APPLICATION No.
DEV 2016/791

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

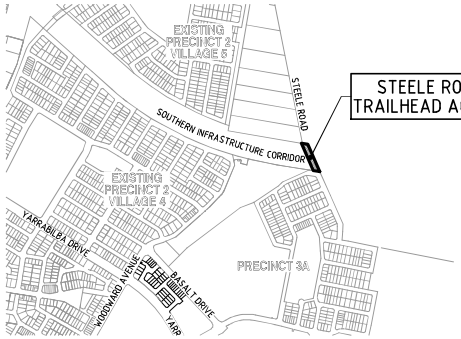
Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

YARRABILBA

PRECINCT 3A - STEELE ROAD TEMPORARY TRAILHEAD ACCESS



LOCALITY PLAN
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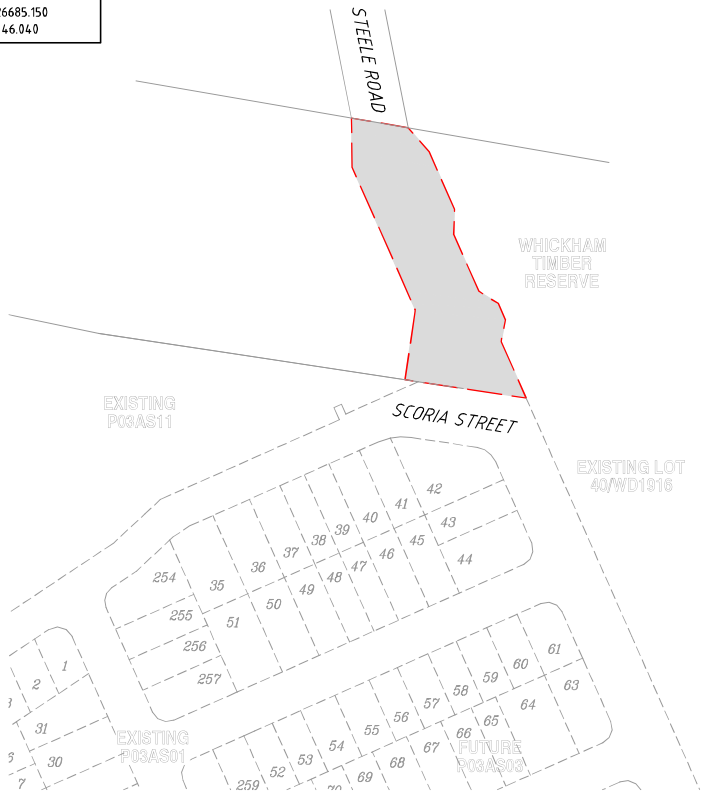

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DRAWING INDEX

DRAWING NO.	DRAWING TITLE
17-268-01	GENERAL - LOCALITY PLAN, DRAWING INDEX AND NOTES
17-268-02	GENERAL - NOTES
17-268-03	GENERAL - LAYOUT PLAN
17-268-04	BULK EARTHWORKS - CONTOUR PLAN
17-268-05	ROADWORKS - LONGITUDINAL - AND CROSS SECTIONS - STEELE ROAD
17-268-06	ROADWORKS - INTERSECTIONS DETAILS
17-268-07	ROADWORKS - LINEMARKING PLAN
17-268-08	EROSION AND SEDIMENT CONTROL - LAYOUT PLAN
17-268-09	EROSION AND SEDIMENT CONTROL - NOTES
17-268-10	EROSION AND SEDIMENT CONTROL - DETAILS
17-268-11	SAFETY IN DESIGN

GENERAL NOTES

1. ALL WORK SHALL BE JOINED NEATLY TO EXISTING CONSTRUCTION.
2. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE ENGINEER AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE ENGINEER DURING CONSTRUCTION.
3. THE MINIMUM CLEARANCE BETWEEN OUTER WALLS OF PIPES IN MANHOLES SHALL BE 150mm.
4. SUBSURFACE DRAIN CLEANING POINTS SHALL BE INSTALLED IN ACCORDANCE WITH IPWEAQ STD DWG NO SEQ RS-142.
5. CONSTRUCTION LOAD CONTROL ON THE INSTALLATION OF REINFORCED CONCRETE STORMWATER PIPE WORK SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE RECOMMENDATIONS DEFINED IN THE CONCRETE PIPE ASSOCIATIONS OF AUSTRALASIA'S "THE INSTALLATIONS OF STEEL REINFORCED CONCRETE PIPES - MINIMUM PIPE COVER REQUIRED FOR VARIOUS COMPACTORS".
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL ERECT A 2 STRAND WIRE FENCE INCLUDING SAFETY BARRIER MESH TO THE PERIMETER OF VEGETATION TO BE RETAINED AND/OR EXCLUSION ZONES.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES/DIAL BEFORE YOU DIG PRIOR TO COMMENCING WORKS.
8. THE CONTRACTOR SHALL NOTE THE PRESENCE OF EXISTING SERVICES ASSOCIATED WITH THE WORKS. SPECIAL CARE MUST BE TAKEN BY THE CONTRACTOR IN THE VICINITY OF ALL SERVICES.

SCALE 100 50 0 100 200 300 400 500 600 700 800 900 1000m
1 : 10000 (A1 UNREDUCED)

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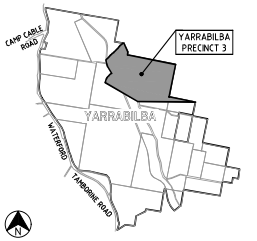
NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	JAN 18'	CWH

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Approved - RPEQ 12805

Drawing Title

GENERAL
LOCALITY PLAN,
DRAWING INDEX AND NOTES

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	01 of 11

	Drawing No	Revision
A1	17-268-01	A

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GENERAL

1. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PROVIDE TO THE SUPERINTENDENT A COPY OF THE CONSTRUCTION PROGRAM DETAILING THE DATES OF COMMENCEMENT AND COMPLETION FOR EACH STAGE.
2. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PREPARE AND FORWARD TO THE SUPERINTENDENT A REPORT ON THE CONDITION OF EXISTING INFRASTRUCTURE IN THE VICINITY OF THE WORKS SITE. THE REPORT SHALL LIST THE LOCATION AND EXTENT OF ANY EXISTING DAMAGE. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGED ASSETS THAT ARE NOT REPORTED PRIOR TO THE COMMENCEMENT OF WORKS.
3. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL BY THE SITE SUPERINTENDENT.
4. THE CONTRACTOR SHALL USE AN APPROVED SECURITY FENCE TO ISOLATE UNSAFE AREAS AS MUTUALLY AGREED UPON BY THE CONTRACTOR AND SUPERINTENDENT.
5. DO NOT SCALE OFF DRAWINGS.
6. ALL DIMENSIONS AND LEVELS TO BE SITE CHECKED AND ANY DISCREPANCY REPORTED TO THE SUPERINTENDENT.
7. ANY VARIATION TO THE DETAILS SHOWN ON THE DRAWING MUST BE AUTHORISED BY THE SUPERINTENDENT PRIOR TO FABRICATION AND/OR CONSTRUCTION.
8. CONSTRUCTION WORK SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE QLD WORKPLACE HEALTH AND SAFETY ACT (1995) AND THE WORKPLACE HEALTH AND SAFETY REGULATION (2008).
9. ALL PROPRIETARY PRODUCTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
10. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
11. ALL R.L.S AND F.S.L.S ARE IN M AHD.
12. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING CONSTRUCTION.
13. ALL ASSETS MODIFIED OR DAMAGED BY THE PROPOSED WORKS SHALL BE REINSTATED TO THE SATISFACTION OF THE SUPERINTENDENT.
14. THE CONTRACTOR SHALL REMOVE ALL STRUCTURES, DEBRIS AND FENCES FROM THE SITE TO THE SATISFACTION OF THE SUPERINTENDENT. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF DEMOLISHING ANY EXISTING STRUCTURES WITHIN THE SITE AREAS.

INSPECTIONS

THE SUPERINTENDENT AND WETLAND DESIGNERS ARE REQUIRED TO INSPECT THE WETLAND CONSTRUCTION AND PROVIDE SIGNOFF AND CERTIFICATION IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATION AND CONSTRUCTION AND ESTABLISHMENT GUIDELINES – CONSTRUCTED WETLANDS, BIORETENTION SYSTEMS AND SWALES (WATER BY DESIGN, 2010). IN ORDER TO FULFIL THIS REQUIREMENT, THE CONTRACTOR SHALL REQUEST THAT THE SUPERINTENDENT ARRANGE INSPECTIONS BY THE DESIGN TEAM AT THE FOLLOWING MILESTONES:

1. AT THE COMPLETION OF BULK EARTHWORKS AND ALL CIVIL STRUCTURES, AND PRIOR TO TOPSOILING, TO CONFIRM COMPLIANCE WITH DESIGN DRAWINGS AND APPROPRIATENESS OF PROPOSED TOPSOIL. (CONTRACTOR TO PROVIDE AS CONSTRUCTED SURVEY.)
2. AT THE COMPLETION OF TOPSOILING TO CONFIRM APPROPRIATE TOPSOIL DEPTH AND PREPARATION.
3. PRIOR TO PLANTING AND FOLLOWING PLANTING OF WETLAND VEGETATION TO CONFIRM PLANTING LAYOUT AND ESTABLISHMENT PROCEDURES. (I.E. PREFERRED WATER LEVELS)

VEGETATION PROTECTION AND WEED MANAGEMENT

1. ALL EXISTING RETAINED VEGETATION SHALL BE APPROPRIATELY PROTECTED WITH FENCING AND THE CONTRACTOR SHALL ENSURE THAT ENCROACHMENT WITHIN THE TREE PROTECTION ZONE (TPZ) IS MINIMISED IN ACCORDANCE WITH AS4970:2009 PROTECTION OF TREES ON DEVELOPMENT SITES. ALL FENCING TYPES AND METHODOLOGY SHALL COMPLY WITH AS4970:2009 PROTECTION OF TREES ON DEVELOPMENT SITES.
2. ACCESS SHOULD BE RESTRICTED TO PRE-EXISTING TRACKS OR THE PATH OF DISTURBANCE.

SOIL AND GROUNDWATER MANAGEMENT

1. NO NET LOSS OF SEDIMENT SHALL OCCUR FROM THE WORK SITE. THIS WILL NECESSITATE THE USE OF APPROPRIATE EROSION AND SEDIMENT CONTROLS. THESE SHOULD BE IMPLEMENTED AT THE SITE ESTABLISHMENT PHASE AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. SEDIMENT SHALL NOT BE ALLOWED TO ENTER THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES AND/OR SILT TRAPS AROUND GULLIES.
3. IMMEDIATELY FOLLOWING EARTHWORKS, ALL EXPOSED SURFACES SHALL BE REVEGETATED WITH STERILE GRASSES (E.G. HYDROSEED).
4. FOLLOWING THE FIRST FEW RAINFALL EVENTS, THE INLET TO THE DIVERSION CHANNEL AND MACROPHYTE ZONE MUST BE INSPECTED TO ENSURE EROSION PROTECTION MEASURES ARE SUFFICIENT.
5. CONTRACTOR TO NOMINATE STOCKPILE AREAS FOR APPROVAL BY THE SITE SUPERINTENDENT. STOCKPILES ARE TO BE LOCATED AWAY FROM DRAINAGE LINES. PROVISION OF A DIVERSION BERM UPSLOPE AND SILT FENCES DOWNSTREAM OF STOCKPILES IS REQUIRED. MAXIMUM STOCKPILE BATTER IS TO BE 1:2 AND STOCKPILES ARE TO BE AS LOW AND FLAT AS POSSIBLE. MAXIMUM HEIGHT IS 3m.
6. MINIMISE DISTURBANCE TO AREAS OUTSIDE OF EARTHWORKS FOOTPRINT.
7. PROVIDE SILT FENCES/MULCH BERMS AT TOE OF BATTERS ADJACENT TO DRAINAGE LINES DURING CONSTRUCTION. HAY BALES ARE PREFERRED WHEN CROSSING NATURAL DRAINAGE LINES WHERE FLOWS ARE CONCENTRATED.
8. CONTRACTOR TO NOMINATE A SINGLE ENTRY ACCESS TO THE SITE AND CONSTRUCT SUITABLE TEMPORARY ACCESS AS APPROVED BY THE SITE SUPERINTENDENT. ACCESS SHALL BE A MINIMUM 15m LONG AND 3m WIDE AND BE CONSTRUCTED WITHIN A RAISED BERM TO 300mm.
9. CONTRACTOR TO PROVIDE ADEQUATE ACCESS TO PATHS TO COMPLETE THE WORKS AND KEEP ACCESSES.
10. STABILISE BATTERS AND CHANNELS AS PER DESIGNS IMMEDIATELY FOLLOWING CONSTRUCTION.
11. PROVIDE TEMPORARY SEDIMENT TRAPS AT OUTLETS TO DRAINAGE CHANNELS DURING CONSTRUCTION.
12. CONTRACTOR TO NOMINATE A FIELD ENVIRONMENT AND SAFETY OFFICER RESPONSIBLE FOR IMPLEMENTING MANAGING AND MONITORING SOIL EROSION CONTROL MEASURES.
13. FIELD ENVIRONMENT AND SAFETY OFFICER TO REGULARLY INSPECT SOIL EROSION CONTROL MEASURES (WEEKLY) AND PARTICULARLY FOLLOWING RAIN EVENTS.
14. BEYOND THIS PLAN, THE FIELD OFFICER WILL PUT IN PLACE MEASURES AS APPROPRIATE FOR ANY UNPLANNED DISCHARGES.
15. IN MORE SERIOUS CASES OF UNPLANNED DISCHARGES WORKS SHALL CEASE UNTIL THE RISK IS PREVENTED. THIS MAY INCLUDE INSTALLATION OF ADDITIONAL MEASURES AND REPAIR OF UPSTREAM CONTROLS.
16. THE CONTRACTOR SHALL REHABILITATE AND DESILT ANY AREAS IMPACTED BY UNPLANNED DISCHARGES.
17. WHERE GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, ADVICE IS TO BE SOUGHT FROM A GEOTECHNICAL ENGINEER.

HIGH FLOW CONTINGENCIES

1. CONTINGENCIES TO MANAGE RISKS ASSOCIATED WITH FLOOD EVENTS DURING CONSTRUCTION ARE REQUIRED.
2. ADEQUATE EROSION AND SEDIMENT CONTROLS MUST BE IN PLACE AT THE END OF EACH DAY AND THE SITE MUST BE STABILISED AGAINST SOIL EROSION AS SOON AS POSSIBLE.
3. ALL MACHINERY SHALL BE STORED ABOVE ACCEPTABLE FLOOD LEVELS AND A MECHANISM FOR DEWATERING THE CONSTRUCTION SITE MADE AVAILABLE.

EARTHWORKS

1. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION. SIMILARLY, THE FINISHED SURFACE LEVELS MAY BE ADJUSTED BY THE WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
2. TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
3. THE FILL SHOULD BE OF GOOD QUALITY AND FREE OF UNSUITABLE MATERIAL AS APPROVED BY A NATA REGISTERED GEOTECHNICAL ENGINEER. FILL SHALL BE NON-DISPERSIVE (EMERSON 5-8), NON-SODIC (EXCHANGEABLE SODIUM <6%) AND BE NON ACID FORMING.
4. THE EXISTING SURFACE IS TO BE CLEAR OF VEGETATION MATTER PRIOR TO THE START OF FILLING.
5. PRIOR TO THE PLACEMENT OF ANY FILL OR PAVEMENT, THE EXPOSED SUBGRADE SHALL BE COMPACTED IN ACCORDANCE WITH AS 1289, TO THE APPROVAL OF THE SUPERINTENDENT AND ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH APPROVED FILL AND COMPACTED.
6. ALL FILLING SHALL COMPRISE SELECT APPROVED MATERIAL TO COMPACTION DENSITIES IN ACCORDANCE WITH THE SPECIFICATIONS.
7. ALL TOPSOIL SHALL REMAIN ON SITE AND BE REUSED ON DISTURBED AND CONSTRUCTED SURFACES AS SHOWN IN THESE DRAWINGS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING OF ALL TRENCHES AND EXCAVATIONS.

THE CONTRACTOR SHALL DISPOSE OF ANY EXCESS SPOIL AS DIRECTED BY THE SUPERINTENDENT.

TOPSOIL

1. TOPSOIL GENERALLY TO CONFORM TO AS 4419 – 2003 'SOILS FOR LANDSCAPING AND GARDEN USE'. I.E. TOPSOIL SHALL BE FREE OF ANY DELETERIOUS MATTER INCLUDING SUB-SOIL, TURF, WEEDS, STICKS AND ROOTS, STONES OVER 25 MM DIAMETER AND ANY MATERIAL TOXIC TO PLANT GROWTH. ACIDITY RANGE SHALL BE PH 5.5 – 7.0 OR AS RECOMMENDED BY AN AGRONOMIST. USE OF EXISTING TOPSOIL IS SUBJECT TO APPROVAL BY SITE SUPERINTENDENT.
2. WITHIN THE WETLAND MACROPHYTE ZONE TOPSOIL SHOULD BE PLACED TO A MINIMUM DEPTH OF 200 MM. NOTE THAT DESIGN LEVELS FOR THE WETLAND ARE INCLUSIVE OF TOPSOIL, SUCH THAT ADDITIONAL EXCAVATION WILL BE REQUIRED TO ACCOUNT FOR CLAY LINER (AS REQUIRED) AND TOPSOIL. THE CLAY LINER SHOULD BE LIGHTLY RIPPED PRIOR TO PLACEMENT OF TOPSOIL TO AVOID A DISTINCT SOIL HORIZON.
3. WHERE DIRECTED, SITE TOPSOIL MAY NEED FURTHER IMPROVEMENT BEFORE SUITABILITY FOR USE ON THIS PROJECT.
4. PLACED TOPSOIL SHALL BE LIGHTLY COMPACTED SO THAT THE FINISHED SURFACE IS SMOOTH AT THE REQUIRED LEVELS READY FOR PLANTING.

DRAINAGE PIPES AND PITS

1. DRAINS TO BE INSPECTED AND APPROVED BY THE SUPERINTENDENT PRIOR TO BACKFILLING
2. ALL CONSTRUCTED PIPEWORK SHALL BE FLUSHED AND CLEANED AT THE COMPLETION OF WORKS TO THE SUPERINTENDENT'S APPROVAL.
3. ALL PITS SHALL HAVE MASS CONCRETE SHAPED BASES TO THE SUPERINTENDENT'S APPROVAL.
4. ALL GRATED PITS SHALL BE HINGED AND PROVIDED WITH A SECURE LOCK DOWN SYSTEM.
5. ALL PITS DEEPER THAN 600 MM SHALL BE INSTALLED WITH PLASTIC-ENCAPSULATED STEEL STEP IRONS (POSISTEP TYPE OR SIMILAR).
6. ALL STORMWATER PIPES SHALL BE CLASS '2' R.C.P UNLESS NOTED OTHERWISE. BULK FILLING REQUIREMENTS SHALL BE IN STRICT ACCORDANCE WITH COUNCIL REQUIREMENTS.
7. THE STORMWATER PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY, AND THE CONTRACTOR SHALL ASSESS ANTICIPATED CONSTRUCTION LOADS AND UPGRADE THE PIPE CLASSES, IF NECESSARY, IN ACCORDANCE WITH AS 3725-1989. ANY UPGRADE SHALL BE AT THE CONTRACTORS COST.
8. MINIMUM PIPE GRADES ARE TO COMPLY GENERALLY WITH AS 3500 – NATIONAL PLUMBING AND DRAINAGE CODE PART 3 STORMWATER DRAINAGE EXCEPT WHERE SPECIFICALLY NOTED.
9. CONCRETE TO BE N25 UNLESS NOTED OTHERWISE.

TOLERANCES

1. THE BASE OF THE WETLAND SHALL BE FREE FROM LOCALIZED DEPRESSIONS AND LOW POINTS. THIS IS PARTICULARLY IMPORTANT TO ACHIEVE A WELL DISTRIBUTED FLOW PATH AND TO PREVENT ISOLATED POOLS FROM FORMING (POTENTIALLY CREATING MOSQUITO HABITAT) WHEN THE WETLAND DRAINS.
2. TRANSITIONS BETWEEN THE MARSH ZONES AND THE BATTER SLOPES MUST BE SMOOTH TO ALLOW FOR STRONG EDGE VEGETATION TO ESTABLISH AND AVOID LOCAL PONDING (THAT CAN ENHANCE MOSQUITO BREEDING HABITAT).
3. FINISHED EARTHWORK LEVELS MUST BE WITHIN 50 MM OF THE DESIGN LEVEL
4. HYDRAULIC STRUCTURE LEVELS (E.G. PIT CREST, WEIRS) SHALL BE WITHIN 25 MM OF DESIGN LEVELS.

ACCESS ROADS

1. ACCESS TRACKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH RELEVANT STANDARD SPECIFICATIONS (QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS AND TCC).
2. ROAD BASE MATERIAL SHALL BE TYPE 2.3 WITH 2% CROSSFALL.
3. WHERE DRECTED, ROAD BASE MATERIAL SHALL BE CEMENT STABILISED OR APPROVED EQUIVALENT.

PLANS AND DOCUMENTS
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Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

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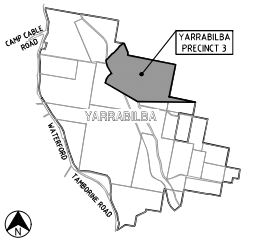
NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	JAN 18'	CWH

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Drawing Title

GENERAL
NOTES

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
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	Drawing No	Revision
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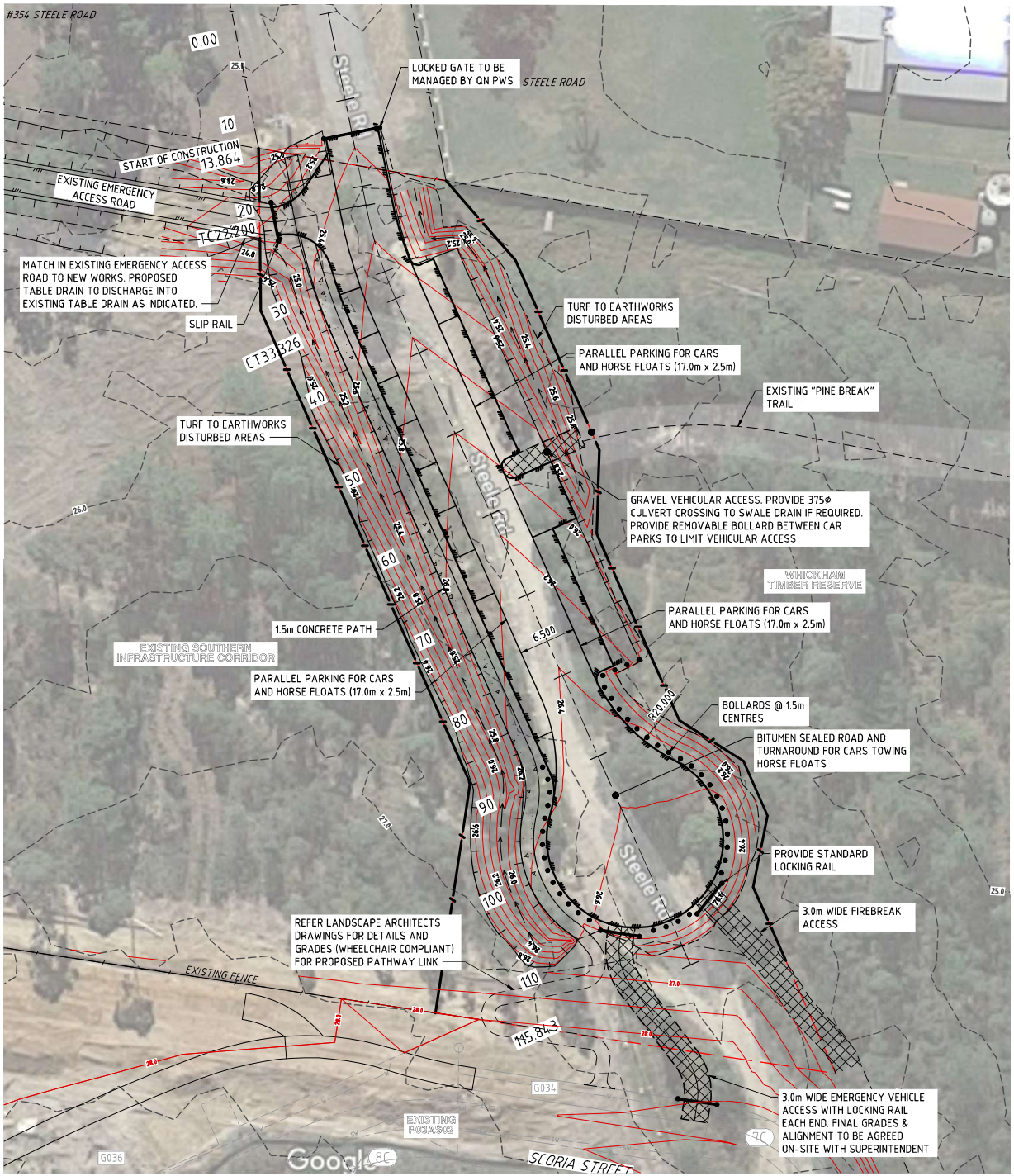

LAYOUT PLAN
SCALE 1:250

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

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Queensland Government

LEGEND

- STAGE BOUNDARY
- FINISHED SURFACE CONTOURS
- NATURAL SURFACE CONTOURS
- EXISTING ROAD CENTRELINE
- EXISTING KERB AND CHANNEL
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER MAIN
- EXISTING TRUNK SEWER MAIN
- EXISTING WATER MAIN
- PROPOSED ROAD CENTRELINE
- PROPOSED EDGE OF ASPHALT
- PROPOSED BOLLARDS
- PROPOSED TOP OF BANK
- PROPOSED BOTTOM OF BANK
- PROPOSED SWALE DRAIN
- EXISTING FENCE
- PROPOSED FENCE
- GRAVEL PAVEMENT - COMPACTED 150mm THICK CBR45

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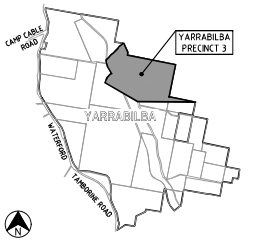
NORTH

LOCALITY PLAN



REVISIONS

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A	FOR APPROVAL	JAN 18'	CWH
B	FOR APPROVAL	SEPT'19	RCT

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GENERAL
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Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	03 of 11

	Drawing No	Revision
A1	17-268-03	B

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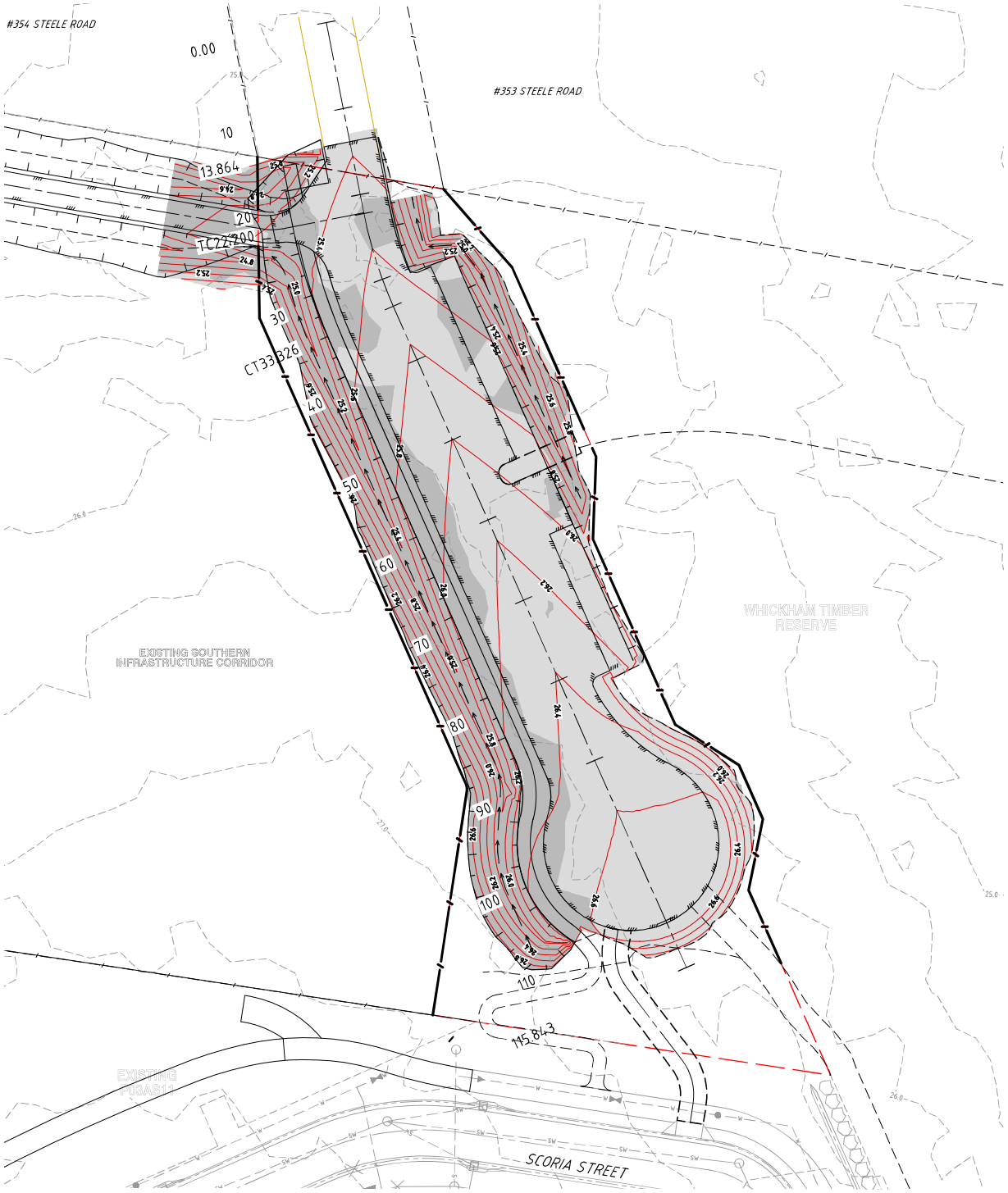

LAYOUT PLAN
SCALE 1:500

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LEGEND

- STAGE BOUNDARY
- FINISHED SURFACE CONTOURS
- NATURAL SURFACE CONTOURS
- EXISTING ROAD CENTRELINE
- EXISTING KERB AND CHANNEL
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER MAIN
- EXISTING TRUNK SEWER MAIN
- EXISTING WATER MAIN
- BATTER LINE
- TOP OF BANK
- EXISTING FENCE
- PROPOSED FENCE
- EXTENT OF CUT
- EXTENT OF FILL

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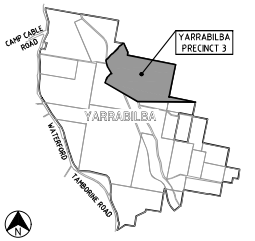
NORTH

LOCALITY PLAN



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Drawing Title

BULK EARTHWORKS
CONTOUR PLAN

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	04 of 11

	Drawing No	Revision
A1	17-268-04	B

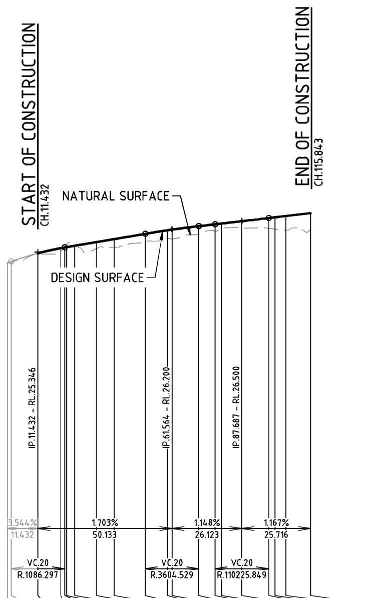
M:\2017\17268 Yarrabilba Steele Road Trailhead Access\Engineering\Acad\17-268-04-EW-CONTOURS.dwg Plotted by: CE on 10/05/2022 3:08:16 PM

NOMINAL PAVEMENT DETAILS
STEELE ROAD ACCESS
URBAN ACCESS STREET

30mm ASPHALTIC CONCRETE
110mm BASE COURSE (TYPE 2.1, CBR 80)
140mm SUB-BASE COURSE (TYPE 2.3, CBR 45)
SUBGRADE REPLACEMENT AS REQUIRED (TYPE 2.5, CBR 15)
DESIGN ESA = 1.1 x 10^5

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2022/1292
Date: 12 December 2022

Queensland Government



Vertical Geometry Grade: 3.544% | 1.703% | 1.148% | 1.167%
Vertical Geometry Length (m): 11.432 | 50.133 | 26.123 | 25.716
Vertical Curve Length (m): VC.20 | VC.20 | VC.20
Vertical Curve Radius (m): R.1086.297 | R.3604.529 | R.110225.849

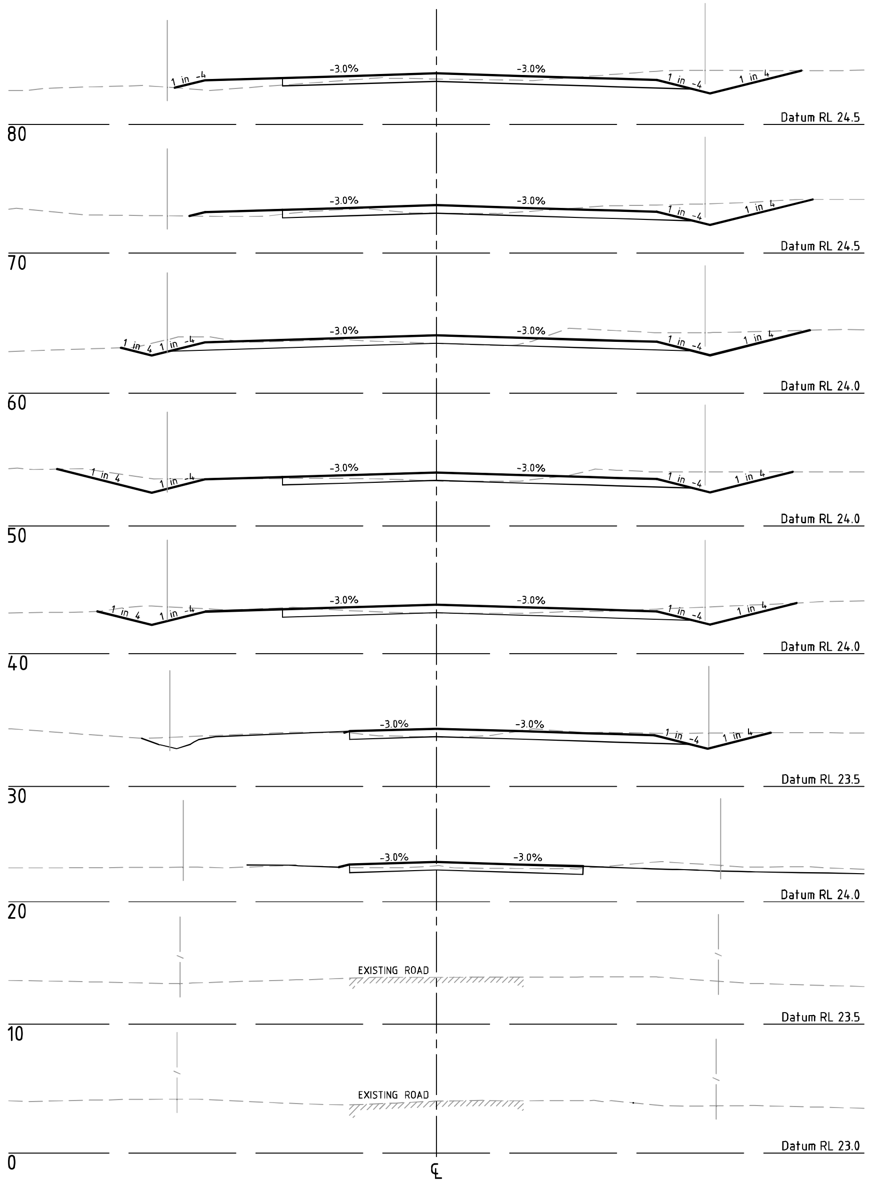
DATUM R.L.12.000

VOLUMES						
CUT	29	52	79	72	35	0
FILL	7	22	42	48	8	0

PEGGED CHAINAGE	LIP OF KERB LHS	LIP OF KERB RHS	NATURAL SURFACE	CUT/FILL DEPTH	DESIGN SURFACE
0.000	24.843	24.843	24.940	0.001	24.941
1.432	24.894	24.894	24.980	0.012	24.992
11.432	25.202	25.202	25.270	0.030	25.300
20.000	25.394	25.394	25.347	0.144	25.491
21.432	25.419	25.419	25.536	-0.020	25.516
22.200	25.432	25.432	25.628	-0.099	25.530
25.135	25.482	25.482	25.654	-0.074	25.579
33.326	25.622	25.622	25.472	0.247	25.719
40.000	25.735	25.735	25.520	0.313	25.833
51.564	25.932	25.932	25.732	0.297	26.030
60.000	26.066	26.066	25.861	0.303	26.163
61.564	26.089	26.089	25.829	0.357	26.186
71.564	26.217	26.217	26.005	0.310	26.315
77.687	26.288	26.288	26.129	0.256	26.385
80.000	26.314	26.314	26.201	0.211	26.412
87.687		26.403	26.233	0.267	26.500
97.687			26.238	0.378	26.617
100.000			26.204	0.439	26.644
104.154			26.163	0.529	26.692
115.843			26.216		

Horiz Curve Data: R.-50, 11.126

LONGITUDINAL SECTION - STEELE ROAD ACCESS
SCALE - 1:1000 (H)
1:100 (V)



CROSS SECTIONS - STEELE ROAD TRAILHEAD ACCESS
SCALE 1:100

SCALE A 1:1000 (Horiz.)
B 1:100 (Vert.)
(A1 UNREDUCED)

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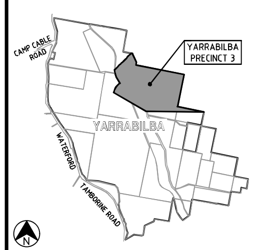
NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	JAN 18'	CWH
B	FOR APPROVAL	SEPT '19	RCT

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STEELE ROAD
TRAILHEAD ACCESS

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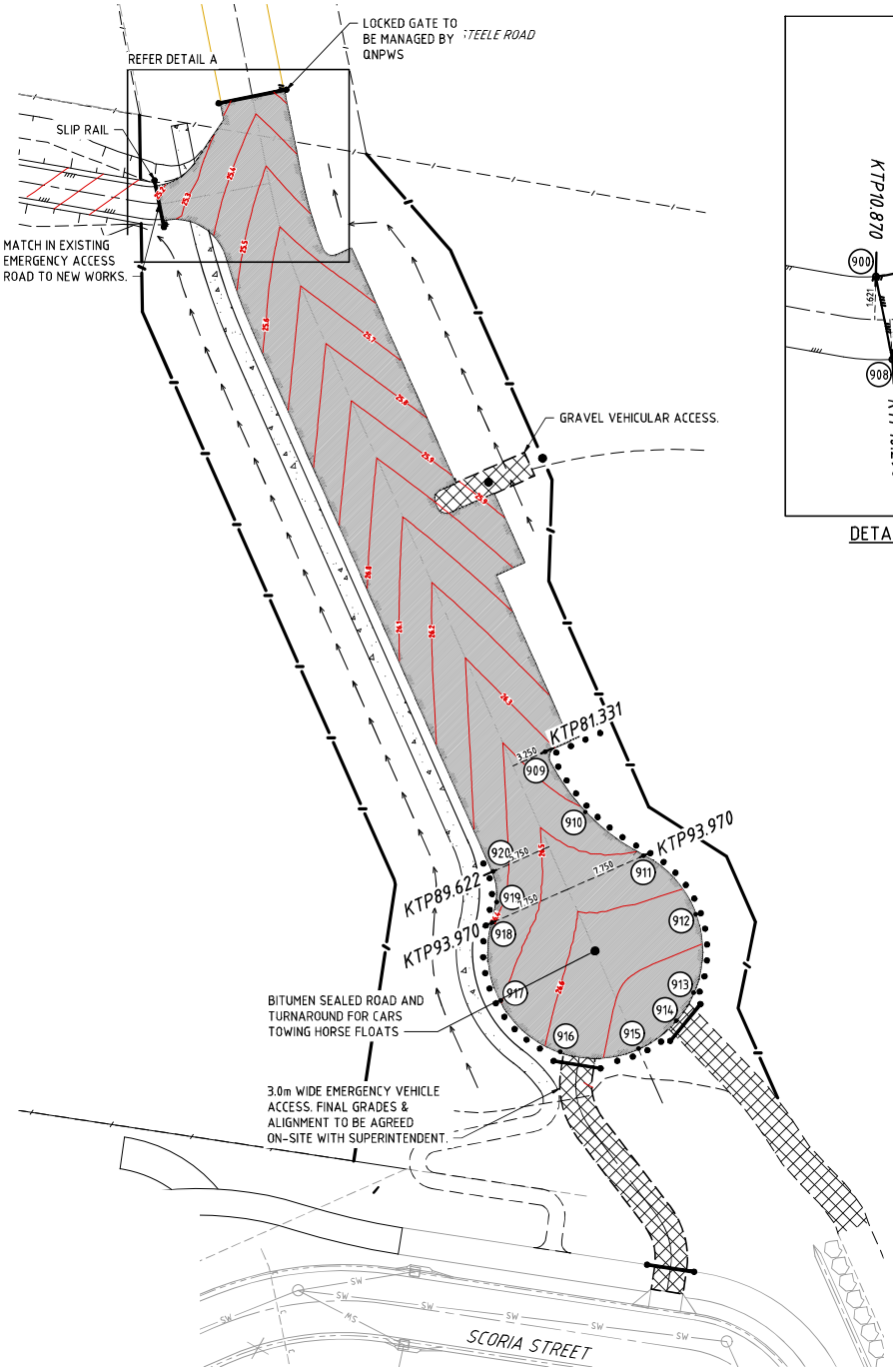
Approved - RPEQ 12805

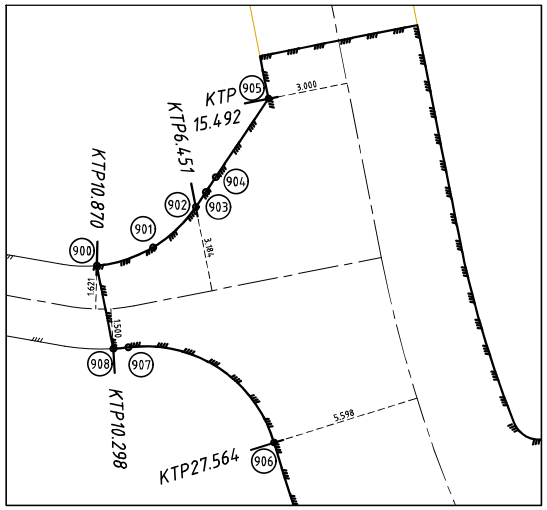
Drawing Title
ROADWORKS - LONGITUDINAL AND CROSS SECTIONS - STEELE ROAD

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale: AS SHOWN
Sheet: 05 of 11
A1
Drawing No: 17-268-05
Revision: B



SETOUT DETAIL - STEELE ROAD
SCALE 1:250



DETAIL A - STEELE ROAD AND EMERGENCY ACCESS
SCALE 1:100

GENERAL NOTES

1. SETOUT TABLES ARE GIVEN AT EDGE OF BITUMEN.
2. EDGE OF BITUMEN LEVELS ARE GIVEN AT QUARTER POINTS, TP'S AND EQUAL PARTS U.N.O.
3. EDGE OF BITUMEN RADII AND OFFSETS ARE GIVEN AT HORIZONTAL SETOUT POINT SHOWN ON KERB SETOUT DETAILS BELOW.
4. EXTRA DETAIL FOR SETTING OUT IS AVAILABLE ON CAD FILE.

LEGEND

- PROPOSED ROAD CENTRELINE
- KERB AND CHANNEL (TYPE B1)
- KERB AND CHANNEL (TYPE M3)
- SW — PROPOSED STORMWATER DRAINAGE
- 36.0 — FINISHED SURFACE CONTOURS
- 3.000 — OFFSET TO KERB FACE
- EXISTING FENCE
- PROPOSED FENCE
- ASPHALT SURFACING (25mm)
- GRAVEL PAVEMENT - COMPACTED 150mm THICK CBR45

SETOUT TABLE

POINT	EASTING	NORTHING	LEVEL
900	3771.308	27316.627	25.170
901	3773.405	27317.306	25.234
902	3775.005	27318.821	25.274
903	3775.379	27319.377	25.281
904	3775.751	27319.933	25.287
905	3777.721	27322.869	25.309
906	3777.933	27310.007	25.453
907	3772.484	27313.571	25.294
908	3771.920	27313.518	25.281
909	3807.721	27263.706	26.330
910	3811.497	27258.043	26.410
911	3816.955	27253.974	26.513
912	3821.825	27248.481	26.649
913	3821.632	27241.143	26.767
914	3820.000	27238.523	26.781
915	3816.480	27235.914	26.754
916	3809.146	27235.611	26.627
917	3803.581	27240.398	26.496
918	3802.784	27247.695	26.400
919	3803.209	27249.615	26.380
920	3802.851	27252.479	26.350

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

SCALE 1 0.5 0 1 2 3 4 5 6 7 8 9 10m
1 : 100 (A1 UNREDUCED)

SCALE 5 0 5 10 15 20 25m
1 : 250 (A1 UNREDUCED)

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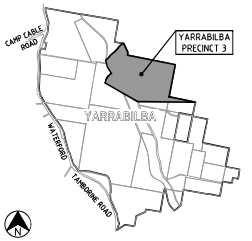
NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	JAN 18	CWH
B	FOR APPROVAL	SEPT'19	RCT

Associated Consultants
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Project: YARRABILBA
STEELE ROAD
TRAILHEAD ACCESS

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Approved - RPEQ 12805

Drawing Title:
ROADWORKS
INTERSECTIONS DETAILS

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	06 of 11

Size	Drawing No	Revision
A1	17-268-06	B

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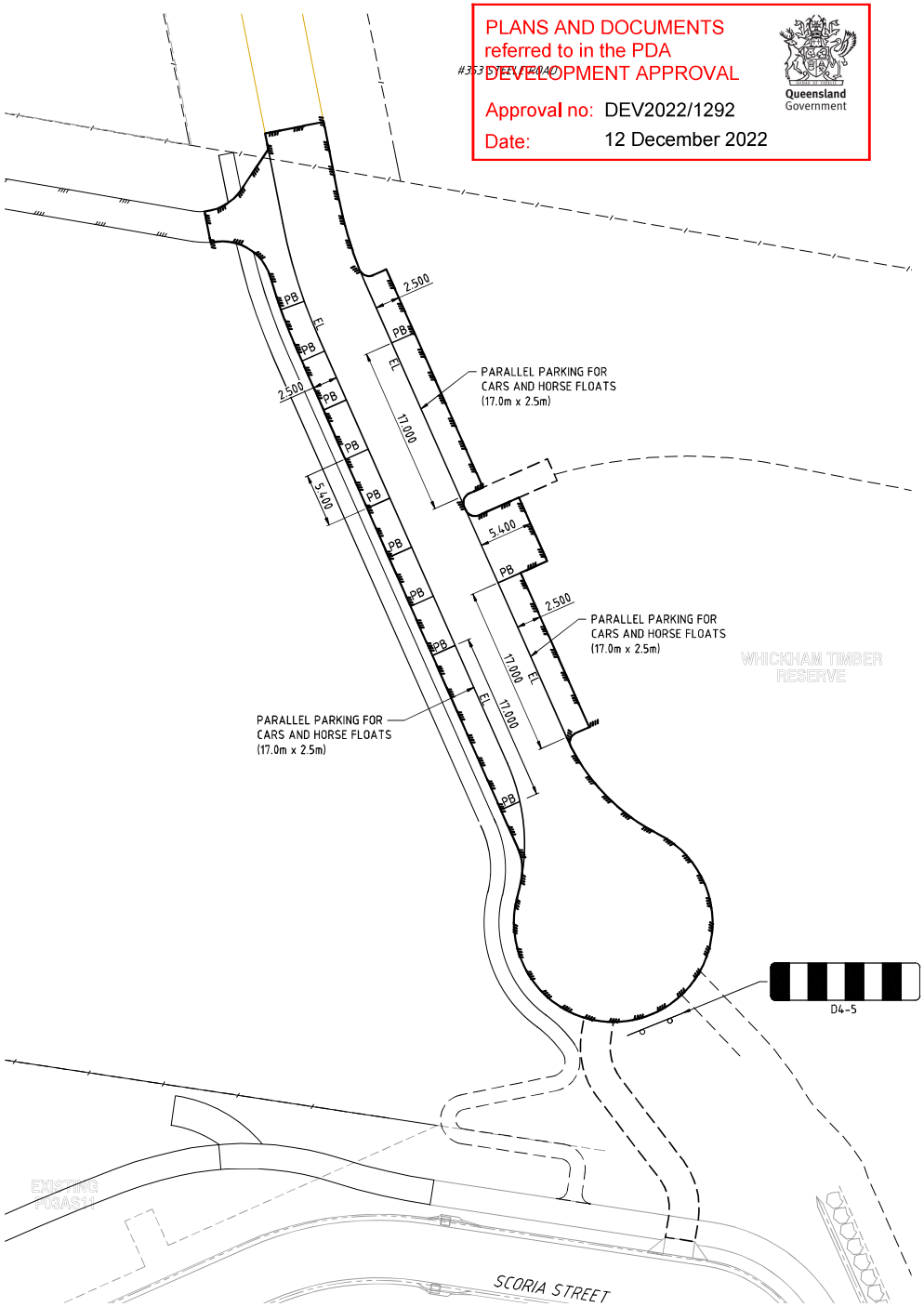
PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2022/1292
Date: 12 December 2022
Queensland Government



SIGNS & LINEMARKING PLAN – MCKINNON DRIVE
SCALE 1:250

LINEMARKING LEGEND

PARKING BAY (PB) — 80mm
EDGE LINE (EL) — 100mm

NOTE- RETROREFLECTIVE RAISED PAVEMENT MARKERS (RRPM'S) REQUIRED TO ALL LANE LANES AND ALL PERIMETER OF CHEVRONS AS PER MAIN ROADS 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (MUTCD).

SIGN NOTES

1. ALL SIGNS TO BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES – CURRENT EDITION
2. THE LOCATION OF EXISTING SIGNS ARE INDICATED ON PLAN.
3. THE LOCATIONS OF PROPOSED SIGNS ARE INDICATED ON PLAN.

   ALL SIGNS TO BE INSTALLED WITH THE FOLLOWING MINIMUM CLEARANCES TO EDGE OF SIGN FACE:

NO KERB	– 600mm BEHIND GUIDEPOSTS
BARRIER KERB	– 300mm FROM FACE OF KERB
MOUNTABLE KERB	– 500mm FROM FACE OF KERB.

4. CHECK FOR ALL IN GROUND SERVICES PRIOR TO PLACING SIGN SUPPORTS.
5. SIGN SUPPORT CONSTRUCTION TO BE IN ACCORDANCE WITH MAIN ROADS STANDARD DRAWING 1368 FOR SIGN SUPPORTS AND FOR MULTIPLE SUPPORT. REUSE EXISTING SIGN SUPPORTS WHERE POSSIBLE.
6. EXACT LOCATION OF ALL SIGNS IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.

PAVEMENT MARKING NOTES

ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES – CURRENT EDITION.

OUTLINE MARKINGS, OFFSET 75mm MINIMUM FROM THE KERB FACE SHALL BE PROVIDED AROUND ALL RAISED ISLANDS AND MEDIANS.

WHITE REFLECTIVE PAINT SHALL BE USED FOR ALL LANE AND EDGE LINES, CHEVRONS AND OUTLINE MARKINGS.

WHITE REFLECTIVE THERMOPLASTIC MATERIAL SHALL BE USED FOR ALL CONTINUITY, TURNING, HOLDING, GIVE WAY, STOP, CROSSWALK MARKINGS AND TURN ARROWS.

ALL EXISTING PAVEMENT MARKINGS THAT SHALL BE MADE OBSOLETE BY THESE WORKS SHALL BE REMOVED FROM THE ROAD SURFACE BY APPROVED METHOD.

SCALE 5 0 5 10 15 20 25m
1 : 250 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
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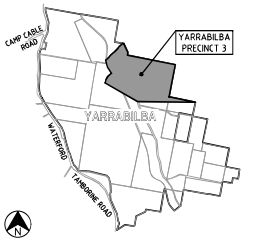
NORTH

LOCALITY PLAN



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Approved - RPEQ 12805

Drawing Title:
ROADWORKS
LINEMARKING PLAN

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	07 of 11

Drawing No	Revision
17-268-07	B

A1

#353 STEELE ROAD

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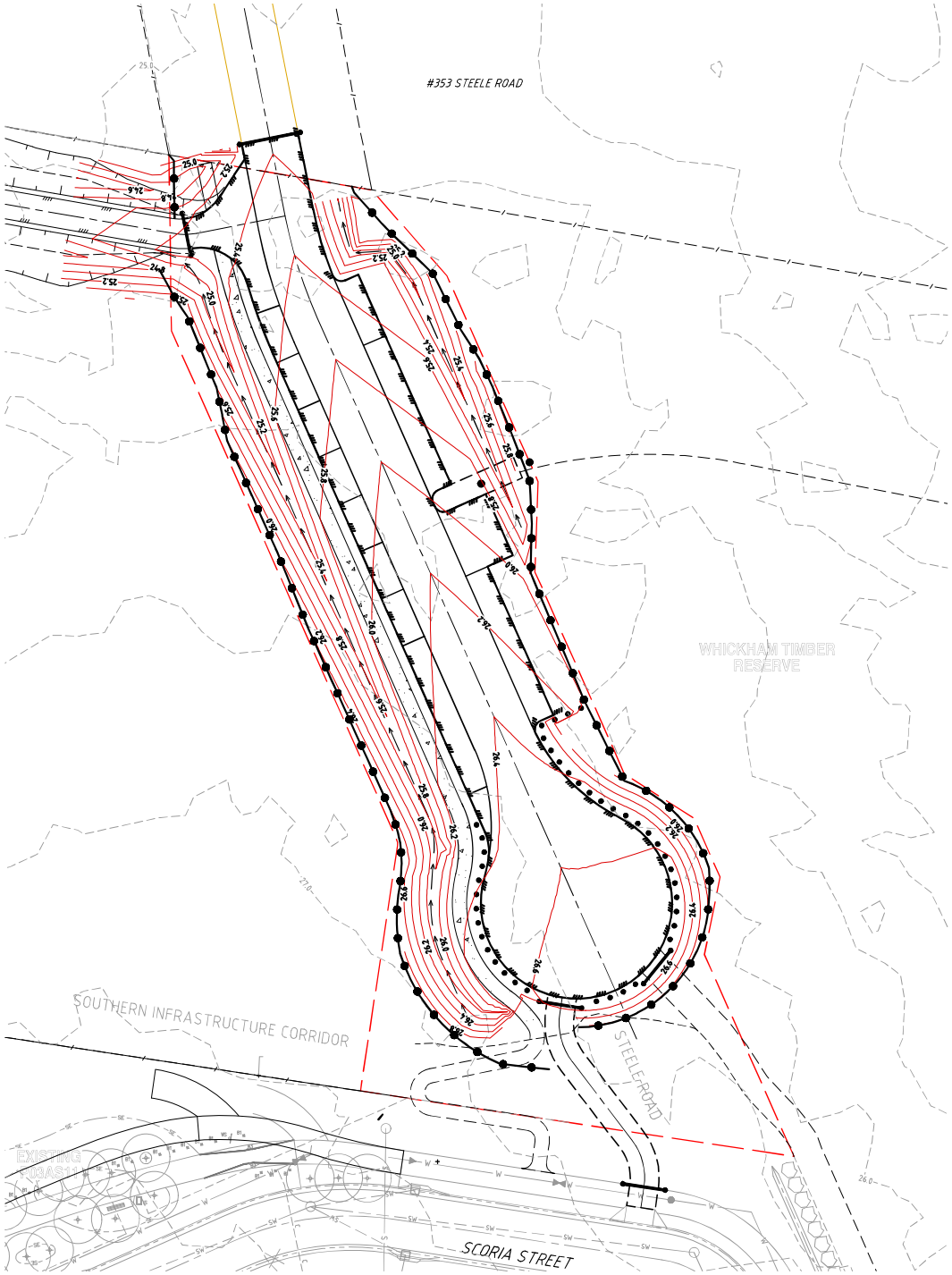

LAYOUT PLAN
SCALE 1:500

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

LEGEND

- STAGE BOUNDARY
- FINISHED SURFACE CONTOURS
- NATURAL SURFACE CONTOURS
- EXISTING ROAD CENTRELINE
- EXISTING KERB AND CHANNEL
- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER MAIN
- EXISTING TRUNK SEWER MAIN
- EXISTING WATER MAIN
- EXISTING IRRIGATION
- SEDIMENT AND DIVERSION FENCE (TEMP)
- EXISTING FENCE

NOTE :-
EROSION AND SEDIMENT CONTROL DESIGN IS IDENTICAL FOR CONSTRUCTION PHASE AND POST-CONSTRUCTION PHASE.

SCALE
10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

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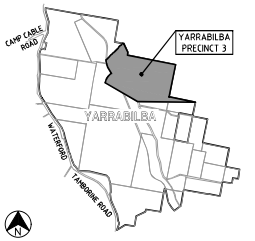
NORTH

LOCALITY PLAN



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STEELE ROAD
TRAILHEAD ACCESS

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Approved - RPEQ 12805

Drawing Title
EROSION AND SEDIMENT CONTROL LAYOUT PLAN

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	08 of 11

	Drawing No	Revision
A1	17-268-08	B

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EROSION AND SEDIMENT CONTROL PROGRAM

1. THIS PROGRAM AND ASSOCIATED PLANS SHOULD BE READ IN CONJUNCTION WITH THE SITE MANAGEMENT SPECIFICATION INCORPORATED IN THE CONTRACT DOCUMENTS. THE PROVISIONS OF THE SPECIFICATION ARE TO BE STRICTLY ADHERED TO.
2. THE BASIC OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL ARE:
   - I. IDENTIFY CRITICAL AREAS AND PROVIDE APPROPRIATE ATTENTION TO THOSE AREAS.
   - II. PLAN SITE LAYOUTS SO THAT ACCESS TO ALL REQUIRED DRAINAGE EROSION AND SEDIMENT CONTROL MEASURE IS MAINTAINED.
   - III. LIMIT EXPOSURE TIME BY PROGRAMMING TO MINIMISE THE AREA OF LAND EXPOSED TO POTENTIALLY ADVERSE WEATHER CONDITIONS AT ANY ONE TIME. I.E. PROGRESSIVELY CLEAR AND REVEGETATE.
   - IV. PROVIDE CONTROL MEASURES INCLUDING TEMPORARY AND PERMANENT DRAINAGE, EROSION AND SEDIMENT CONTROLS.
3. THE EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH BEST PRACTICE FOR EROSION AND SEDIMENT CONTROL, THE POLLUTION CONTROL MANUAL FOR URBAN STORMWATER MANAGEMENT, THE QUEENSLAND URBAN DRAINAGE MANUAL, AND THE SOIL EROSION AND SEDIMENT CONTROL - ENGINEERING GUIDELINES FOR QUEENSLAND (CURRENT EDITIONS).
4. CONSTRUCTION SEQUENCE THE CONSTRUCTION SEQUENCE WILL GENERALLY BE:
   - I. OBTAIN ALL NECESSARY PERMITS AND APPROVALS BEFORE SITE ESTABLISHMENTS.
   - II. HOLD A PRE-CONSTRUCTION CONFERENCE.
   - III. STABILISE ALL CONSTRUCTION ACCESS ROUTES AND ENTRY/EXIT POINTS.
   - IV. ESTABLISH SEDIMENT CONTROL STRUCTURES AND TEMPORARY DRAINAGE CONTROL MEASURES AS NECESSARY.
   - V. CARRY OUT BULK EARTHWORKS.
   - VI. MAINTAIN AND REPAIR DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES.
   - VII. REMOVE SEDIMENT CONTROL MEASURES WHEN THE SITE IS STABILISED. I.E. >70% GROUND COVER
   - VIII. THE CONTRACTOR SHALL PREPARE A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO SUIT HIS/HER CONSTRUCTION METHODOLOGY, AND SUBMIT THIS PLAN FOR APPROVAL TO THE SUPERINTENDENT. IT SHOULD BE NOTED THAT ANY SIGNIFICANT VARIATION TO THIS PLAN MAY REQUIRE RESUBMISSION TO COUNCIL FOR APPROVAL. THE CLIENT SHALL NOT BE RESPONSIBLE FOR ANY SUCH ASSOCIATED DELAY.
5. ALL ESC DEVICES ARE TO BE INSPECTED WEEKLY, PRIOR TO EXPECTED AND AFTER RAINFALL ANY DAMAGE IS TO BE REPAIRED AS REQUIRED TO MAINTAIN THEIR EFFICACY.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL (ESC) MEASURE TO BE MAINTAINED AND FULLY OPERATIONAL DURING THE MAINTENANCE PERIOD AND ARE TO BE REMOVED AFTER THE SATISFACTORY COMPLETION OF AN OFF-MAINTENANCE INSPECTION BY COUNCIL AND PRIOR TO FORMAL ACCEPTANCE "OFF MAINTENANCE" BY COUNCIL.
7. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR IS TO PROVIDE A DETAILED PROGRAM TO THE SUPERINTENDENT SHOWING THE TIMING FOR ALL WORKS ASSOCIATED WITH THE PROJECT, NOMINATING, IN PARTICULAR, THE PROGRAM FOR INSTALLATION OF SOIL AND EROSION CONTROL SYSTEMS.
8. EARTHWORKS SHALL BE CARRIED OUT IN SUCH A MANNER THAT THE SITE IS MAINTAINED IN A WELL DRAINED CONDITION, AREAS OF LOOSE SOIL ARE MINIMISED AND CONCENTRATIONS OF STORMWATER ARE MINIMISED. BULK EARTHWORKS WILL BE CARRIED OUT OVER THE ENTIRE SITE IN ONE STAGE.
9. A SHAKE DOWN AS DETAILED ON THE PLAN COMPRISING FREE DRAINAGE GRAVEL SHALL BE LOCATED ADJACENT TO THE POINT OF ACCESS WHERE VEHICLES CAN BE WASHED DOWN PRIOR TO EXIT TO THE STREET SYSTEM IF REQUIRED. THE WASH DOWN AREA SHALL BE KEPT FREE OF MUD.
10. FOR DETAILS OF ENTRY/EXIT SEDIMENT PAD REFER TO BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 2.48, FIGURE 2.6.
11. SUPPLEMENTARY EROSION AND SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE SUPERINTENDENT.
12. SEDIMENTATION FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 2.50, FIGURE 2.8.
13. WHERE SEDIMENT FENCES ARE SHOWN TO BE CONSTRUCTED IN AREAS OF SIGNIFICANT EARTHWORKS, ERECTION OF THE FENCE MAY BE DEFERRED UNTIL COMPLETION OF THE BULK EARTHWORKS, SUBJECT TO ABSENCE OF RAIN.

TREES

1. ENSURE COMPLIANCE WITH THE REQUIREMENTS OF AS4970 - TREES ON CONSTRUCTION SITES. THIS MAY REQUIRE CONSULTATION AND GUIDANCE FROM A CLASS V CERTIFIED ARBORIST AS TREES OUTSIDE THE IMMEDIATE WORK AREA MAY BE AFFECTED.

EROSION AND SEDIMENT CONTROL NOTES

1. NO DISTURBED AREA IS TO REMAIN DENUDED LONGER THAN 60 DAYS.
2. ALL EROSION AND SILTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING AND GRUBBING OR ANY OTHER EARTHWORKS OR TRENCHING.
3. ALL STORMWATER, SEWER LINE AND SERVICES TRENCHES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 15 DAYS AFTER BACKFILL, NO MORE THAN 150 METRES ARE TO BE OPEN AT ANY ONE TIME.
4. ALL TEMPORARY EARTH BANKS, DIVERSIONS AND SEDIMENT DAM EMBANKMENTS ARE TO BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED.
5. ALL FILL EMBANKMENTS ARE TO BE LEFT WITH A LIP AT THE TOP OF THE SLOPE AT THE END OF EACH DAYS OPERATION.
6. ALL CUT AND FILL BATTERS ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING.
7. ADDITIONAL SILT AND EROSION CONTROLS MAY BE REQUIRED AS ORDERED ON SITE BY THE SUPERVISING ENGINEER.
8. ALL CONTROLS ARE TO BE INSPECTED AFTER EACH STORM EVENT AND MAINTAINED AS REQUIRED. CONTROLS ARE TO BE MAINTAINED UNTIL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED OR UNTIL NO LONGER REQUIRED.

PHASE 1 - CLEARING AND BULK EARTHWORKS

CONSTRUCT AND MAINTAIN SILT FENCES, STRAW BALE TRAPS, ALLOTMENT DRAINAGE BANKS, CATCH DRAINS AND HYDROMULCHING WHICH CONTROL SEDIMENT AND EROSION DURING CLEARING AND BULK EARTHWORKS.

PHASE 2 - TRENCH EXCAVATION

CONSTRUCT AND MAINTAIN SILT FENCES, STRAW BALE TRAPS, ALLOTMENT DRAINAGE BANKS AND CATCH DRAINS WHICH CONTROL SEDIMENTATION AND EROSION DURING TRENCHING WORK.

PHASE 3 - PAVEMENT CONSTRUCTION

CONSTRUCT AND MAINTAIN SILT FENCES, STRAW BALE TRAPS, ALLOTMENT DRAINAGE BANKS, GULLY INLET PROTECTION, AND PIPE INLET/OUTLET PROTECTION WHICH CONTROL SEDIMENTATION AND EROSION DURING PAVEMENT CONSTRUCTION. SAND BAGGING TO BE PLACED ACROSS PAVEMENT TO CONTROL RUNOFF IN PAVEMENT BOXING AS DIRECTED ON SITE.

PHASE 4 - MAINTENANCE PERIOD

CONSTRUCT AND MAINTAIN CONTROLS AND VEGETATIVE TREATMENTS WHICH CONTROL SEDIMENTATION AND EROSION PRIOR TO THE ESTABLISHMENT OF GRASS COVER.
PROVIDE 600mm WIDE GRASS FILTER STRIPS BEHIND KERB AND CHANNEL.

NOTE: TURF TREATMENT IN CERTAIN AREAS BY LANDSCAPER. REFER TO LANDSCAPE DRAWING.

NOTE

ALL VEHICLES EXITING FROM THE SITE ARE TO BE CLEANED AND TREATED TO PREVENT MATERIAL BEING TRACKED OR DEPOSITED ONTO PUBLIC ROADS.
IF MATERIAL IS ACCIDENTLY DEPOSITED ONTO PUBLIC ROADS IT SHALL BE REMOVED WITHOUT DELAY. IF THE SHAKEDOWN DEVICE PROVES TO BE INEFFECTIVE THE CONTRACTOR IS TO USE OTHERS MEANS TO PREVENT MATERIAL BEING DEPOSITED ONTO PUBLIC ROADS.

TOPSOIL

1. STRIP AND STOCKPILE AVAILABLE TOPSOIL (ASSUMED AVERAGE DEPTH 150mm) FROM ALL DISTURBED AREAS PRIOR TO BULK EARTHWORKS. GRADE EVENLY BETWEEN ALLOTMENT FINISHED SURFACE LEVELS AND ENSURE LOTS ARE FREE DRAINING.
2. MINIMUM SLOPE ACROSS ALLOTMENTS TO BE 1%.
3. ALL FOOTPATHS, BATTERS, AND EARTHWORKS AFFECTED ALLOTMENTS ARE TO BE TOPSOILED TO A MINIMUM DEPTH OF 150mm (LIGHTLY COMPACTED) AND TURFED WHERE SPECIFIED.

SEDIMENT FENCES

1. SEDIMENT FENCES TO BE PLACED AS SHOWN. SEDIMENT FENCED TO BE REPAIRED AND EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE CAPACITY FALLS BELOW 75%.
2. FOR DETAILS OF SEDIMENT FENCE REFER BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 2.50, FIGURE 2.8.
3. SEDIMENT FENCES TO BE REPAIRED AS REQUIRED AND EXCESSIVE SEDIMENT DEPOSITS SHOULD BE REMOVED.
4. INSTALL KERB INLETS WITH GRAVEL RANGING FROM 50mm TO 75mm IN SIZE SHALL BE INSTALLED AT ALL COMPLETED INLETS. REFER IPWEAQ STANDARD DRAWING D-0041. THESE SHALL BE MAINTAINED IN A CLEAN CONDITION. IN THE EVENT OF HEAVY RAIN THEY SHALL BE REMOVED TO MINIMISE THE POTENTIAL FOR FLOODING.
5. CHECKS OF SILT CONTROL DEVICES ARE TO BE MADE WEEKLY, OR AFTER ANY SIGNIFICANT STORM EVENT TO ENSURE INTEGRITY AND PERFORMANCE.

TURFING

1. PROVIDE TURFING TO ENTIRE WIDTH OF ALL SWALES, FOOTPATHS, AND 1 IN 4 CUT AND FILL BATTERS.
2. FOOTPATH BATTERS ARE TO BE STABILISED WITH TOPSOIL (AND TURFED) AS SOON AS PRACTICAL AFTER THE BATTERS HAVE BEEN COMPLETED.

DURING CONSTRUCTION SEQUENCE:

1. TOPSOIL STOCKPILES SHALL BE LESS THAN 1m DEEP AND UNCOMPACTED. A SEDIMENTATION FENCE SHALL BE CONSTRUCTED ON THE D/S SIDE, OR THE STOCKPILE STABILISED WITH VEGETATION, MULCH, OR A SOIL STABILISER.
2. SEDIMENTATION FENCES TO BE PLACED AS SHOWN.
3. REGULARLY INSPECT BANKS AND REPAIR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD.
4. REMOVE SEDIMENT TO AVOID PONDING FROM CATCH DRAINS.
5. REMOVE EXCESSIVE SEDIMENT FROM UPSTREAM OF CHECK DAM.
6. ROAD RESERVE TO BE USED AS HAUL ROAD.
7. A CATCH DRAIN OR DIVERSION BANK IS TO BE PROVIDED ON THE TOP SIDE OF ALL CUTS, WITH DISCHARGE EITHER TO UNDISTURBED GRASS LANDS OR TO THE CROSS ROAD DRAINAGE.
8. SUPPLEMENTARY EROSION AND SEDIMENT CONTROL DEVISED MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
9. WATER QUALITY SAMPLES MUST BE TAKEN AND ANALYSED PRIOR TO THE RELEASE OF ANY WATER FROM THE SEDIMENT POND. WATER QUALITY MUST SATISFY THE FOLLOWING CRITERIA: TSS<50MG/L PH BETWEEN 6.5 AND 8.5.
10. ALL WATER QUALITY DATA INCLUDING DATES OF RAINFALL, TESTING AND WATER RELEASE MUST BE MAINTAINED IN AN ON-SITE REGISTER. THIS REGISTER IS TO BE MAINTAINED FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON SITE FOR INSPECTION BY COUNCIL OFFICERS ON REQUEST.
11. EXPOSED AREAS ON LOTS ARE TO BE SEEDED AND MULCHED (E.G. HYDROMULCHED). MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 2.5T/HA. ALTERNATIVELY THEY SHALL BE DRILL-SEEDED AND IRRIGATED SO AS TO ENSURE >70% GROUND COVER WITHIN 14 DAYS FROM NOVEMBER TO APRIL, OR 30 DAYS FROM MAY TO OCTOBER.

FOLLOWING CONSTRUCTION:

1. SEDIMENTATION FENCES TO BE MAINTAINED UNTIL TURFING IS COMPLETED.
2. SEDIMENT BASINS TO BE CHECKED AFTER EVERY SIGNIFICANT STORM AND DESILTED ONCE THE SETTLEMENT LIMIT HAS BEEN REACHED.

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

SCALE 10 5 0 10 20 30 40 50m

1 : 500 (A1 UNREDUCED)

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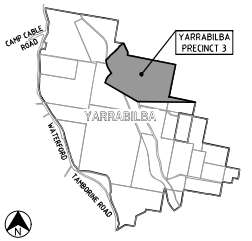
NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
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Project: YARRABILBA

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TRAILHEAD ACCESS

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Drawing Title: EROSION AND SEDIMENT CONTROL NOTES

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	09 of 11

Drawing No	Revision
17-268-09	A

A1

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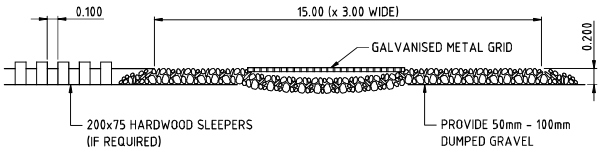

SITE ACCESS POINT SHAKEDOWN FACILITY
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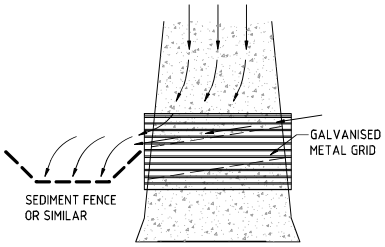

SITE ACCESS POINT ENTRY/EXIT PAD
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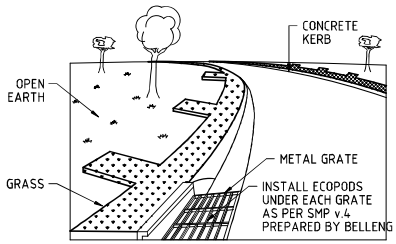

TURF STRIP DETAIL
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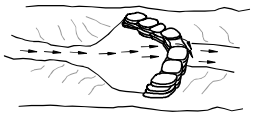

SANDBAG CHECK DAM
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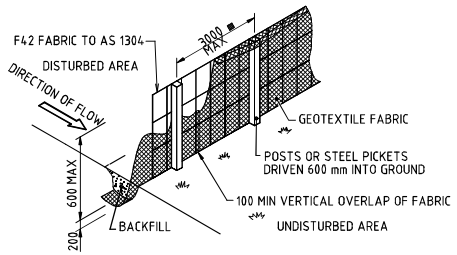

SEDIMENT FENCE
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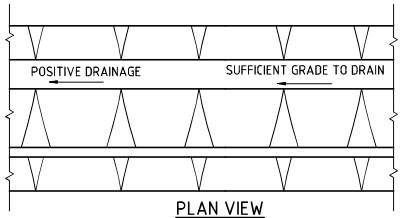

PLAN VIEW
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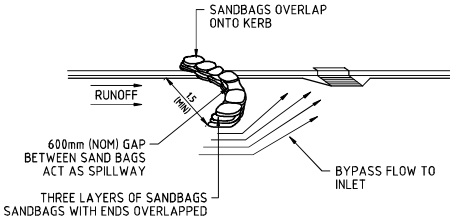
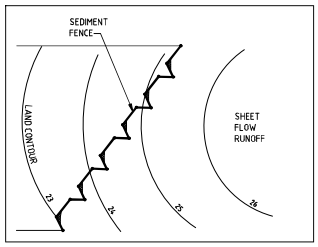
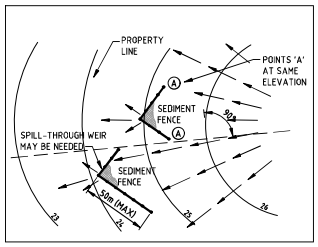


ON GRADE GULLY INLET
N.T.S.





SILT FENCE DETAILS
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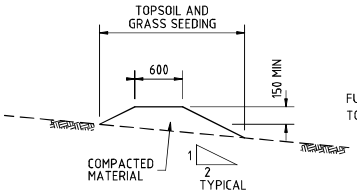

DIVERSION DRAINAGE BANK
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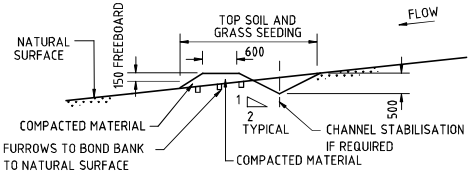

PLACE FILTER FABRIC ACROSS DRAIN AT 30m MAXIMUM INTERVALS AND AT OUTLET OF DRAIN, OR AS REQUIRED TO CONTROL SEDIMENT MOVEMENT ALONG DRAIN.

CATCHMENT DRAIN
N.T.S.

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

SCALE
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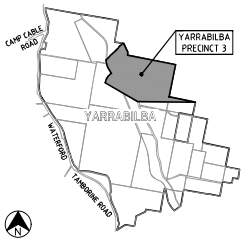
LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	JAN 18	CWH

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Approved - RPEQ 12805

Drawing Title

EROSION AND SEDIMENT CONTROL DETAILS

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

Scale	Sheet
AS SHOWN	10 of 11

	Drawing No	Revision
A1	17-268-10	A

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2022/1292

Date: 12 December 2022

Queensland Government

Client: LEND LEASE COMMUNITIES

Project: YARRABILBA – STEELE ROAD - TRAILHEAD ACCESS

Prepared By: Craig Hamilton Date: 19th February 2018

Reviewed By: Robert Mander Date: 19th February 2018

Safety in Design Analysis

- Complete Safety in Design Analysis by populating the table where applicable with all of the relevant safety issues for the project. For example:

☒ Positioning of new services adjacent to existing live services	☒ Slope Stability
☒ Construction adjacent to existing road carriageways	☒ Dust Contrcl
☒ Pedestrians	☒ Erosion and Sediment Control/Management
☒ Civil Construction Workers	☐ Sediment Basin Construction
☒ Maintenance Workers	☐ Wetland Construction
☒ Work Place Health and Safety Constraints	☒ Working under traffic
☐ Unusual material handling	
☒ Falls from heights	Project Specific Design Elements:
☒ Underground Services (existing)	
☒ Electrical Service Installation	
☒ Gas Service Installation	
☒ Communication Installation	
☐ Traffic Signal Installation	
☒ Landscape Workers	
☒ Line marking Workers	
☒ Excavation – open cut trenching - Trench excavation depths	
☐ Tunnel Boring	
☒ Confined Spaces	
☐ Lifting of loads	
☐ Unloading of materials and storage	
☐ Storage of hazardous materials	
☒ Geotechnical investigation – works	
☒ Bulk Earthworks	

☐ List all relevant safety studies

The following table summarises the safety in design issues considered.

Section of Works	Identify any Potential Incident or Hazard	Consequence	Likelihood	Risk Rating	Risk Control Measures	Consequence	Likelihood	Residual Risk Rating (after design applied)	Risk Manager
Earthworks Material Investigation	Geotechnical Investigation	C	3	S	SWMS required by Contractor	D	3	M	Contractor
Road Works	Pedestrians Injury	D	3	M	TMP to be provided by Contractor to exclude pedestrians from work site	E	3	L	Contractor
	Civil Construction Workers – Injury	A	4	H	TMP and SWMS required for all activities	C	2	S	Contractor
	Maintenance Workers	A	4	H	TMP and SWMS required for all activities	C	3	S	Contractor
	Underground Services (Existing)	A	3	H	DBYD information to be sort prior to design. Existing to be located by survey if applicable to design. All existing services to be located and depths confirmed prior to commencement. SWMSto be provided by Contractor	C	2	S	Designer/ Contractor
Working adjacent to existing Infrastructure	Conflict between construction equipment / personnel and live infrastructure in particular Power lines	B	4	S	All existing services highlighted in the documentation. Contractor to complete DBYD search before commencing works.SWMS to be provided by Contractor	C	4	M	Designer/ Contractor
Service trench/ pipe installation	Location of all trenches to provide clearance to all other services and all structures or battered embankments	A	4	H	Mains located with safe working clearance to existing pressure mains, structures and battered embankments	C	4	M	Designer
	Trench depth	A	4	M	Depth of trenches minimized for both safety and cost efficiency	C	4	M	Designer
Works withir Confined Spaces	Construction of manholes/ structures	A	4	M	Contractor to ensure works undertaken in a manner complying with safe work method statements	D	5	L	Contractor
Silt and Erosion Control	Public access to water retaining temporary sediment basins	A	5	S	Protection measures – that is fencing of all water retaining structures with side slopes greater than 1 in 5 as described in International Erosion Control Association (Australasian) Table B9	C	4	M	Designer/ Contractor

RISK ASSESSMENT AND CONTROL

Risk Assessment

Select **one** category from each of the columns below that best represents the likely outcome if the potential hazard actually did occur. For each consequence consider the **most likely outcome** and **not** the 'absolute worst' case.

Consequence		Likelihood	
A	Death – major environmental damage	1	Certain
B	Permanent Disability – severe environmental damage	2	Probable
C	Lost Time Injury – moderate environmental damage	3	Possible
D	Medical Treatment Injury – minor environmental damage	4	Unlikely
E	First Aid Treatment	5	Very Unlikely

RISK RATING

H: High Risk **S: Sigrificant Risk**

M: Moderate Risk **L: Low Risk**

Read the Risk Rating from the matrix below:

Risk Assessment Matrix	A	B	C	D	E
1	H	H	H	S	S
2	H	H	S	S	M
3	H	H	S	M	L
4	H	S	M	L	L
5	S	S	M	L	L

Certain - means an event or situation that is happening more or less all the time, including continuous situations

Permanent Disability – means a disability, such as loss of a limb or eyesight, loss of hearing, chronic skin disorder, chronic back disorder, emphysema, and the like

Probable – means an event or situation that occurs or is likely to occur about ten times or more per year

Possible – means an event or situation that occurs or is likely to occur about once per year

Unlikely – means an event or situation that occurs or is likely to occur less frequently than once every ten years

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NORTH

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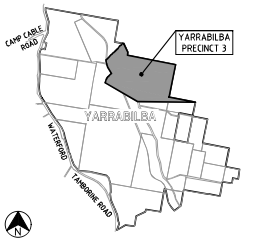

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Drawing Title

SAFETY IN DESIGN

Drawn	Designed	Checked	Date
CWH	CWH	RM	JAN 18

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	Drawing No	Revision
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