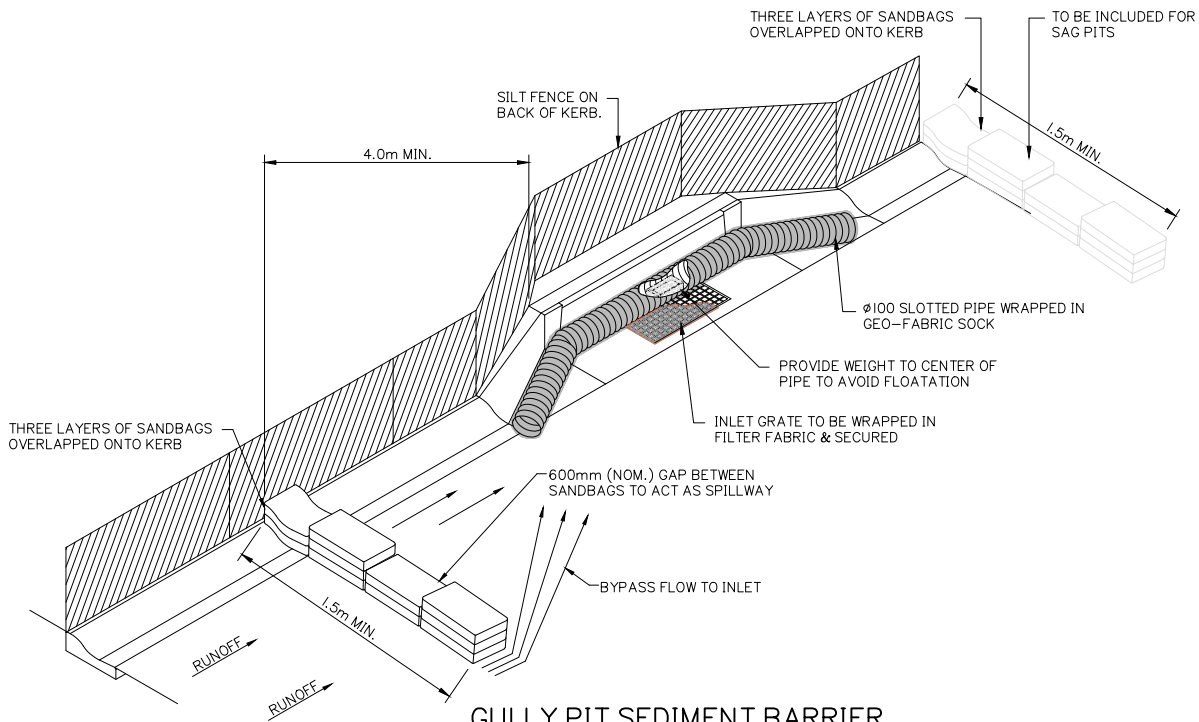
STORMWATER INLET – SEDIMENT TRAP

NOTE:
FOURTH SIDE OF TRAP NOT SHOWN FOR CLARITY



GEOTEXTILE SEDIMENT FENCE

NOT TO SCALE



GULLY PIT SEDIMENT BARRIER

SCALE N.T.S.

Client:



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COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
SEDIMENT AND EROSION
CONTROL PLAN AND
TYPICAL DETAILS

B	03-08-2022	INFORMATION REQUEST RESPONSE	LAB	MG	
A	24-03-2022	ISSUED FOR TENDER	LAB	MG	
A	11-03-2022	ORIGINAL ISSUE	JH	MG	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES

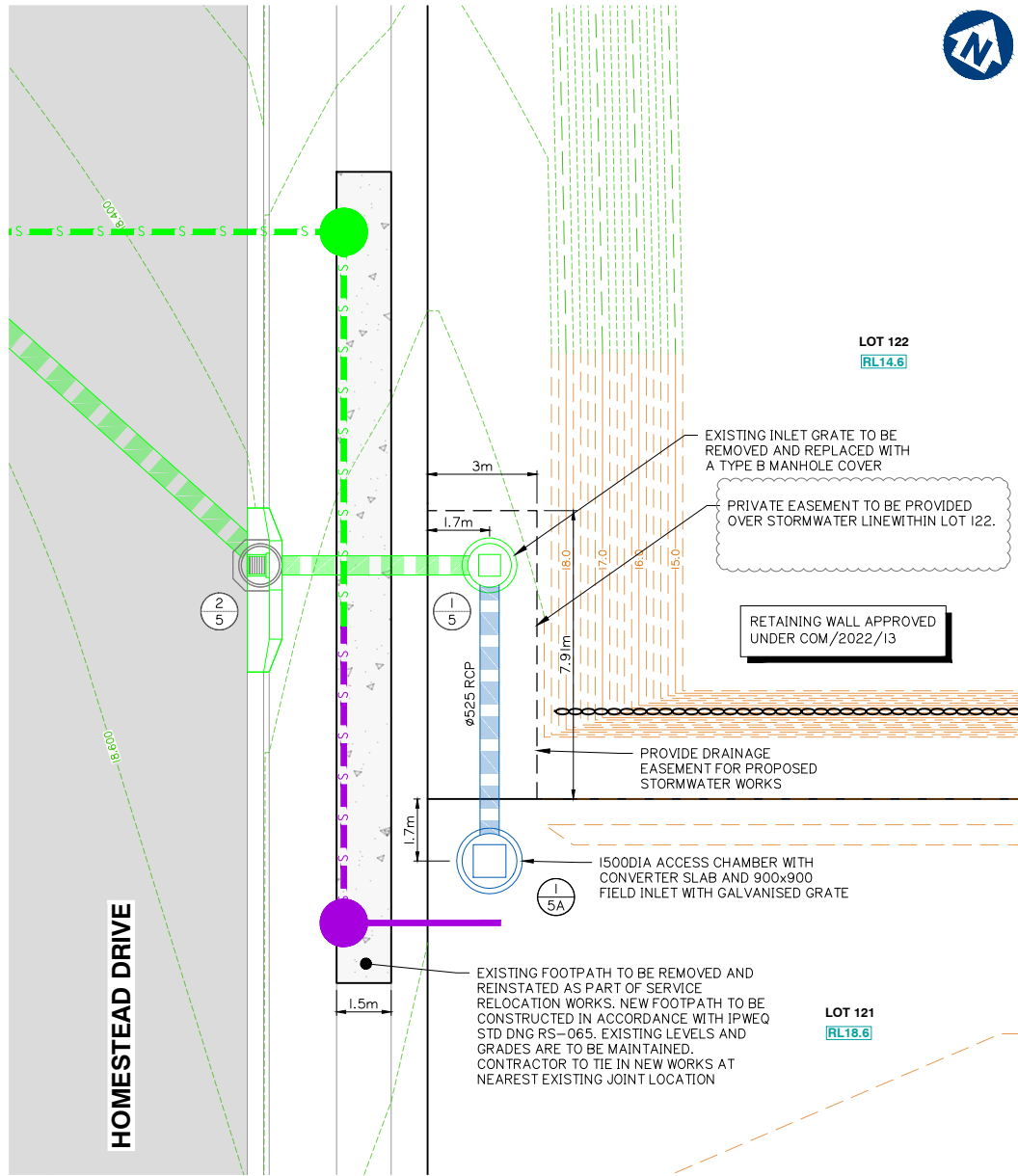


1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1: 1:100

Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	16939
Signed:	
Date:	03-08-2022

Drawing No: 6098 ENG OPW 020 Rev. No: A



SHAFT/PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE ROCLA CPO 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 CPO PITS 1200ø, 1500ø, 1800ø

PIPE SIZE (mm)	525
PIPE CLASS	3
PIPE GRADE (%)	0.57%
PIPE SLOPE (1 in X)	174.1
PIPE FLOW (cumecs)	0.646
CAPACITY FLOW (cumecs)	0.353
FULL PIPE VELOCITY (m/s)	2.98
NORMAL DEPTH VELOCITY (m/s)	2.98
DATUM RL	9.000
HGL ELEVATION (39% AEP)	18.723 18.211 18.146 18.307 17.417
DEPTH TO INVERT	2.196 2.158 2.198
INVERT LEVEL OF DRAIN	16.527 16.486 16.446
EXISTING SURFACE LEVEL	18.723 18.644
SETOUT COORDINATES (EASTING & NORTHING)	0.000 2338.029 E 6790.831 N 8.112 2334.097 E 6797.927 N
CHAINAGE	0.000 7.137

LINE

5A



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, Beerleigh 4207

Client:



FPI QUEENSLAND PTY. LTD.

Project:
LOTS 121 & 122 CIVIL WORKS
ASSOCIATED WITH 3 INTO 3 ROL

Site Address:
HOMESTEAD DRIVE,
STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 120 - 122
Plan: SP316168
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
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DRAWING TITLE ROADWORKS AND DRAINAGE LAYOUT PLAN AND DETAILS

B	03-08-2022	INFORMATION REQUEST RESPONSE	LAB	MG
A	24-03-2022	ISSUED FOR TENDER	LAB	MG
A	11-03-2022	ORIGINAL ISSUE	JH	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



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

Scale at A1: 1:100

Designed:	JH
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Approved:	MG
RPEQ:	16939
Signed:	
Date:	03-08-2022

Drawing No: 6098 ENG OPW 400 Rev. No:

ROADWORKS AND DRAINAGE LAYOUT PLAN AND DETAILS

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Project:
LOTS 121 & 122 CIVIL WORKS
ASSOCIATED WITH 3 INTO 3 ROL

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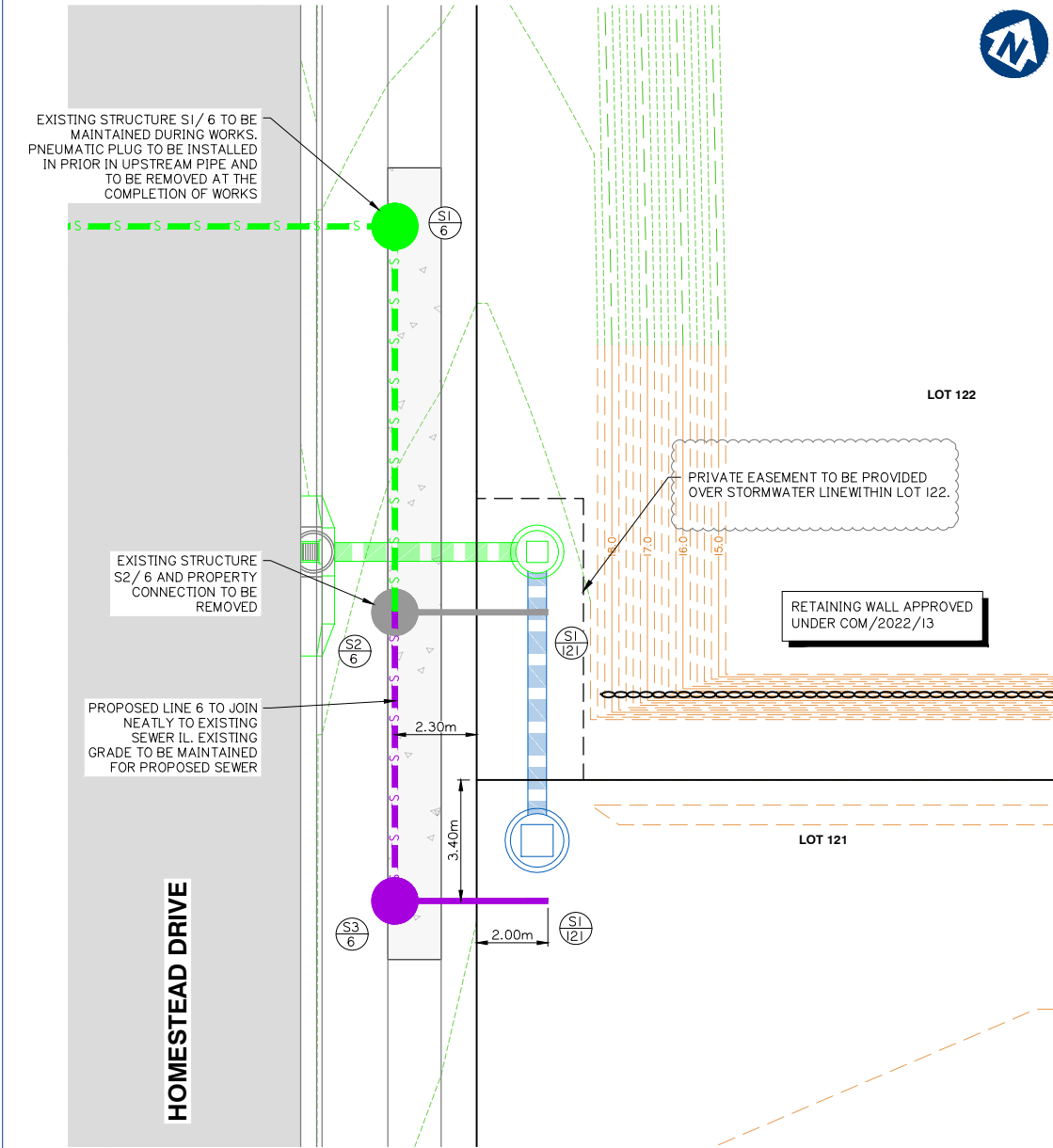
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Issue	Date	Description	DRN	CHK

Drawing No:	Rev. No.
5941 ENG OPW1 550	A

STORMWATER CALCULATIONS TABLE



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.

SEWER STRUCTURE SETOUT TABLE		
STRUCTURE NO.	EASTING	NORTHING
S3/6	2335.354	6787.406
S2/121	2339.115	6789.489

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)	PNEUMATIC PLUG TO INSTALLED TO UPSTREAM LINE ON EXISTING STRUCTURE SI/ 6	150	SI/6	–	–	–	–	18.488	14.903	3.585
I(B)	CONTRACTOR TO REMOVE EXISTING STRUCTURE S2/ 6 AND EXISTING PROPERTY CONNECTION S2/ 121	150	S2/6	P3	D/C	121	–	18.647	14.963	3.684
I(C)	CONTRACTOR TO CONSTRUCT NEW MAINTENANCE HOLE S3/ 6		S3/ 6	P3	D/C	121	–	18.722	15.008	3.714
I(D)	CONTRACTOR TO LAY LINE 6 EXTENSION AND CONNECT TO EXISTING LINE 6	150					–			
I(E)	CONTRACTOR TO INSTALL PROPERTY CONNECTION	150				121	–		15.048	3.674
I(F)	CONTRACTOR TO REMOVE PNEUMATIC PLUG FROM EXISTING STRUCTURE SI/ 6 AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION WITH COUNCIL		SI/6	–	–	–	–	18.488	14.903	3.585

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.

SEWER RETICULATION LAYOUT PLAN AND DETAILS

MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE	D/C	D/C
MH / MS TYPE	P3	P3
MH / MS DROP TYPE	V	V
LINE DEFLECTION ANG. & BRANCHES	7°	90°
PROPERTY CONNECTION TYPE	–	X
INTERNAL CORROSION PROTECTION	Y	Y

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

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-SEW-1300-1
J1	TYPE "J1" MAINTENANCE STRUCTURE 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) TO HAVE 300mmø PVC RISERS UNLESS NOTED OTHERWISE
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 OPW 030
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 SEWERS 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.
11	ALL MAINTENANCE 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.

DATUM RL	3.000
LOCATION DESCRIPTION	CoGC R/RESERVE
PIPE SIZE (mm), MATERIAL & CLASS	150, uPVC SN8
PIPE GRADE (1 IN X)	180
PIPE LENGTH	18.959
PIPE EMBEDMENT TYPE	
EXISTING SURFACE LEVEL	18.488 18.722
DEPTH TO PIPE INVERT BELOW FSL	3.625 3.585 3.714
PIPE INVERT LEVEL	14.863 14.903 15.008
PIPE CHAINAGE	0.000 18.959

LINE

6

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SEWER RETICULATION
LAYOUT PLAN AND DETAILS

SCALE IN METRES

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

Scale at A1: 1:500

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