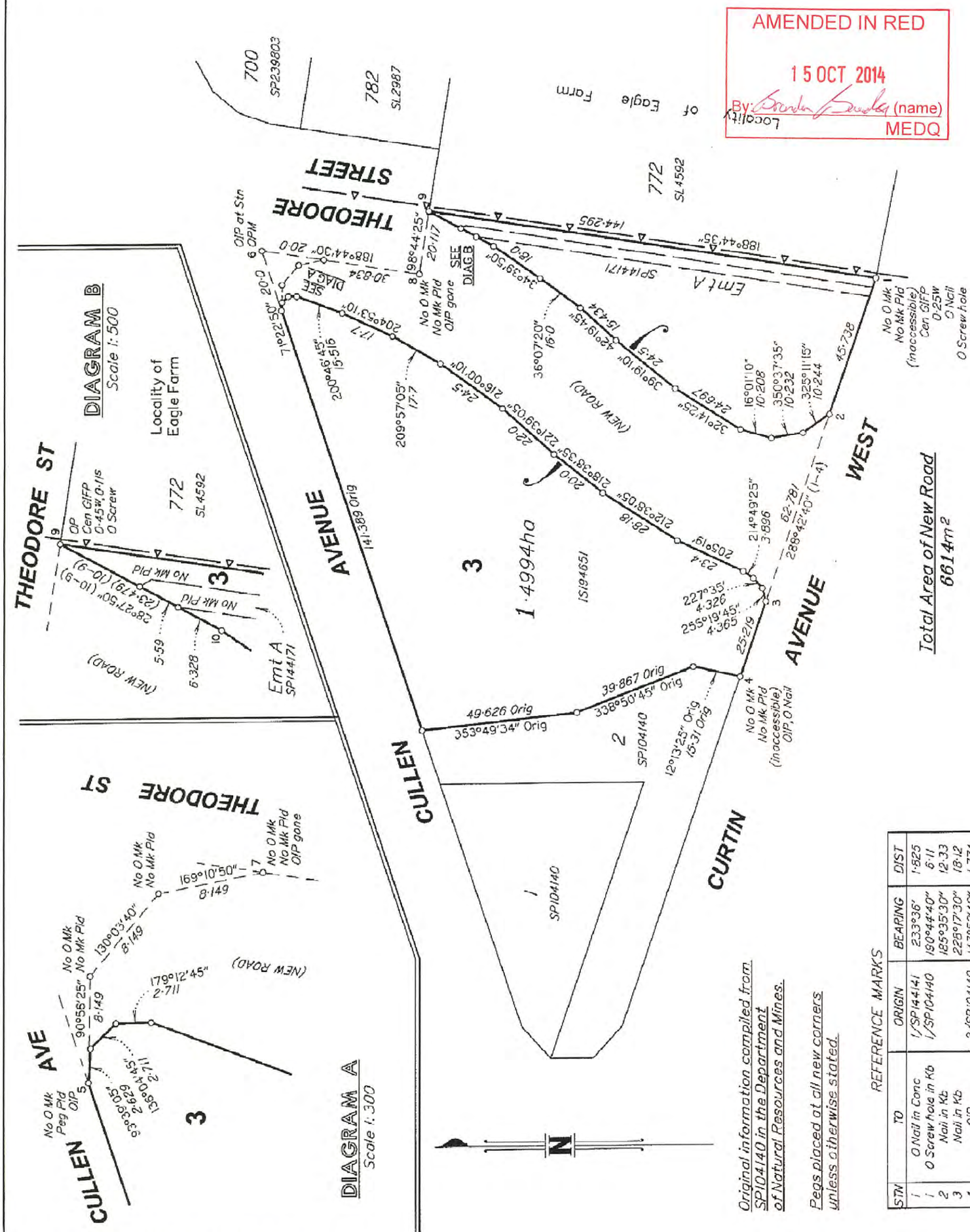
Land Title Act 1994 ; Land Act 1994
Form 21 Version 3

DRAFT SURVEY PLAN

Sheet 1 of 1

AMENDED IN RED
15 OCT 2014
By: (name)
MEDQ



Original information compiled from SP104140 in the Department of Natural Resources and Mines.

Pegs placed at all new corners unless otherwise stated.

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO	TYPE
6–OPM 9–PM	SL 7313	72°13'35" 9°48'40"	52·995 18·55	7622 198348	Mini Mk

REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	O Nail in Conc	1/SP144141	233°36'	1·825
1	O Screw hole in Kb	1/SP104140	190°44'40"	6·11
2	Nail in Kb		185°35'30"	12·33
3	Nail in Kb		229°17'30"	18·12
4	O/P	2/SP104140	147°52'40"	1·774
4	O Nail in Kb	2/SP104140	194°26'10"	16·404
5	O/P	12/SP104140	7°22'50"	0·9
6	O/P	15a/SP104140	at	Stn
7	O/P gone	75/IS194651	29°28'	1·125
8	O/P gone	76/IS194651	7°59'	1·367
9	O Screw in Kb	17/SP104140	21°06'40"	5·117

LandPartners Limited (ACN 118 146 008) hereby certify that the land comprised in this plan was surveyed by the corporation, by Peter Anthony EPSTEIN surveyor, for whose work the corporation accepts responsibility, under the supervision of Graham James LINDSAY, cadastral surveyor and that the plan is accurate, that the said survey was performed in accordance with the *Survey and Mapping Infrastructure Act 2003* and *Surveyors Act 2003* and associated Regulations and Standards and that the said survey was completed on 12/05/2014.

LANDPARTNERS LIMITED ACN 118 146 008 The Common Seal of

Director

Director

27.5.2014
Date

0m 62.5m 125m 187.5m
0 50mm 100mm 150mm

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Plan of Lot 3

Cancelling Lot 3 on SP104140

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

LOCAL GOVERNMENT: BRISBANE C.C.

LOCALITY: HAMILTON

Meridian: IS194651

Survey Records: No

Scale: 1:1250

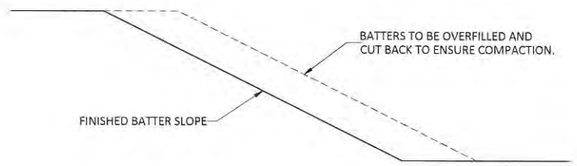
Format: STANDARD

SP270578

BRSS4250.000–056A ÷25000CH

EARTHWORKS NOTES

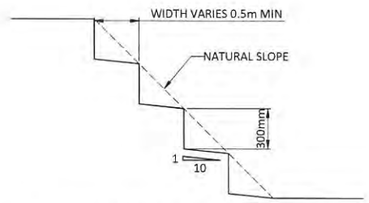
1. NOTWITHSTANDING THE LIMITS OF CUTTING & FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT AT THE PRE-START MEETING, ALTERATIONS TO THE EARTHWORKS MAY BE INSTRUCTED BY THE SUPERINTENDENT DURING CONSTRUCTION. FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY THE WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
2. REFER TO THE SPECIFICATION FOR COMPACTION DETAILS. ALL FILL MATERIALS WILL BE PLACED IN ACCORDANCE WITH THE APPROVED SPECIFICATION.
3. EARTHWORKS QUANTITIES ARE CALCULATED ON THE BASIS OF THE ASSUMED PAVEMENT THICKNESS SHOWN ON THE DRAWINGS (EXCLUDING LOWER SUB-BASE COURSE), AND ON THE FINAL ALLOTMENT LEVELS ADJUSTED FOR THE STRIPPING AND REPLACEMENT OF TOPSOIL. EARTHWORK QUANTITIES ARE NET SOLID VOLUMES.
4. EXCAVATED MATERIAL NOT REQUIRED FOR ROADWORKS OR NOMINATED SITE FILLING SHALL BE REMOVED FROM SITE AS DIRECTED BY THE SUPERINTENDENT.
5. ALL SITE PREPARATION SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798-(LATEST VERSION), "GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS".
6. THE SITE SHALL BE STRIPPED OF ALL TOPSOIL FROM ALL THE CUT AND FILL AREAS AND ROAD RESERVES, INCLUDING ANY CARPARKING AREAS AND STOCKPILED FOR LATER USE. THE GEOTECHNICAL CONSULTANT IS TO CONFIRM THAT ALL ORGANIC SOIL HAS BEEN REMOVED PRIOR TO THE COMMENCEMENT OF FURTHER EARTHWORKS.
7. WHERE UNSUITABLE MATERIAL IN AREAS TO BE FILLED IS ENCOUNTERED, THIS WILL BE TREATED AS SET OUT IN THE SPECIFICATION.
8. LEVEL 1 INSPECTION & TESTING IS TO BE IMPLEMENTED ON THE SITE IN ACCORDANCE WITH AS 3798-(LATEST VERSION), "GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS". THE INSPECTION & TESTING AUTHORITY IS TO PROVIDE A COMPLIANCE CERTIFICATE & REPORT SETTING OUT THE INSPECTIONS, SAMPLING & TESTING CARRIED OUT DURING THE BULK EARTHWORKS.
9. THE TOTAL COST OF THE GEOTECHNICAL INSPECTION & TESTING AUTHORITY (GITA) FOR THE LEVEL 1 INSPECTION & TESTING IS TO BE INCLUDED IN THE LUMP SUM OF THE TENDER. THE GITA IS TO MAINTAIN DAILY SITE RECORD SHEETS AS SET OUT IN AS 3798-2007.
10. UNLESS NOTED OTHERWISE THE FREQUENCY OF TESTING IS TO BE IN ACCORDANCE WITH TABLE 8.1 OF AS 3798-(LATEST VERSION).
11. AFTER THE COMPLETION OF EARTHWORKS ON ALLOTMENTS, THE GEOTECHNICAL ENGINEER IS TO CERTIFY THE WORK DONE ON EACH ALLOTMENT, MAKING ANY RECOMMENDATION WHERE APPROPRIATE FOR BUILDING FOUNDATION FOR EACH LOT.
12. THE CONTRACTOR IS TO COMPLY WITH ALL REGULATIONS CONCERNING WORK HOURS, WARNING SIGNS, FENCING OR SECURITY & EMISSIONS FROM THE SITE INCLUDING DUST, WATER, SILT, NOISE & SMOKE.
13. FILL BATTER SLOPES ARE TO BE OVERFILLED & TRIMMED BACK TO PROFILE.
14. ALL VEHICLES EXITING FROM THE SITE WILL DO SO VIA THE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP. VEHICLES WILL BE CLEANED & TREATED AS TO PREVENT MATERIAL BEING TRACKED OR DEPOSITED ON THE ADJOINING PUBLIC ROADS. REFER EROSION & SEDIMENT DRAWINGS FOR FURTHER DETAILS OF EROSION & SEDIMENT CONTROLS.



BATTER CUTBACK DETAIL
N.T.S.

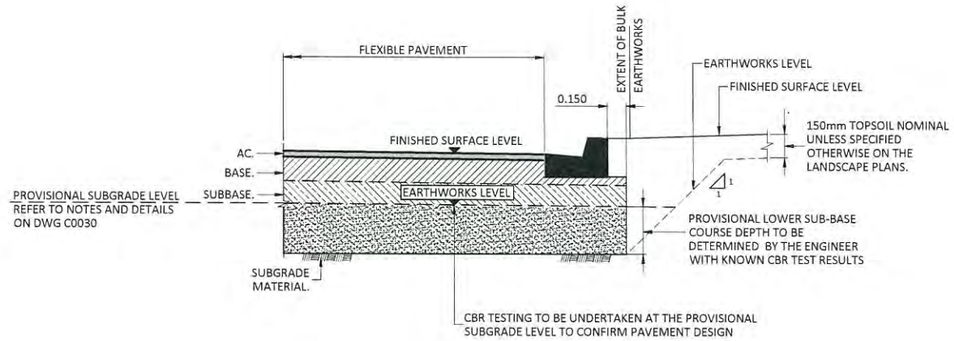
NOTE:

1. UNLESS SPECIFIED OTHERWISE ON THE DRAWING, EARTHWORKS LEVELS UNDER FLEXIBLE PAVEMENT ARE TO BE DETERMINED USING THE BELOW DETAILS
2. ADDITIONAL SUBGRADE REPLACEMENT MATERIAL (CBR15) MAY BE REQUIRED UNDER PAVEMENT WHERE A CBR VALUE LESS THAN THE DESIGN CBR IS OBTAINED OR WHERE SOFT SPOTS MAY OCCUR. REFER DWG C0030 FOR PAVEMENT DESIGNS.
3. THE ENGINEER IS REQUIRED TO INSPECT AND PASS THE SUBGRADE PRIOR TO THE CONSTRUCTION OF ANY PAVEMENT.



NOTE: COMPACTION ON SLOPES GREATER THAN 1 IN 10 TO BE KEYED AS SHOWN UNLESS DIRECTED OTHERWISE BY THE GEOTECHNICAL ENGINEER

COMPACTION ON SLOPES DETAIL
N.T.S.



EARTHWORKS LEVELS UNDER FLEXIBLE PAVEMENT DETAIL
N.T.S.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
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REV.	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
A	26.05.14	ISSUE FOR INFORMATION				

ASSOCIATED CONSULTANTS

APPROVED
RPEQ
DATE

CHECKED
DATE

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CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

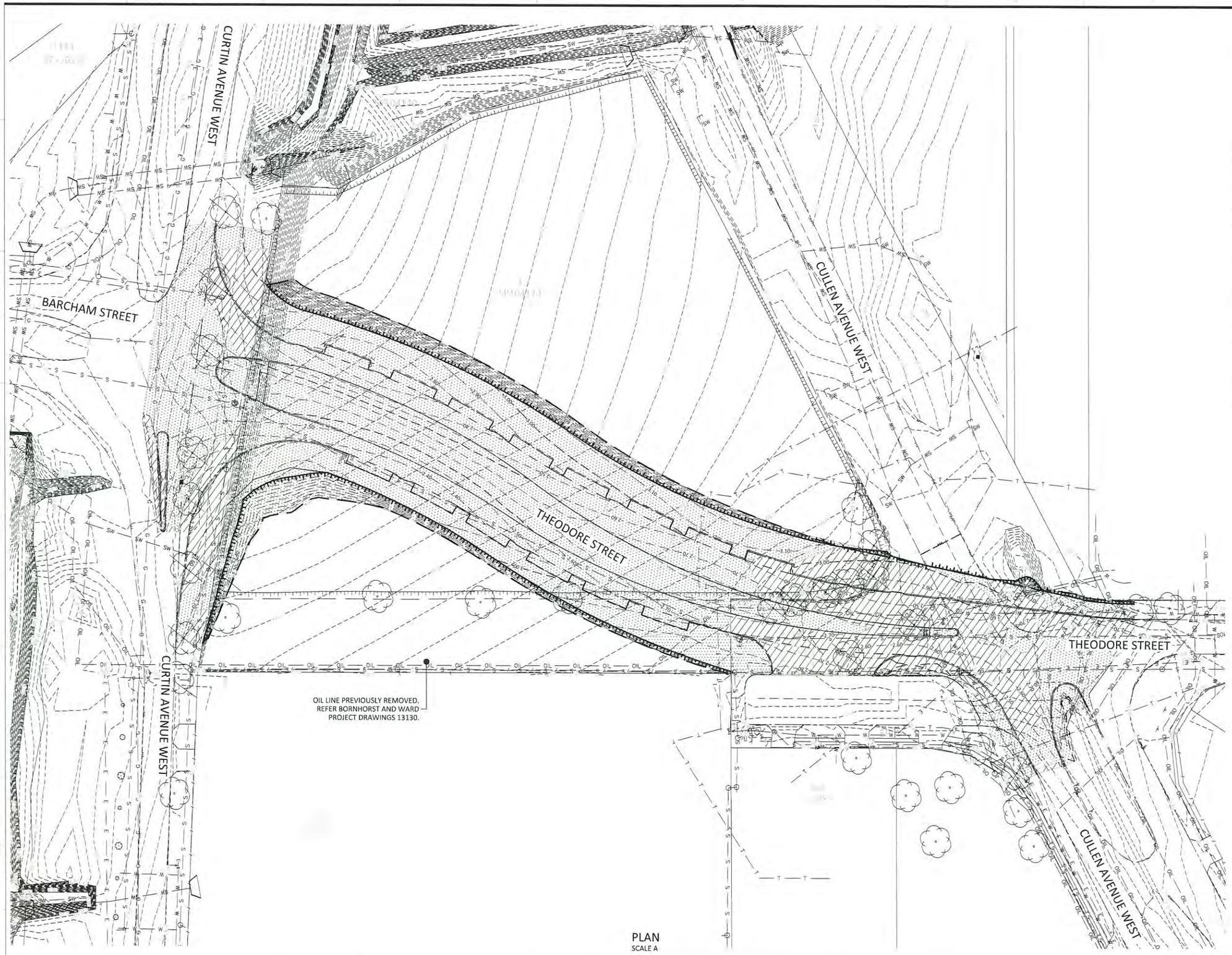
PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
EARTHWORKS NOTES AND DETAILS

PROJECT No.
13267

DRAWING No. C0010
REVISION A

A1



PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
SW		STORMWATER DRAINAGE
RW SW		ROOFWATER DRAINAGE
		OPEN CHANNEL
		SUB SOIL DRAINAGE & CLEANOUT
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52	52	CONTOURS
		FENCE
S S		SEWER
W W		WATER
G G		GAS
T T		TELECOMMUNICATIONS
E E		UNDER GROUND POWER
		FOOTPATH
OIL OIL		UNDER GROUND OIL LINE
		TREE
		TREE TO BE REMOVED
61.35 +		BULK EARTHWORKS LEVEL
		CUT
		FILL

NOTE:
EXISTING SURFACE CONTOURS BASED ON POST DECONTAMINATION FILL EXTENT. DRAWINGS TO READ IN CONJUNCTION WITH BORNHORST AND WARD PROJECT DRAWINGS 13130.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED
A — 0 5 10 15 20 25m — 1 : 500 / 1 : 1000

STATUS
PRELIMINARY

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CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
EARTHWORKS LAYOUT

PROJECT No. 13267

DRAWING No. C0011 — REVISION A

A1

STANDARD ROADWORKS NOTES

FLEXIBLE PAVEMENTS

1. PAVEMENT AND SURFACING

1.1 PAVEMENT THICKNESSES SHOWED ON DRAWINGS ARE PRELIMINARY. THE SUPERINTENDENT WILL NOMINATE FINAL PAVEMENT THICKNESSES FOLLOWING DETAILED SUBGRADE EVALUATION AS NOMINATED IN THE SPECIFICATIONS.

1.2 A PRIMER IS REQUIRED ON THE BASE COURSE SURFACE BEFORE ANY ASPHALTIC CONCRETE SURFACING, OR SEALING, IS CARRIED OUT. REFER SPECIFICATION FOR TYPICAL REQUIREMENTS. DETAILS TO BE CONFIRMED WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.

1.3 BITUMINOUS SURFACING SHALL NOT BE COMMENCED UNTIL THE PROFILE, SURFACE COMPACTION, QUALITY AND FINISH OF THE PAVEMENT HAVE BEEN APPROVED BY THE SUPERINTENDENT. SHOULD THE PAVEMENT, DUE TO ANY REASON OR CAUSE, LOSE THE REQUIRED QUALITY, STABILITY, DENSITY OR FINISH BEFORE THE SURFACING IS COMPLETE, IT SHALL BE RECTIFIED AT THE EXPENSE OF THE CONTRACTOR.

2. MATERIALS

2.1 WHERE PAVEMENT MATERIALS ARE SPECIFIED BY SOAKED CBR VALUES, THIS SHALL BE DEFINED AS THE FOUR DAY SOAKED CBR VALUE WHEN TESTING IN ACCORDANCE WITH AS 1289.6.1.1 - METHOD 6.1.1

2.2 ALL PAVEMENT MATERIAL INCORPORATED INTO THE FINISHED PAVEMENT SHALL BE FREE FROM STICKS, ORGANIC MATTER, CLAY LUMPS AND OTHER DELETERIOUS MATERIAL. VISUAL INSPECTION OF THE MATERIAL DURING AND AFTER PLACEMENT SHALL BE USED TO ENSURE COMPLIANCE WITH THIS CLAUSE.

MATERIAL COMPLIANCE TESTING

1. PRIOR TO DELIVERY OF ANY MATERIAL ON SITE SUBMIT MATERIAL COMPLIANCE TEST RESULTS TO THE SUPERINTENDENT
2. TESTING REQUIRED TO DEMONSTRATE COMPLIANCE OF MATERIALS SHALL BE UNDERTAKEN AT THE RATE OF ONE (1) TEST PER 500 CUBIC METRES SOLID MEASUREMENT OR PART THEREOF UNLESS OTHERWISE DETERMINED BY THE SUPERINTENDENT OR SPECIFIED UNDER THE JOB SPECIFICATION.

SUBGRADE INSPECTIONS AND TESTING

1. SUBGRADE INSPECTIONS

1.1 THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT TWENTY-FOUR (24) HOURS IN ADVANCE OF WHEN THE SUBGRADE WILL BE READY FOR THE SUPERINTENDENT'S INSPECTION. PAVING SHALL NOT COMMENCE UNTIL THE SUPERINTENDENT HAS INSPECTED AND APPROVED THE SUBGRADE PREPARATION.

2. SUBGRADE TESTING

2.1 THE MINIMUM STANDARDS OF COMPACTION SHALL BE:
SUBGRADE - 100% STANDARD COMPACTION
SUBGRADE REPLACEMENT MATERIAL - 95% MODIFIED COMPACTION
SUB-BASE - 95% MODIFIED COMPACTION
BASE - 98% MODIFIED COMPACTION

2.2 COMPACTION TESTS ARE REQUIRED ON SUBGRADE, SUBGRADE REPLACEMENT, SUB-BASE AND BASE LAYERS AT A FREQUENCY OF ONE (1) TEST PER 100 METRES FOR ROADWAY OR ONE (1) TEST PER 500m2 FOR GENERAL PAVING

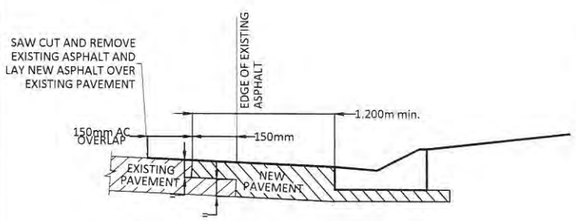
SIDE DRAINS & CONDUITS

1. SIDE DRAINS

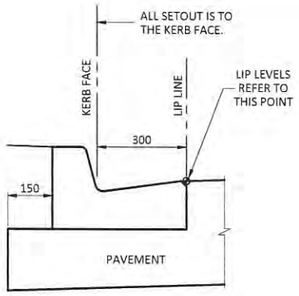
SUB-SURFACE PAVEMENT DRAINS ARE TO BE PROVIDED BENEATH ALL KERB AND KERB AND CHANNEL UNLESS NOTED OTHERWISE. SIDE DRAINS SHOULD BE FREE DRAINING AND CONNECTED TO THE NEAREST STORMWATER PIT OR OUTLET AT 1% GRADE. REFER SPECIFICATION AND STANDARD DRAWINGS.

2. SERVICE CONDUITS

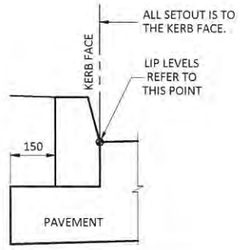
THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.



ROAD WIDENING CUTBACK DETAIL
N.T.S.



BCC STANDARD TYPE 'E'
REFER BCC STD DWG UMS 211 FOR DETAILS
N.T.S.



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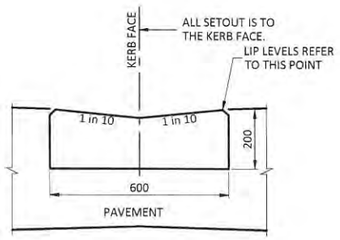
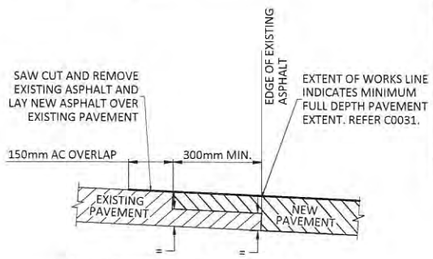


BCC INVERT
REFER BCC STD DWG UMS 211 FOR DETAILS
N.T.S.



PAVEMENT CUTBACK DETAIL
N.T.S.

STANDARD STORMWATER DRAINAGE NOTES

1. MATERIALS

1.1.2 PIPES

PIPES WORK SHALL COMPLY WITH THE FOLLOWING UNLESS NOTED OTHERWISE:

SIZE	CLASS	TYPE	JOINTING
≤ 300 DIA	REFER PROJECT DRAWINGS	RCP, FRC OR uPVC	RRJ
300 TO 600 DIA	REFER PROJECT DRAWINGS	RCP/FRC	SPIGOT AND SOCKET RRJ
> 675 DIA	REFER PROJECT DRAWINGS	RCP	INTERNAL FLUSH JOINT WITH EXTERNAL RUBBER BANDS

1.2 BEDDING, BACKFILL AND OVERLAY

BEDDING, HAUNCH / SIDE ZONE AND OVERLAY MATERIAL

THIS MATERIAL SHALL CONFORM TO THE FOLLOWING GRADING:

	% PASSING BY MASS	
AS SIEVE SIZE	BED AND HAUNCH ZONES	SIDE ZONES
9.5	100	50-100
2.36	50 - 100	30-100
0.60	20 - 90	15-50
0.30	10 - 60	-
0.15	0 - 25	-
0.075	0 -10	0-25

1.2.1 BACKFILL

THE BACKFILL SHALL CONFORM TO THE FOLLOWING:

LOCATION	TRENCH	EMBANKMENT
EXISTING ROAD TO REMAIN IN USE	CEMENT STABILIZED FILL	N/A
NEW ROAD	GRAVEL (CBR>15% SOAKED)	*ORDINARY FILL
OTHER LOCATIONS	*ORDINARY FILL	*ORDINARY FILL

* ORDINARY FILL SHALL CONFORM TO THE REQUIREMENT DETAILED IN CLAUSE 8.1 OF THE BCC REFERENCE SPECIFICATION S140 EARTHWORKS, AND EARTHWORKS PERFORMANCE NOTES DRG C010. NOTE: MAXIMUM STONE SIZE OF 75mm.

2. CONSTRUCTION

2.1 UNLESS NOTED OTHERWISE BEDDING, HAUNCH OVERLAY AND BACKFILLING TO BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AS3725 FOR CONCRETE PIPES AND AS2032, PARTS 5 AND 7 FOR uPVC PIPE UNDERGROUND INSTALLATION

NOMINAL DIAMETER OF PIPE (mm)	MINIMUM WIDTH OF TRENCH (mm)	MAXIMUM ALLOWABLE WIDTH OF TRENCH INSTALLATION (mm)
< 300	150	-
300	900	1100
375	975	1200
450	1050	1300
525	1125	1500
600	1200	1600
750	1350	1800
900	1500	1900

2.2 FOR DIAMETER < 600 ADOPT HS3 BEDDING AND H2 FOR LARGER PIPES. FOR ALL PLASTIC PIPES THE SIDE AND HAUNCH ZONE MATERIAL IS TO EXTEND 75mm ABOVE THE CROWN OF THE PIPE

2.3 DRAINAGE TRENCH COMPACTION:

MINIMUM DRY DENSITY COMPACTION RATIOS TO AS 1289.5.4.1 (STANDARD COMPACTION)

ZONE	LOCATION	MATERIAL	MIN. DRY DENSITY (%)	
			COHESIVE	NON COHESIVE
BEDDING	ALL	REFER NOTE 1.2	98	70
BACKFILL	UNDER ROAD	GRANULAR (TOP 300mm)	98	N/A
BACKFILL	UNDER ROAD	CBR 15	98	N/A
BACKFILL	FOOTPATH	*ORDINARY FILL	95	N/A
BACKFILL	OTHER	*ORDINARY FILL	95	N/A

* REFER NOTE 1.2.1

TESTING FREQUENCY: 1 TEST PER 30 LINEAL METERS OF TRENCH PER LAYER OR A MINIMUM OF 2 TESTS PER LAYER FOR TRENCHES < 50m IN LENGTH

2.4 A 2.0m LENGTH OF 80 DIA. SUBSOIL DRAIN, SLEEVED IN A GEOTEXTILE SOCK, IS TO BE PLACED IN THE BEDDING UPSTREAM OF ALL DRAINAGE STRUCTURES OUTFALLING INTO THE DRAINAGE STRUCTURE.

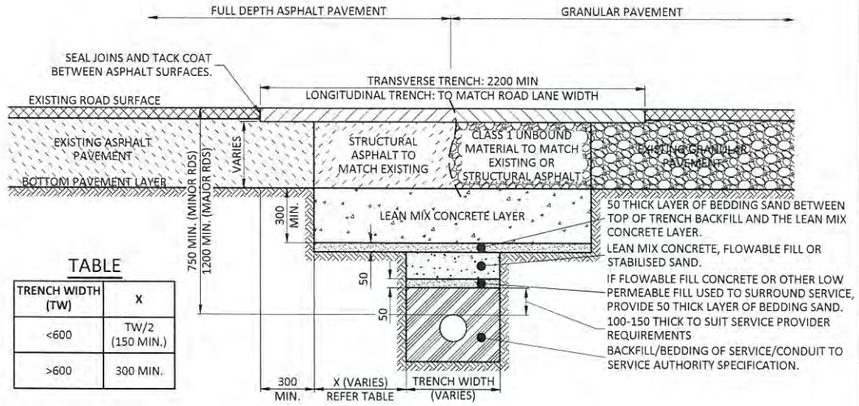
2.5 WORKS UNDER EXISTING PAVEMENT (WHICH IS TO REMAIN IN USE)

2.5.1 STATE CONTROLLED ROADS UNLESS APPROVED OTHERWISE BY THE MANAGING CONTRACTOR ARE TO BE PLACED BY TUNNEL BORING.

2.5.2 OTHER PAVEMENTS ADOPT PIPE DETAIL - TRENCH THROUGH EXISTING ROAD

2.6 MAXIMUM CONSTRUCTION LOADS FOR CLASS 3 RCP STORMWATER LINES ARE NOT TO EXCEED A 10tonne VIBRATOR SMOOTH ROLLER AT 450mm COVER AND A 25 tonne EXCAVATOR AT 600mm COVER.

NOTE:
PLEASE NOTE THAT THE STORMWATER QUALITY MANAGEMENT PLAN NOMINATED IS A COMPLETE SYSTEM. SHOULD THE CONTRACTOR PROPOSE AN ALTERNATIVE THEN SUPPORTING DESIGN FOR THE ENTIRE SYSTEM WILL NEED TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

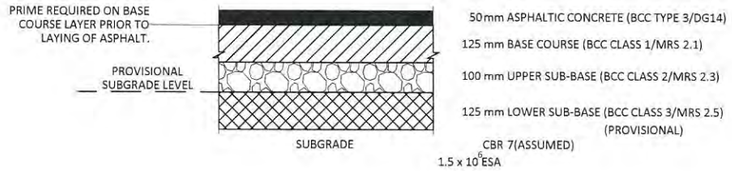


TABLE

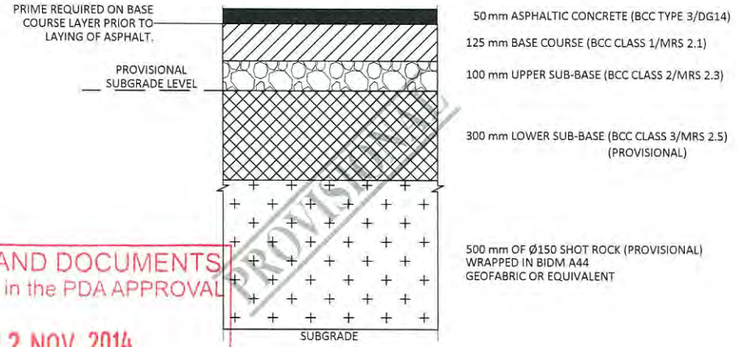
TRENCH WIDTH (TW)	X
<600	TW/2 (150 MIN.)
>600	300 MIN.

TRENCH THROUGH EXISTING ROAD

PAVEMENT TYPE 1: BCC TYPE E - INDUSTRIAL ACCESS



PAVEMENT TYPE 1: ALTERNATIVE



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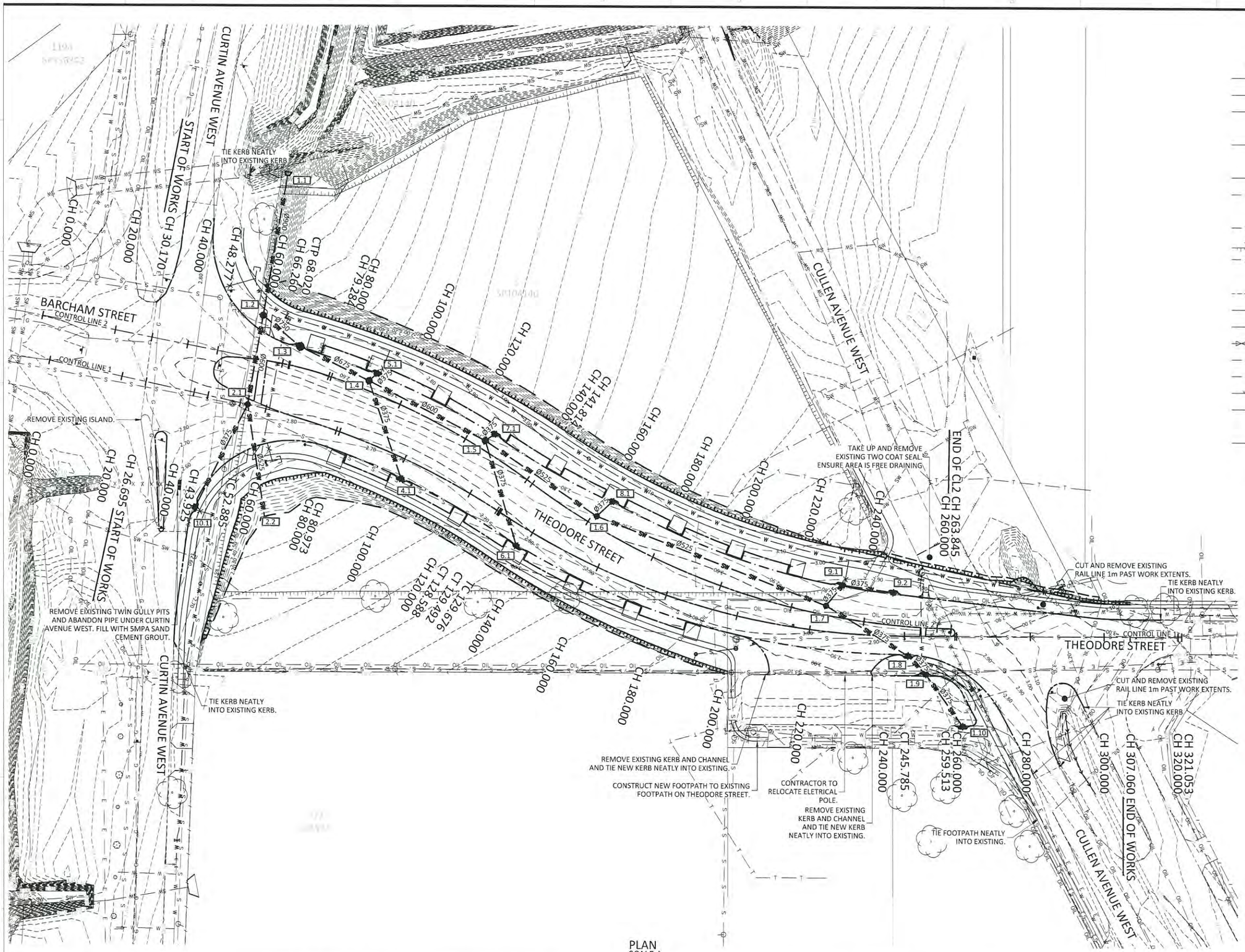
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
ROADWORKS AND DRAINAGE NOTES AND DETAILS

PROJECT No. 13267
DRAWING No. C0030
REVISION A

A1



PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		EDGE OF BITUMEN
		CONTROL LINE
		PROPERTY BOUNDARY
		EASEMENT
		EXTENT OF WORKS
SW	SW	STORMWATER DRAINAGE
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
		SWALE DRAIN
	52	CONTOURS
		FENCE
S	S	SEWER
W	W	WATER
G		GAS
E		UNDER GROUND POWER
		OVERHEAD ELECTRICAL
T		TELECOMMUNICATIONS
X X X X X X X		ABANDONED SERVICES
		FOOTPATH
		LOG RAIL BARRIER
		PRAM RAMP
		STREET NAME SIGN
		TRAFFIC SIGN
	1.1.1	STORMWATER STRUCTURE NUMBER

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 5 10 15 20 25m 1 : 500 / 1 : 1000

STATUS
PRELIMINARY

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REV	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
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ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

CHECKED — DATE

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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

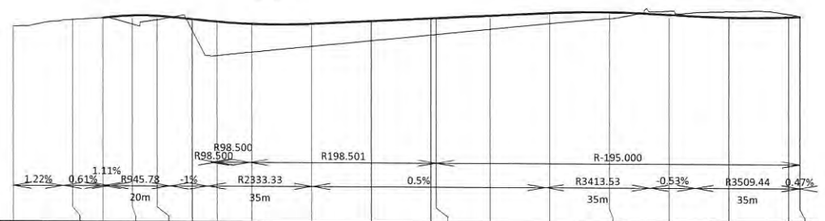
PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: ROADWORKS AND DRAINAGE LAYOUT

PROJECT No. 13267

DRAWING No. C0031 — REVISION A

A1



EXISTING SURFACE LEVEL	2.541	2.767	2.828	2.617	2.767	2.420	1.576	1.698	1.898	2.095	2.297	2.315	2.501	2.702	2.874	3.131	3.120	3.034	2.975
CUT / FILL DEPTH TO EXISTING SURFACE	-0.000	-0.000	-0.001	-0.292	-0.133	-0.373	-1.136	-0.942	-0.755	-0.658	-0.556	-0.547	-0.451	-0.351	-0.212	0.124	0.199	0.097	0.022
CONTROL LINE FINISHED LEVEL	2.541	2.767	2.829	2.909	2.900	2.793	2.712	2.640	2.653	2.753	2.853	2.862	2.953	3.052	3.086	3.008	2.921	2.937	2.953
CONTROL LINE CHAINAGES	0.000	20.000	30.170	40.000	48.277	60.000	68.291	80.000	100.000	120.000	140.000	145.706	160.000	180.000	200.000	220.000	240.000	260.000	263.845

CONTROL LINE 2 LONGITUDINAL SECTION

SCALE A (HOR)
B (VERT)

EXISTING SURFACE LEVEL	2.656	2.765	2.801	2.622	2.672	2.825	1.668	1.867	1.876	2.054	2.250	2.343	2.450	2.644	2.826	3.133	3.098	3.153	3.165	2.966	2.958	3.032	3.065	3.008	2.835	2.822
CUT / FILL DEPTH TO EXISTING SURFACE	-0.000	0.000	-0.006	-0.310	-0.270	-0.089	-1.210	-0.911	-0.897	-0.657	-0.505	-0.459	-0.405	-0.311	-0.229	0.039	0.074	0.213	0.231	0.010	0.000	-0.067	0.019	0.000	-0.001	-0.000
CONTROL LINE FINISHED LEVEL	2.656	2.765	2.808	2.933	2.942	2.914	2.878	2.778	2.773	2.711	2.755	2.802	2.855	2.955	3.055	3.095	3.024	2.940	2.934	2.956	2.958	3.099	3.047	3.008	2.836	2.822
CONTROL LINE CHAINAGES	0.000	20.000	26.695	40.000	43.925	52.885	60.000	80.000	80.973	100.000	120.000	129.322	140.000	160.000	180.000	200.000	220.000	240.000	245.786	259.513	260.000	280.000	300.000	307.060	320.000	321.053

CONTROL LINE 1 LONGITUDINAL SECTION

SCALE A (HOR)
B (VERT)

PLANS AND DOCUMENTS
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SCALES — UNREDUCED / REDUCED
A: 0 1.0 2.0 3.0 4.0 5.0m — 1 : 100 / 1 : 200
B: 0 10 20 30 40 50m — 1 : 1000 / 1 : 2000

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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

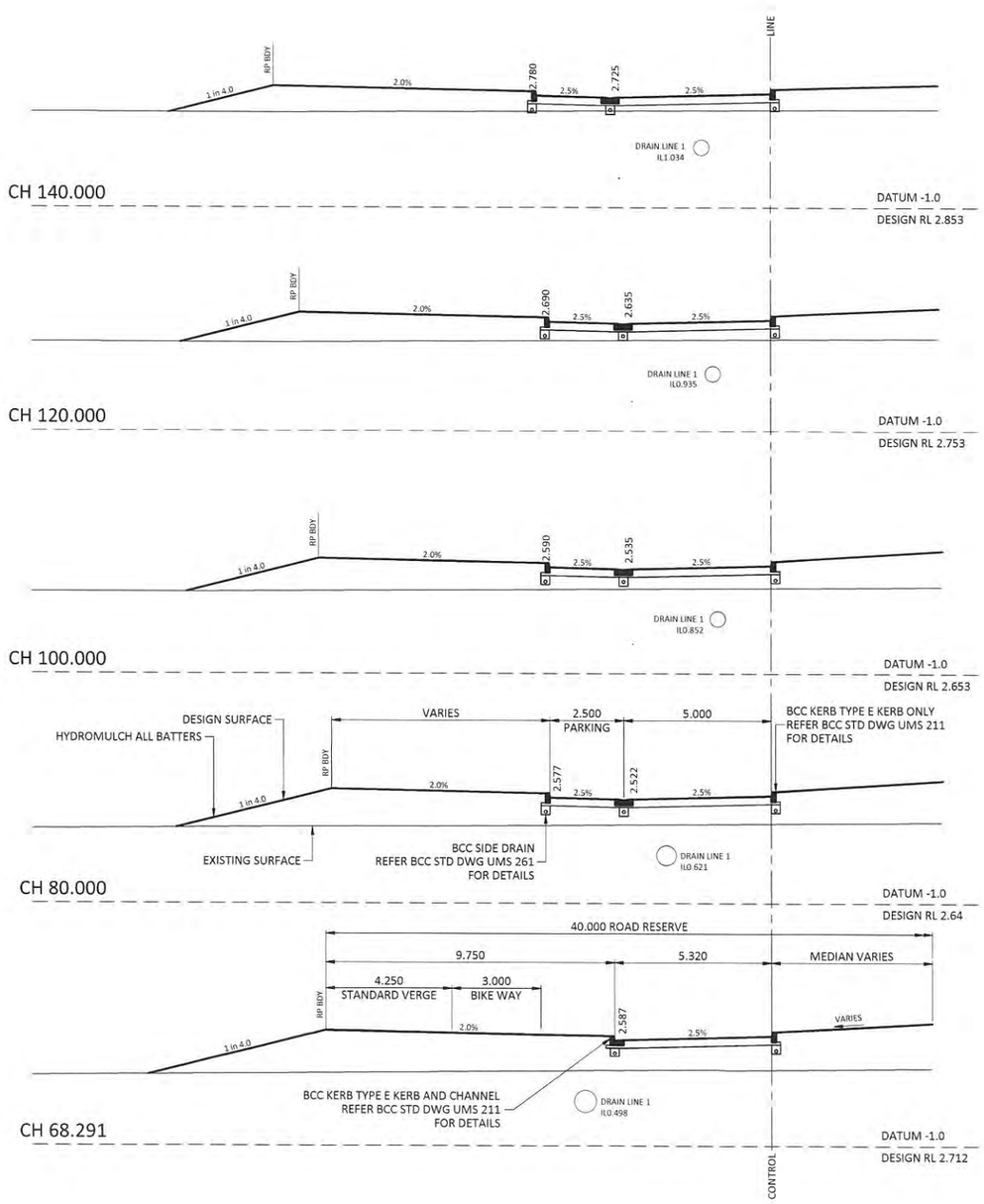
PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: ROADWORKS SECTIONS SHEET 1

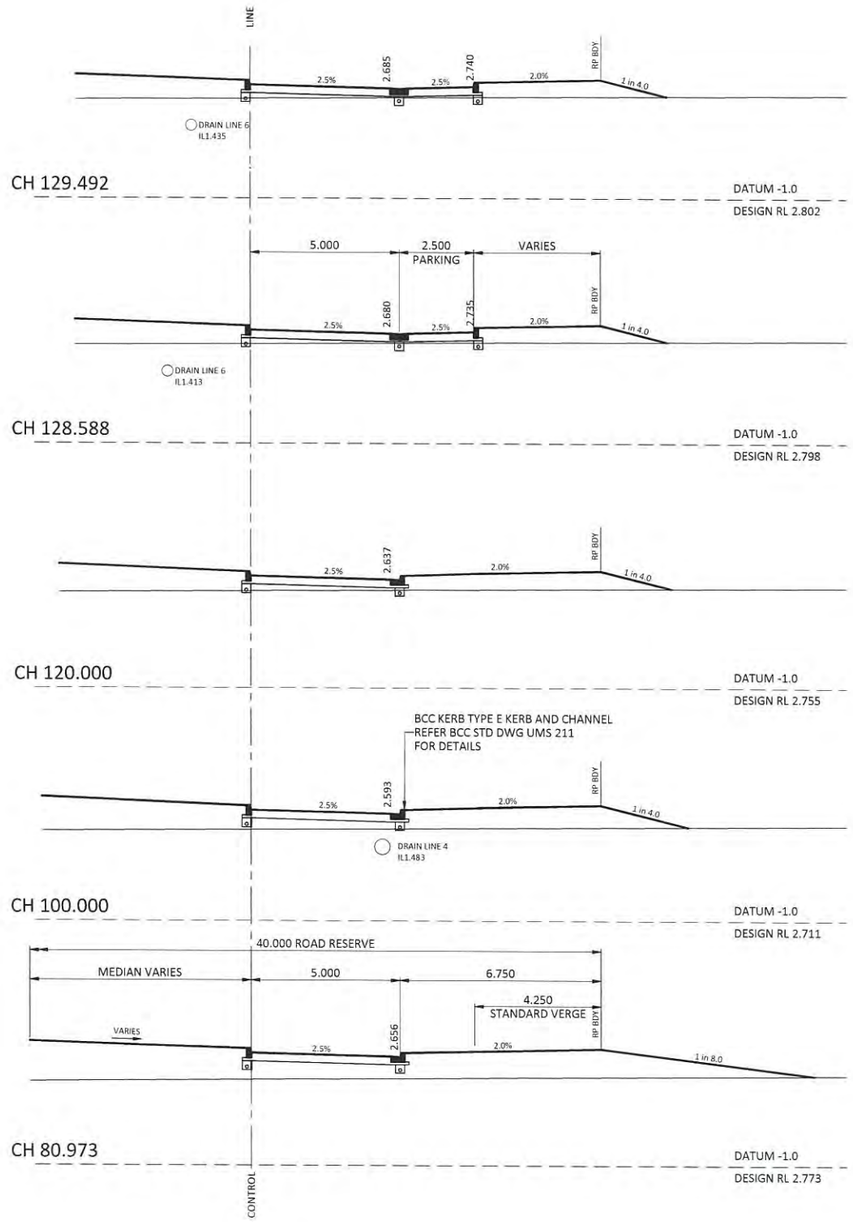
PROJECT No. 13267

DRAWING No. C0040 — REVISION A

A1



CONTROL LINE 2 CROSS SECTIONS
SCALE A



CONTROL LINE 1 CROSS SECTIONS
SCALE A

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CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

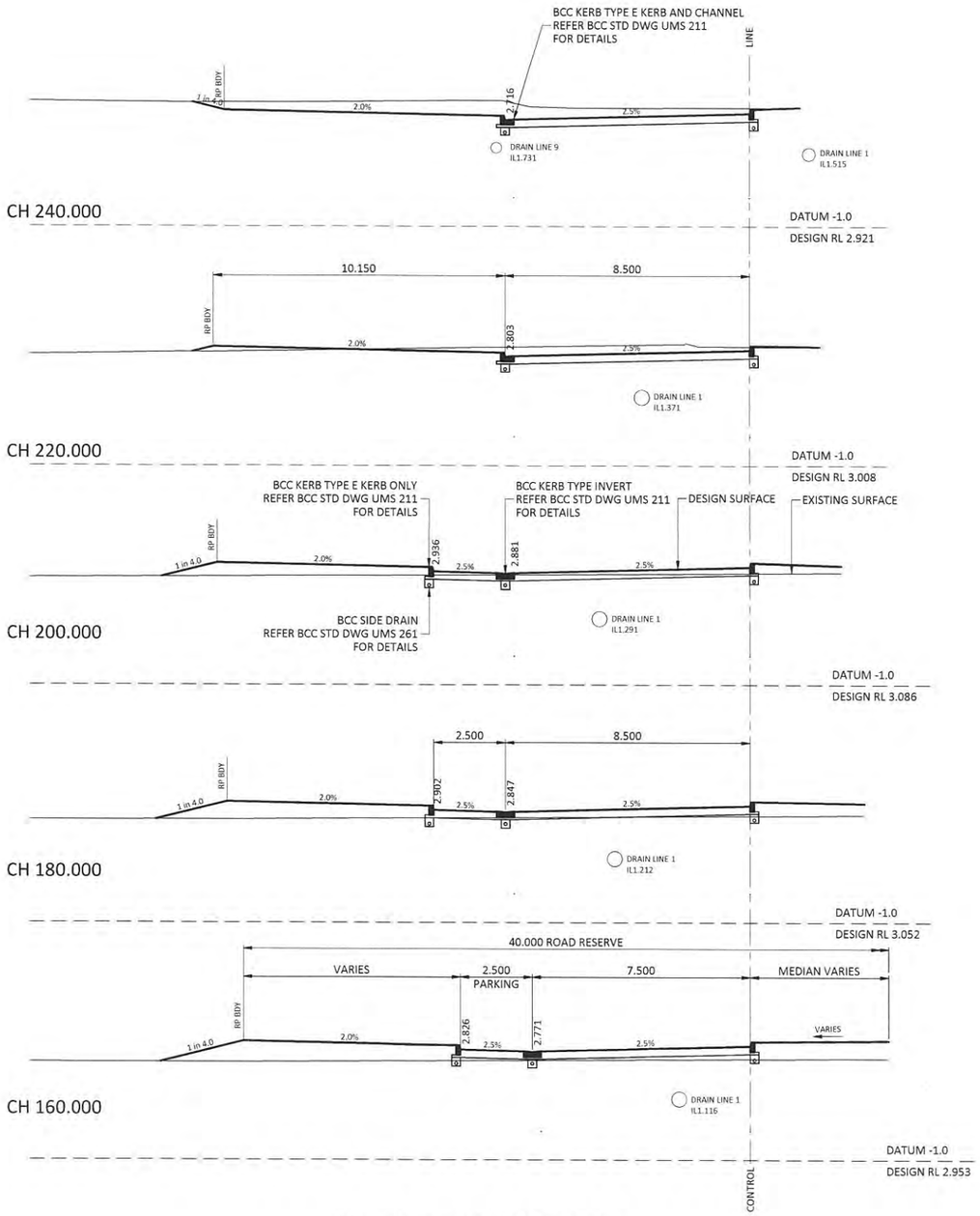
PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
ROADWORKS SECTIONS SHEET 2

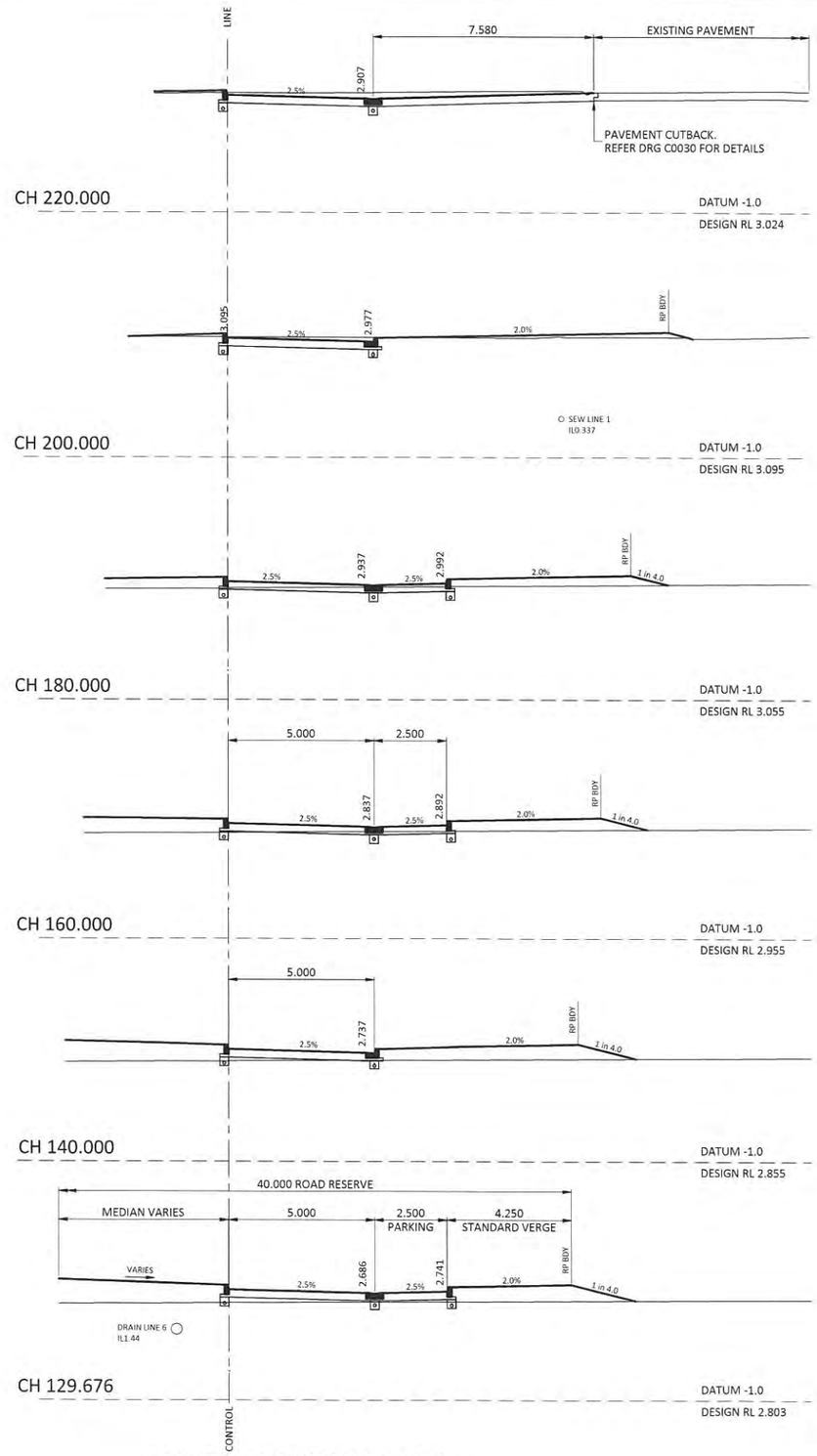
PROJECT No. 13267

DRAWING No. C0041 — REVISION A

A1



CONTROL LINE 2 CROSS SECTIONS
SCALE A



CONTROL LINE 1 CROSS SECTIONS
SCALE A

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CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

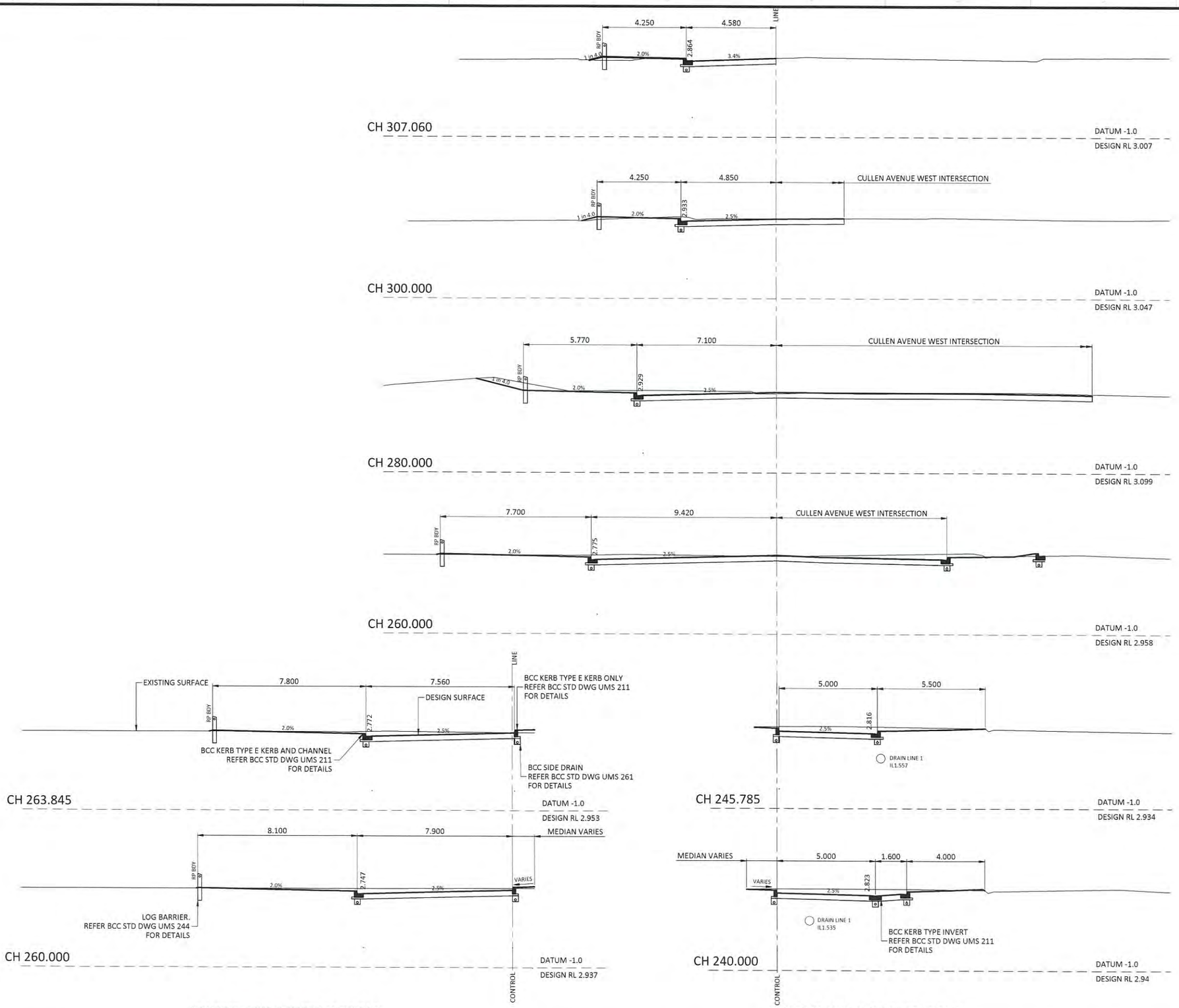
PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: ROADWORKS SECTIONS SHEET 3

PROJECT No. 13267

DRAWING No. C0042 — REVISION A

A1



CONTROL LINE 2 CROSS SECTIONS
SCALE A

CONTROL LINE 1 CROSS SECTIONS
SCALE A

PLANS AND DOCUMENTS
referred to in the PDA APPROVAL

12 NOV 2014

MEDQ

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A1 UNREDUCED
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PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: ROADWORKS SECTIONS SHEET 4

PROJECT No. 13267

DRAWING No. C0043 — REVISION A

A1

THEODORE STREET, HAMILTON

WATER RETICULATION

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

WATER RETICULATION DRAWING INDEX

DRAWING No.	QUU DWG No.	DESCRIPTION
C070	-	WATER RETICULATION NOTES & DETAILS SHEET 1
C071	-	WATER RETICULATION NOTES & DETAILS SHEET 2
C072	-	WATER RETICULATION LAYOUT
C075	-	QUU WATER LIVE CONNECTIONS DETAILS

WATER

WATER SUPPLY

SEQ-WAT-1102-1	TYPICAL RETICULATION MAIN ARRANGEMENTS
SEQ-WAT-1105-1	TYPICAL PE WATER MAIN DETAILS
SEQ-WAT-1105-2	TYPICAL CONNECTION TO EXISTING MAINS
SEQ-WAT-1200-1	TYPICAL SOIL CLASSIFICATION GUIDELINES AND ALLOWABLE BEARING PRESSURES FOR ANCHORS & THRUST BLOCKS
SEQ-WAT-1200-2	EMBEDMENT & TRENCHFILL TYPICAL ARRANGEMENT
SEQ-WAT-1201-1	STANDARD EMBEDMENT TYPICAL FLEXIBLE & RIGID PIPES
SEQ-WAT-1204-1	TYPICAL TRENCH AND BEDDING DETAILS WITHIN EXISTING ROADS TYPE K TO N
SEQ-WAT-1205-1	TYPICAL THRUST BLOCK DETAILS MASS CONCRETE
SEQ-WAT-1206-1	TYPICAL THRUST AND ANCHOR BLOCKS FOR VALVES
SEQ-WAT-1300-1	TYPICAL VALVE AND HYDRANT IDENTIFICATION MARKERS
SEQ-WAT-1301-1	TYPICAL VALVE AND HYDRANT INSTALLATION VALVE ARRANGEMENT
SEQ-WAT-1302-1	TYPICAL HYDRANT INSTALLATION
SEQ-WAT-1305-1	TYPICAL SURFACE FITTING INSTALLATION VALVE AND HYDRANT SURFACE BOXES TRAFFICABLE AND NON-TRAFFICABLE
SEQ-WAT-1306-1	TYPICAL SURFACE FITTING INSTALLATION VALVE AND HYDRANT SURFACE BOXES SUPPORT AND SURROUND DETAILS
SEQ-WAT-1307-2	PE WATER MAINS TYPICAL DETAILS SCOURS
SEQ-WAT-1313-1	FLANGED JOINTS TYPICAL BOLTING DETAILS
SEQ-WAT-1400-1	TYPICAL STEEL PIPE JOINTING BUTT WELDING OF JOINTS
SEQ-WAT-1402-1	TYPICAL STEEL PIPE JOINTING WELDED PIPE COLLARS
SEQ-WAT-1403-1	TYPICAL STEEL PIPE JOINTING BENDS
SEQ-WAT-1409-1	HYDRANT INSTALLATION FITTINGS TYPICAL PE ASSEMBLIES NOMENCLATURE
SEQ-WAT-1410-1	TYPICAL CHLORINATION TEST POINT DETAILS

SURVEY CONTROL:

PSM: 77618
(LOCATED: MACARTHUR AVENUE)
RL: 4.114 AHD

NOTES:

GENERAL

G1 WORKS MUST BE EXECUTED IN ACCORDANCE WITH SEQ WATER SUPPLY CODE INCORPORATING WATER SUPPLY CODE OF AUSTRALIA WSA 03 - 2011 V 3.1 AND UMD REFERENCE SPECIFICATION S140 EARTHWORKS.
G2 ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION. PHONE: 1300 369 915.
G3 CONNECTION OF THE WORKS TO THE LIVE SYSTEM SHALL BE CARRIED OUT BY QUU. FOR A QUOTE AND TO ARRANGE A CONNECTION PHONE 13 26 57.
G4 CONTRACTOR TO TAKE APPROPRIATE ACTION TO PROTECT AND MAINTAIN QUU'S AND OTHER AUTHORITIES' EXISTING SERVICES.
G5 IN THE EVENT OF A BREAKAGE OR ANY OTHER EMERGENCY RELATING TO A QUU ASSET PHONE 13 23 64 IMMEDIATELY
G6 AUDIT AND FINAL INSPECTIONS OF WORK CONSTRUCTED BY CONTRACTORS MUST BE ARRANGED TWO WEEKS BEFOREHAND WITH THE QUU AUDIT AND COMPLIANCE OFFICER (CONTACT DETAILS BELOW).
G7 ONLY QUU PERSONNEL MUST OPERATE THE EXISTING WATER NETWORK
G8 SERVICES WHERE SHOWN ARE APPROXIMATE ONLY. EXACT LOCATION AND DEPTH TO SERVICES ARE TO BE CONFIRMED WITH RELEVANT AUTHORITIES AND ON SITE BY THE CONTRACTOR PRIOR TO COMMENCING WORKS.
G9 RESTORE ALL SURFACES TO MATCH PRE-EXISTING SURFACES UNLESS NOTED OTHERWISE.
G10 REMOVE AND REINSTATE OBJECTS ALONG LINE OF CONSTRUCTION SUCH AS SIGNS, FENCES, ETC.
G11 ALL NEW RETICULATION WORKS REQUIRE BACTERIAL AND PRESSURE TESTING PRIOR TO ACCEPTANCE.
G12 HANDLING OF ASBESTOS CEMENT PIPES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE QUU ASBESTOS PROCEDURE - WH&S 703 AND QUU SWMS 10.
G13 OTHER AUTHORITIES' UNDERGROUND SERVICES ARE SHOWN APPROXIMATELY AS TAKEN OFF DIAL BEFORE YOU DIG INFORMATION. EXTREME CAUTION MUST BE EXERCISED WHEN WORKING IN THE VICINITY OF AND AROUND THESE SERVICES. DUE TO THE TIME FRAME BETWEEN DESIGN AND CONSTRUCTION IT IS NECESSARY THAT THE CONTRACTOR CONFIRM THE LOCATION OF OTHER AUTHORITIES' UNDERGROUND SERVICES
G14 IF ANY ADDITIONAL INFORMATION IS REQUIRED PLEASE CONTACT THE QUEENSLAND URBAN UTILITIES AUDIT AND COMPLIANCE OFFICER

ENVIRONMENTAL MANAGEMENT

E1 CONTACT LOCAL ASSET SERVICES PH. 3403 9169 ONE WEEK PRIOR TO CONSTRUCTION FOR REMOVAL OR REPLACEMENT OF EXISTING TREES.
E2 ALL TREES AND SHRUBS THAT ARE TO BE RETAINED MUST BE PROTECTED FROM DAMAGE AS DETERMINED BY BRISBANE CITY COUNCIL.
E3 PIPELINES ADJACENT TO SIGNIFICANT TREES MUST BE INSTALLED BY BORING OR DIRECTIONAL DRILLING UNLESS OTHERWISE AGREED BY THE CONTRACT MANAGER.
E4 FOR TRENCH INSTALLATIONS TREE ROOTS MUST BE EXPOSED BY HAND EXCAVATION. TREE ROOTS MUST BE CUT CLEANLY AND A BITUMINOUS FUNGICIDAL SEALANT APPLIED TO THE CUT SURFACE.
E5 BACKFILL AROUND TREE ROOTS USING A MIXTURE OF THREE PARTS TOPSOIL TO ONE PART COMPOST, LIGHTLY COMPACTED.
E6 EXCAVATION UNDER TREE CANOPIES TO BE BACKFILLED AS SOON AS POSSIBLE.
E7 TOPSOIL AND SUBSOIL MUST BE STOCKPILED SEPARATELY.
E8 PLACE APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
E9 NO SOIL MUST BE STOCKPILED WITHIN 5m OF ANY CREEK OR WATER COURSE.
E10 IF YOU SUSPECT FIRE ANTS ON SITE CALL D.P.I. ON 13 25 23.
E11 NO TREE SHALL BE LOPPED OR MOVED WITHOUT WRITTEN PERMISSION OF BRISBANE CITY COUNCIL.

POLYETHYLENE PIPES (PE)

PE1 PE IS THE PREFERRED MATERIAL OF CHOICE OF QUU AND SHOULD BE USED USED UNLESS OTHERWISE STATED. ALL PE PIPES AND FITTINGS SHALL BE MATERIAL GRADE PE100
PE2 PRESSURISED MAINS TO BE A MINIMUM CLASS PN16. WHERE PIPE CLASSIFICATION IS NOT SPECIFIED CONSULT WITH DESIGN CONSULTANT AND QUU.
PE3 PE PIPE COLOUR SHALL BE:
DRINKING WATER: EXTERNAL: BLUE - (SOLID OR STRIPED IS ACCEPTABLE)
PE4 ALL PE PIPES TO BE BUTT WELDED/ELECTRO FUSION FUSED UNLESS NOTED OTHERWISE.
PE5 PRECHLORINATED PIPES AND FITTINGS MUST BE USED WHERE INDICATED.
PE6 BACTERIAL TESTING TO BE CARRIED OUT AS PER WSA/QUU STANDARDS.
PE7 PE PIPES WITH CRACKS, SCORES OR SCRATCHES DEEPER THAN 10% OF THE WALL THICKNESS SHALL BE REJECTED.
PE8 ALL DESIGN AND CONSTRUCTION WORK SHALL CONFORM WITH SEQ CODE.
PE9 PRESSURE TESTING FOR PE PIPELINES SHALL COMPLY WITH REQUIREMENTS OF WSA 01-2004.
TEST PRESSURE 1200 KPA.
PE10 THE ENDS OF PE MAINS SHALL BE RESTRAINED WITH CONCRETE THRUST RESTRAINTS TO PROTECT AGAINST POISSON EFFECT FORCES, AS PER SEQ CODE REQUIREMENTS.

PIPELINES

P1 THE MINIMUM CLEARANCE TO EXISTING SERVICES TO BE AS PER WSA/QUU STANDARDS UNLESS OTHERWISE SHOWN.
P2 CONTRACTOR TO OBTAIN PRIOR APPROVAL OF THE SUPERINTENDENT FOR ANY MINOR DEVIATIONS REQUIRED TO AVOID EXISTING SERVICES.
P3 PRESSURE& BACTERIAL TESTING TO BE CARRIED OUT AS PER WSA/QUU STANDARDS.
P4 NON METALLIC PIPES SHALL HAVE DETECTABLE MARKER TAPE INSTALLED. REFER TO QUU STANDARDS. THE COLOURS OF MARKER TAPE MUST BE: WATER - GREEN
P5 PIPELINES SHALL NOT BE CONSTRUCTED IN UNCONTROLLED FILL. CERTIFICATES SHALL BE LODGED WITH THE CONTRACT MANAGER CERTIFYING THE FILL IS CONTROLLED FILL COMPACTED TO 95% R.D. TO A.S.1289.5.2.1.
P6 ALL OPEN ENDS OF DISUSED WATER MAINS MUST BE EFFECTIVELY PLUGGED BY QUU. FOR A QUOTE AND TO ARRANGE WORK PHONE 13 26 57.
P7 DISUSED MAINS SHALL COMPLY WITH REQUIREMENTS SET OUT IN WSA/QUU STANDARDS.
P8 THE CONSTRUCTION OF THE MAIN WORK SHOWN ON THESE DRAWINGS SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WATER WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE QUU WATER SYSTEM.
P9 PRIME, CAULK AND WRAP ALL BURIED FLANGES AND BOLTS WITH DENSO PETROLATUM PRODUCTS OR EQUIVALENT AS PER THE MANUFACTURER'S RECOMMENDATIONS.
P10 TUNNEL BORE OR DIRECTIONAL DRILL UNDER EXISTING STAMPED OR REINFORCED CONCRETE DRIVEWAYS WHERE THE EXISTING SURFACE CANNOT BE MATCHED, AND UNDER SIGNIFICANT TREES AS ADVISED BY BCC VEGETATION AND PEST SERVICES SECTION PH 3403 3782.
P11 WATER SERVICES:
(A) MUST BE BYPASSED WHERE NECESSARY.
(B) MUST BE RECONNECTED TO NEW MAIN UPON CLEARANCE BY QUU.
(C) ALL DN15mm SERVICES MUST BE RE-LAID IN DN20mm COPPER.
(D) ALL GALVANISED IRON OR LEAD SERVICES MUST BE RE-LAID IN COPPER OF EQUIVALENT DIAMETER.
(E) MUST BE INDICATED ON 'AS CONSTRUCTED' DRAWINGS.
(F) ALL IRRIGATION SERVICES MUST BE CONSTRUCTED TO A.S.3500 PART 1 SECTION 4 AND NOTIFICATION OF SUCH SERVICE MUST BE MADE TO THE PRINCIPLE OFFICE PLUMBING SERVICES PH: 3403 0744.
P12 ALL VALVES, FIRE HYDRANTS AND SURFACE FITTINGS ON ABANDONED PIPELINE MUST BE REMOVED UNLESS NOTED OTHERWISE.
P13 ALL FLANGES MUST BE IN ACCORDANCE WITH A.S. 4087 UNLESS NOTED OTHERWISE.
P14 WHERE A METALLIC WATER MAIN IS TO BE REPLACED WITH A PLASTIC MAIN, A LICENSED ELECTRICIAN SHALL MAKE AN ASSESSMENT OF POTENTIALLY AFFECTED PROPERTY EARTHING SYSTEMS. WORK SHALL NOT COMMENCE UNTIL THE ELECTRICIAN DECLARES IN WRITING THAT IT IS SAFE TO PROCEED.
P15 PIPE EMBEDMENT MATERIAL SHALL BE:
- 5 TO 7mm SINGLE SIZED MATERIAL TO WSA PS-351 OR
- 13.2mm SINGLE SIZED RECYCLED AGGREGATE MATERIAL TO WSA PS-366.
P16 COVER ON MAINS FROM PERMANENT LEVEL TO BE AS FOLLOWS:
63, 100 & 150 DIAMETER PIPE - 600mm VERGE, 1000mm BENEATH ROADS
200, 250 & 300 DIAMETER PIPE - 1000mm
P17 HYDRANTS TO BE DN100 ON PE MAINS, HYDRANT RISERS TO BE 125 OD.

DUCTILE IRON CEMENT LINED PIPES (DICL)

D1 ALL DICL PIPES AND FITTINGS TO BE COVERED WITH POLYETHYLENE SLEEVING AS PER THE MANUFACTURER'S RECOMMENDATIONS.
D2 DICL PIPES AND NON-FLANGED FITTINGS SHALL BE CLASS PN35 AND COMPLY WITH A.S. 2280
D3 FLANGE FITTINGS SHALL BE PN16 AND COMPLY WITH AS2280

THRUST BLOCKS

T1 PROVIDE ANCHOR/THRUST BLOCKS FOR 1200kPa COMPLYING WITH STANDARD DRAWINGS SEQ-WAT-1205 AND SEQ-WAT-1207 AND TO PRESSURE 1200kPa.
T2 THE BEARING FACE OF THE THRUST RESTRAINT MUST BE CAST AGAINST UNDISTURBED GROUND
T3 CONCRETE MUST NOT SPILL OVER SOCKET JOINTS
T4 VERTICAL THRUST BLOCKS MUST BE EMBEDDED AT A MINIMUM OF 250mm INTO UNDISTURBED GROUND
T5 CONCRETE MUST BE CURED 48 HOURS (MIN) PRIOR TO CHARGING MAIN
T6 UNREINFORCED CONCRETE SHALL BE A MINIMUM OF N20. REINFORCED CONCRETE SHALL BE A MINIMUM OF N25.
T7 THRUST BLOCK TABLE TO BE PROVIDED FOR MAINS EQUAL TO & GREATER THAN 200MM DIAMETER. CHAINAGE, HORIZONTAL & VERTICAL SIZES & FORCES TO BE PROVIDED AS PER GEOTECHNICAL INFORMATION.
T8 THE CONTRACTOR SHALL CONFIRM BEARING CAPACITY PRIOR TO CONSTRUCTION OF THRUST BLOCK. SHOULD DIFFERENT GROUND CONDITIONS BE ENCOUNTERED TO THOSE SHOWN IN THE TABLE ON DRAWING C071, RE-DESIGN OF THRUST BLOCKS MAY BE REQUIRED.

SITE SPECIFIC NOTES:

S1. HANDLING OF ASBESTOS CEMENT PIPES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE BCC ASBESTOS PROCEDURE - WH&S 703. AND QUU SWMS 10.
S2. WHERE A METALLIC WATER MAIN IS TO BE REPLACED WITH A PLASTIC MAIN, A LICENSED ELECTRICIAN SHALL MAKE AN ASSESSMENT OF POTENTIALLY AFFECTED PROPERTY EARTHING SYSTEMS. WORK SHALL NOT COMMENCE UNTIL THE ELECTRICIAN DECLARES IN WRITING THAT IT IS SAFE TO PROCEED.
S3. OTHER AUTHORITIES' UNDERGROUND SERVICES ARE SHOWN APPROXIMATELY AS TAKEN OFF DIAL BEFORE YOU DIG INFORMATION. EXTREME CAUTION MUST BE EXERCISED WHEN WORKING IN THE VICINITY OF AND AROUND THESE SERVICES. DUE TO THE TIME FRAME BETWEEN DESIGN AND CONSTRUCTION IT IS NECESSARY THAT THE CONTRACTOR CONFIRM THE LOCATION OF OTHER AUTHORITIES' UNDERGROUND SERVICES BY CONTACTING DIAL BEFORE YOU DIG (PH. 1100) AND WHERE NECESSARY BY CONTACTING THE RELEVANT AUTHORITY DIRECTLY FOR A MORE ACCURATE LOCATION.
S4. HIGH PRESSURE GAS MAINS EXIST IN THIS AREA. PLEASE CONTACT ORIGIN ENERGY ASSET MANAGEMENT ON PH. 3323 7619 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION.
S5. OPTIC FIBRE CABLE NETWORK EXISTS IN THIS AREA. PLEASE CALL 1800 114 918 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION.
S6. ELECTRICITY CABLES (LOW AND/OR HIGH VOLTAGE) EXIST IN THIS AREA. PLEASE CALL ENERGEX NETWORK INFORMATION SECTION AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION.

QLD URBAN UTILITIES

Q1. QLD URBAN UTILITIES CONTROL ROOM MUST BE NOTIFIED AFTER CLEARANCE OF NEW MAIN (PH. 3856 7179) WHEN WORKS AFFECT THE EXTENT OF WATER SUPPLY ZONES.
Q2. A "PERMIT TO WORK" MUST BE OBTAINED FROM THE RELEVANT QUU CONTROL ROOM PRIOR TO COMMENCEMENT OF WORK ON SITE. A MINIMUM PERIOD OF TEN WORKING DAYS IS REQUIRED FOR THE ISSUING OF A PERMIT.
CONTROL ROOM EAST (BRISBANE LG AREA)
EMAIL: PTW@URBANUTILITIES.COM.AU
Q3. A PERMIT OF WORK IS REQUIRED FOR CONNECTIONS TO LIVE QUU MAINS. AT LEAST 10 WORKING DAYS PRIOR TO SUBMISSION OF PTW APPLICATION CONTRACTOR SHALL APPLY TO QUU FOR PREPARATION OF A VALVE SHUT PLAN. THE APPROVED VALVE SHUT PLAN SHALL BE ATTACHED TO THE PTW APPLICATION. REFER TO QUU PERMIT TO WORK FACT SHEET FOR DETAILS.
CONTACT THE RELEVANT QUU ACCESS TO ASSETS TEAM. A MINIMUM OF TEN WORKING DAYS IS REQUIRED TO IMPLEMENT A VALVE SHUT PLAN REQUEST.
USE FORM FOR291
PH: 3856 7027
EMAIL: QUU-NetworkOpReq@urbanutilities.com.au

ABBREVIATIONS

AC - ASBESTOS CEMENT
CICL - CAST IRON CEMENT LINED
CISL - CAST IRON SPUN LINED
CR - CONCRETE REINFORCED
CTS - CUT TO SUIT
CUR - CONCRETE UN-REINFORCED
DF - DOUBLE FLANGE
DI - DUCTILE IRON
DICL - DUCTILE IRON CEMENT LINED
DS - DOUBLE SOCKET
SGW - SALT GLAZED WARE
EW - EARTHENWARE
FH - FIRE HYDRANT
F&S - FLANGE & SOCKET
F&SP - FLANGE & SPIGOT
mPVC - MODIFIED POLYVINYL CHLORIDE
MSBW - MILD STEEL BUTT WELD
MSCL - MILD STEEL CEMENT LINED
NDW - NON DRINKING WATER
PE - POLYETHYLENE
P&F - PLAIN & FLANGED
RTS - ROTATE TO SUIT
SC - STOP COCK/WATER METER
S&P - SOCKET & PLAIN
S&SP - SOCKET & SPIGOT
uPVC - UNPLASTICISED POLYVINYL CHLORIDE

DATE:
QUEENSLAND URBAN UTILITIES DELEGATE
(VALID FOR 12 MONTHS FROM DATE SHOWN)

CLIENT -
CONTACT: BORNHORST & WARD
QUU AUDITOR: AUDIT & COMPLIANCE OFFICER
CONTACT: -

AS CONSTRUCTED DETAILS FOR AMEND.

I CERTIFY THAT THE "AS CONSTRUCTED" DETAILS SHOWN ON THIS PLAN ARE TRUE AND ACCURATE RECORD OF THE WORKS
SIGNED DATE:
NAME of SIGNATORY
RPEQ No. or LICENCE
COMPANY NAME
START DATE FINISH DATE

SHEET No. 1 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No.	AMEND.
-	-

QUEENSLAND UrbanUtilities

STATUS
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REV.	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
A	26.05.14	ISSUE FOR INFORMATION				

ASSOCIATED CONSULTANTS

APPROVED
RPEQ
DATE

CHECKED
DATE

BORNHORST + WARD
CONSULTING ENGINEERS
CIVIL AND STRUCTURAL
Level 4, 67 Astor Terrace, Spring Hill, QLD 4000
Bornhorst & Ward Pty Ltd
Brisbane Australia
Phone (07) 3013 4699
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www.bornhorstward.com.au
A.C.N. 010 151 354 A.B.N. 78 010 151 354
CONSULT AUSTRALIA Member Firm

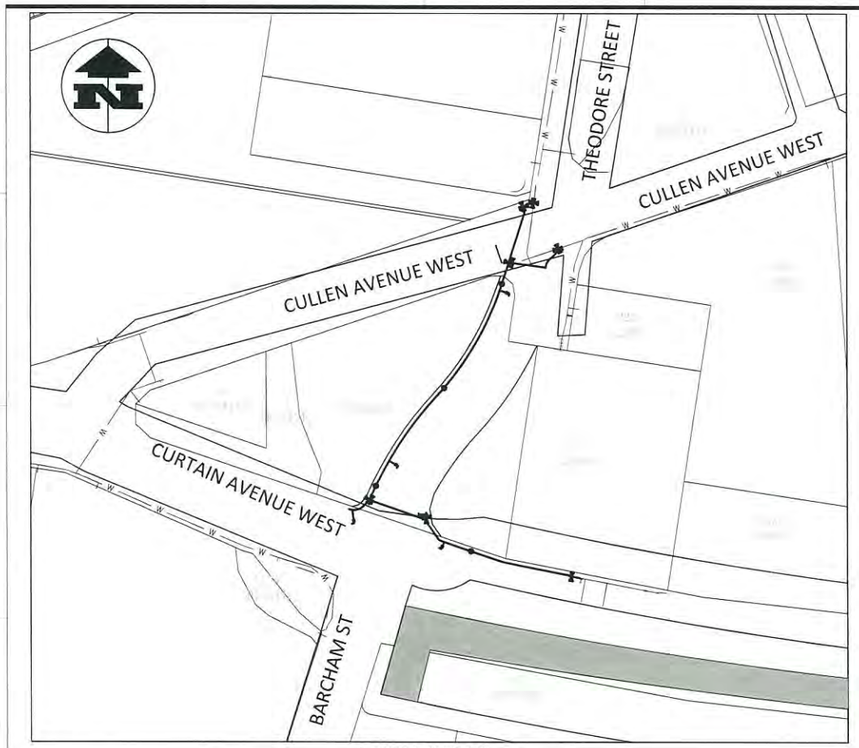
CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
WATER RETICULATION NOTES AND DETAILS SHEET 1

PROJECT No. 13267
DRAWING No. C0070
REVISION A

A1



LOCALITY PLAN

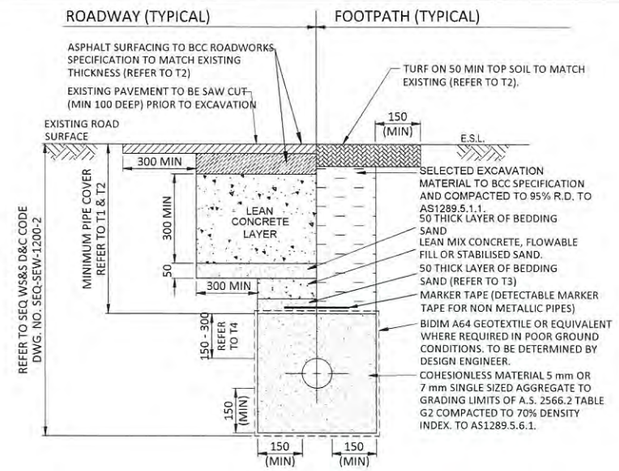
UBD MAP REF: PG141, GRID C16
SITE ADDRESS: THEODORE STREET, HAMILTON
N.T.S.

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
W	W	WATER
SW	SW	STORMWATER DRAINAGE
S	S	SEWER
G		GAS
E E		ELECTRICITY U/G
x x x x x x x x		ABANDONED SERVICE

FITTINGS

EXISTING	PROPOSED	
	FH	FIRE HYDRANT
W	W	VALVE
W	W	SCOUR VALVE
W	W	END CAP
WMT	WMT	WATER METER
150 W 100	150 W 100	REDUCER
PVC W DICL	PVC W DICL	PIPE MATERIAL CHANGE
	W	THRUST / ANCHOR BLOCK



TYPICAL TRENCH DETAIL

TRENCH NOTES:

T1. MINIMUM COVER ON MAINS FROM PERMANENT LEVEL SHALL BE THE GREATER OF SEQ WS&S D&C CODE DWG. NO. SEQ-WAT-1200-2 OR BRISBANE CITY COUNCIL STANDARD DRAWINGS UMS 281 & UMS 282.
T2. ROAD CROSSING, VERGES AND PATHS TRENCH RESTORATION SHALL BE IN ACCORDANCE WITH BCC STANDARD DRAWINGS UMS 281 & UMS 282.
T3. PROVIDE 50 THICK LAYER OF BEDDING SAND IF FLOWABLE FILL CONCRETE OR OTHER LOW PERMEABLE FILL IS USED AS EMBEDMENT.
T4. 150 MINIMUM OVERLAY FOR NON TRAFFICABLE AND 300 MINIMUM FOR TRAFFICABLE.

FITTING SCHEDULE

ITEM No.	DESCRIPTION
1	Ø250 PE END CAP E-F
2	Ø250 VALVE WITH PE TAILS
3	Ø250 x Ø250 PE E-F TEE WITH FULL FACE FLANGE AND S/S BACKING RING
4	Ø250 PE E-F COUPLER
5	Ø250 DICL CLASS 16 FL/FL PIPE 1000 LONG WITH DN250 PUDDLE FLANGE INSTALLED MID WAY AND CONCRETE THRUST BLOCK. REFER SEQ STD DWG SEQ-WAT-1206-1 FOR THRUST BLOCK DETAILS
6	DN 250/125 HYDRANT TEE WITH FLANGED DN125 RISER, S&S BACKING RING & E-F COUPLING, Ø100 HYDRANT ASSEMBLY
7	Ø250 x Ø180 PE REDUCER E-F
8	Ø250 x Ø90 E-F SCOUR TEE WITH 90 PE SCOUR ASSEMBLY TO KERB. REFER SEQ-WAT-1307-2
9	Ø225 FL/FL VALVE
10	Ø225 DICL 22.5° BEND
11	Ø225 DICL 45° BEND
12	Ø225 DICL GIBAULT JOINT
13	Ø180 VALVE WITH PE TAILS
14	Ø180 PE E-F COUPLER
15	Ø150 DICL 90° BEND
16	Ø180 x Ø90 E-F SCOUR TEE WITH 90 PE SCOUR ASSEMBLY TO GULLY TRAP. REFER SEQ-WAT-1307-2
17	Ø180 PE END CAP E-F
18	Ø180 x Ø180 PE E-F TEE
19	DN 180/125 HYDRANT TEE WITH FLANGED DN125 RISER, S&S BACKING RING & E-F COUPLING, Ø100 HYDRANT ASSEMBLY
20	Ø150 DICL FL/FL VALVE
21	Ø150 DICL GIBAULT JOINT
22	Ø250 x Ø90 E-F SCOUR TEE WITH 90 PE SCOUR ASSEMBLY TO GULLY TRAP. REFER SEQ-WAT-1307-2
23	Ø150 DICL 45° BEND
24	Ø180 x Ø90 E-F SCOUR TEE WITH 90 PE SCOUR ASSEMBLY TO KERB. REFER SEQ-WAT-1307-2
25	Ø225 DICL 90° BEND
26	Ø150 DICL FL PLAIN 500 LONG PIPE
27	Ø150 DICL 22.5° BEND
28	Ø180 PE 90° BEND
29	Ø225 DICL FL PLAIN 500 LONG PIPE

NOTE:
ALL HYDRANTS AND VALVES TO INCLUDE FITTINGS AND BOX TO SURFACE AND MARKERS IN ACCORDANCE WITH SEQ STD DRGS.

PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR TO PREPARE FOR A TRAFFIC PLAN AND SEEK APPROVAL FROM PLANNING AND TRAFFIC BRANCH. TELEPHONE 3403 4150 FOR DETAILS. TO OBTAIN TRAFFIC PERMITS, IT MAY BE NECESSARY TO COMPLETE CONSTRUCTION WORK DURING WEEKENDS AND/OR LATE AT NIGHT ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE RELEVANT TRAFFIC PERMITS PRIOR TO THE COMMENCEMENT OF WORKS.

xxCAUTIONxx

APPROX. LOCATION OF PUBLIC UTILITIES ONLY. EXACT LOCATION AND DEPTH TO BE DETERMINED ON SITE BY RELEVANT AUTHORITY PERSONNEL PRIOR TO COMMENCING WORK.

TELSTRA:- PH: 1800 114 918
ENERGEX:- PH: 07 3407 6381
BCC:- PH: 3403 8888
GAS INSPECTOR:- PH: 07 3467 9514

HIGH RISK ACTIVITY

ASBESTOS CEMENT PRODUCTS

THIS PROJECT MAY REQUIRE THE HANDLING, REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PRODUCTS. ANY ACTIVITY ASSOCIATED WITH ASBESTOS CEMENT PRODUCTS SHALL BE IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDELINES AND SAFETY REQUIREMENTS.

SURVEYOR

LAND PARTNERS LIMITED
BRISBANE
13 RAILWAY TERRACE
MILTON, 4064
PH (07) 3842 1000
FAX 3842 1001

LEVEL DATUM

PSM: 77618
(LOCATED: MACARTHUR AVENUE)
RL: 4.114 AHD

CONSULTANT : BORNHORST + WARD PTY LTD
CONTACT : KRIS RENSCH
TELEPHONE : (07) 3013 4699

ALL WATER AND SEWER WORK UNDERTAKEN BY THE CONTRACTOR IS TO COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 1995. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION. PHONE 1300 369915

CONSTRUCTION INSPECTIONS:
NOTIFICATION OF INSPECTIONS MUST BE RECEIVED BY QUU AT LEAST TWO (2) WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

AS BUILT RECEIVED

BY	-
OFFICER	-
DATE	-

ON MAINTENANCE DETAILS

START - FINISH -

UTILITY DELEGATE COMMENTS

FUNDING

PRIVATE BOOSTER REQUIRED? YES/NO
FUNDED BY BCC ( ) DEVELOPER ( )
FED GOV'T ( ) STATE ( ) OTHER ( )

DRS OFFICER	-
DATE RELEASED	-

PLAN CUSTODIAN

OFFICER/REC'D	-
DATE RELEASED	-

LIVE CONNECTION(S)/PASSED(W)

REFERENCE	-
DATE	-

GIS CAPTURE

JOB NUMBER	-
OFFICER CODE	-
DATE	-

GIS COMMENTS

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

ASSET REGISTER - WATER RETICULATION

ESTATE/STAGE	THEODORE STREET
SITE ADDRESS	THEODORE STREET, HAMILTON
COUNCIL FILE	-
BCC DELEGATES APP. DATE.	-
CLIENT	-
JOB REF. No.	-

MAINS	DIAMETER	MATERIAL DESIGN	MATERIAL CONST	LENGTH DESIGN	LENGTH CONST
	250	PE		254.865	
	180	PE		207.775	

SERVICES	DIAMETER	MATERIAL DESIGN	MATERIAL CONST	LENGTH DESIGN	LENGTH CONST
	225	DICL		7.383	
	150	DICL		0.700	
	-	-		-	

METERS	DIAMETER	NUMBER
	-	-

SERVICE DETAILS

NO.	SIZE	LOT NUMBERS
-	-	-
-	-	-
-	-	-
-	-	-

DATE:
QUEENSLAND URBAN UTILITIES DELEGATE
(VALID FOR 12 MONTHS FROM DATE SHOWN)

CLIENT -
CONTACT: BORNHORST & WARD
QUU AUDITOR: AUDIT & COMPLIANCE OFFICER
CONTACT: -

AS CONSTRUCTED DETAILS FOR AMEND.

I CERTIFY THAT THE "AS CONSTRUCTED" DETAILS SHOWN ON THIS PLAN ARE TRUE AND ACCURATE RECORD OF THE WORKS

SIGNED DATE:
NAME of SIGNATORY
RPEQ No. or LICENCE
COMPANY NAME
START DATE FINISH DATE

SHEET No. 2 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No.	AMEND.
-	-

QUEENSLAND UrbanUtilities

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ASSOCIATED CONSULTANTS

APPROVED
RPEQ
DATE

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DATE

BORNHORST + WARD
CONSULTING ENGINEERS
CIVIL AND STRUCTURAL
Level 4, 67 Astor Terrace, Spring Hill, QLD 4000

Bornhorst & Ward Pty Ltd
Brisbane Australia
Phone (07) 3013 4699
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mail@bornhorstward.com.au
www.bornhorstward.com.au
A.C.N. 010 151 354 A.B.N. 78 010 151 354
CONSULT AUSTRALIA Member Firm

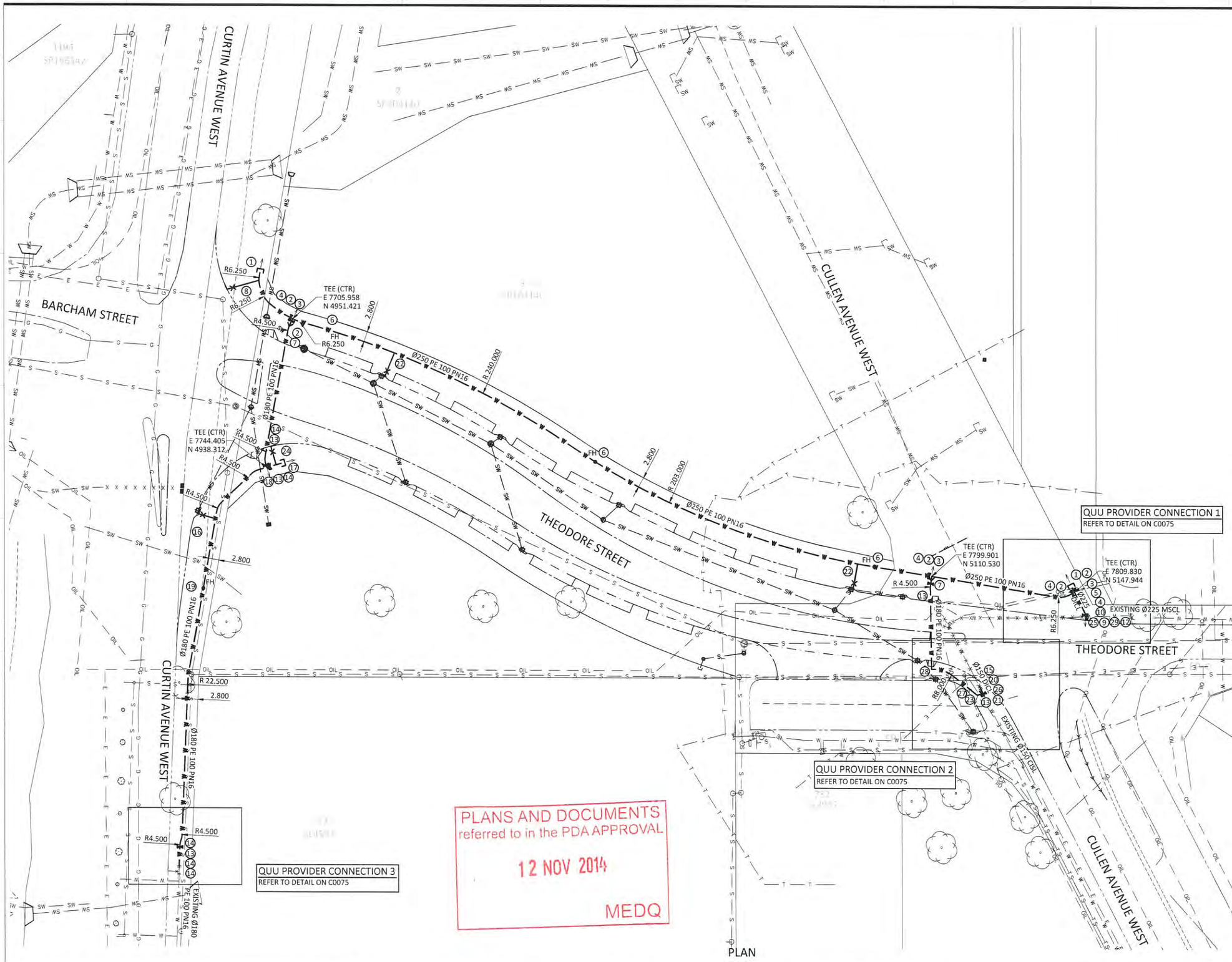
CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
WATER RETICULATION NOTES AND DETAILS SHEET 2

PROJECT No. 13267
DRAWING No. C0071
REVISION A

A1



PLANS AND DOCUMENTS
referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
W	W	WATER
SW	SW	STORMWATER DRAINAGE
		SWALE DRAIN
S	S	SEWER
G	G	GAS
T	T	TELECOMMUNICATIONS
E	E	ELECTRICITY U/G
X X X X X X X		ABANDONED SERVICE

FITTINGS

EXISTING	PROPOSED	
W	W FH W	FIRE HYDRANT
W	W	VALVE
W	W	SCOUR VALVE
W	W	END CAP
W WMT	W WMT	WATER METER
150 W 100	150 W 100	REDUCER
PVC W DICL	PVC W DICL	PIPE MATERIAL CHANGE
	W	THRUST / ANCHOR BLOCK

DATE:
QUEENSLAND URBAN UTILITIES DELEGATE
(VALID FOR 12 MONTHS FROM DATE SHOWN)

CLIENT -
CONTACT: BORNHORST & WARD
QUU AUDITOR: AUDIT & COMPLIANCE OFFICER
CONTACT:

SHEET No. 3 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No.	AMEND.
-	-

QUEENSLAND UrbanUtilities

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED, A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 5 10 15 20 25m 1 : 500 / 1 : 1000

STATUS
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ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

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CONSULTING ENGINEERS
CIVIL AND STRUCTURAL
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mail@bornhorstward.com.au
www.bornhorstward.com.au
A.C.N. 010 131 354 A.B.N. 78 010 151 354
CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

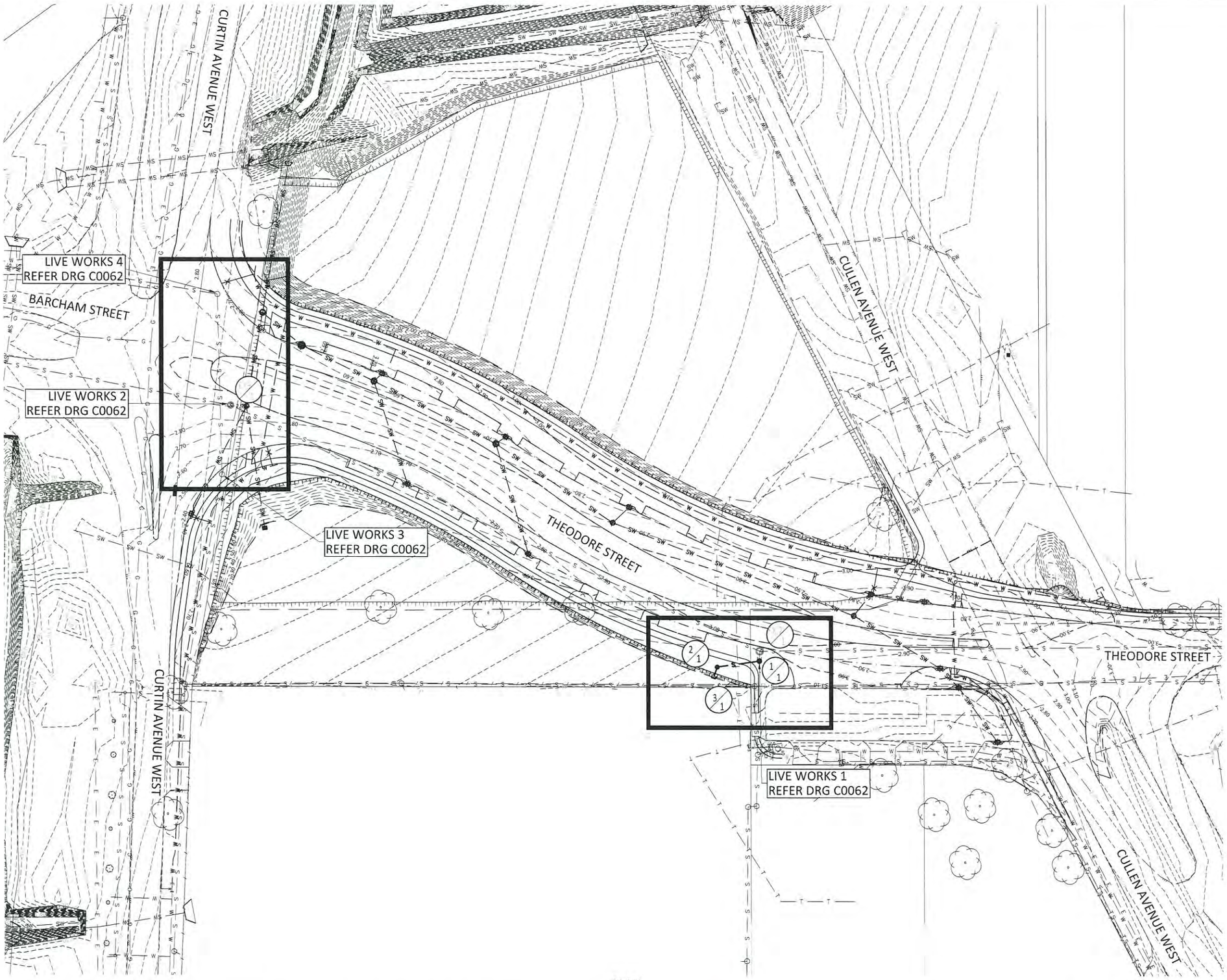
PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: WATER RETICULATION LAYOUT

PROJECT No. 13267

DRAWING No. C0072 REVISION A

A1



PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		PROPERTY BOUNDARY
	SW	STORMWATER DRAINAGE
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
	·52·	CONTOURS
		FENCE
S	S	SEWER
E		UNDER GROUND ELECTRICITY
W	W	WATER
T		TELECOMMUNICATIONS
G		GAS
		TREE

PLANS AND DOCUMENTS
referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

DATE:
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QUU AUDITOR: AUDIT AND COMPLIANCE OFFICER
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SHEET No. 2 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No. -
AMEND. -

QUEENSLAND UrbanUtilities

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES
A1 UNREDUCED
A3 REDUCED

SCALES
UNREDUCED / REDUCED
A 0 1.0 2.0 3.0 4.0 5.0m 1 : 100 / 1 : 200

STATUS
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CONSULT AUSTRALIA Member Firm

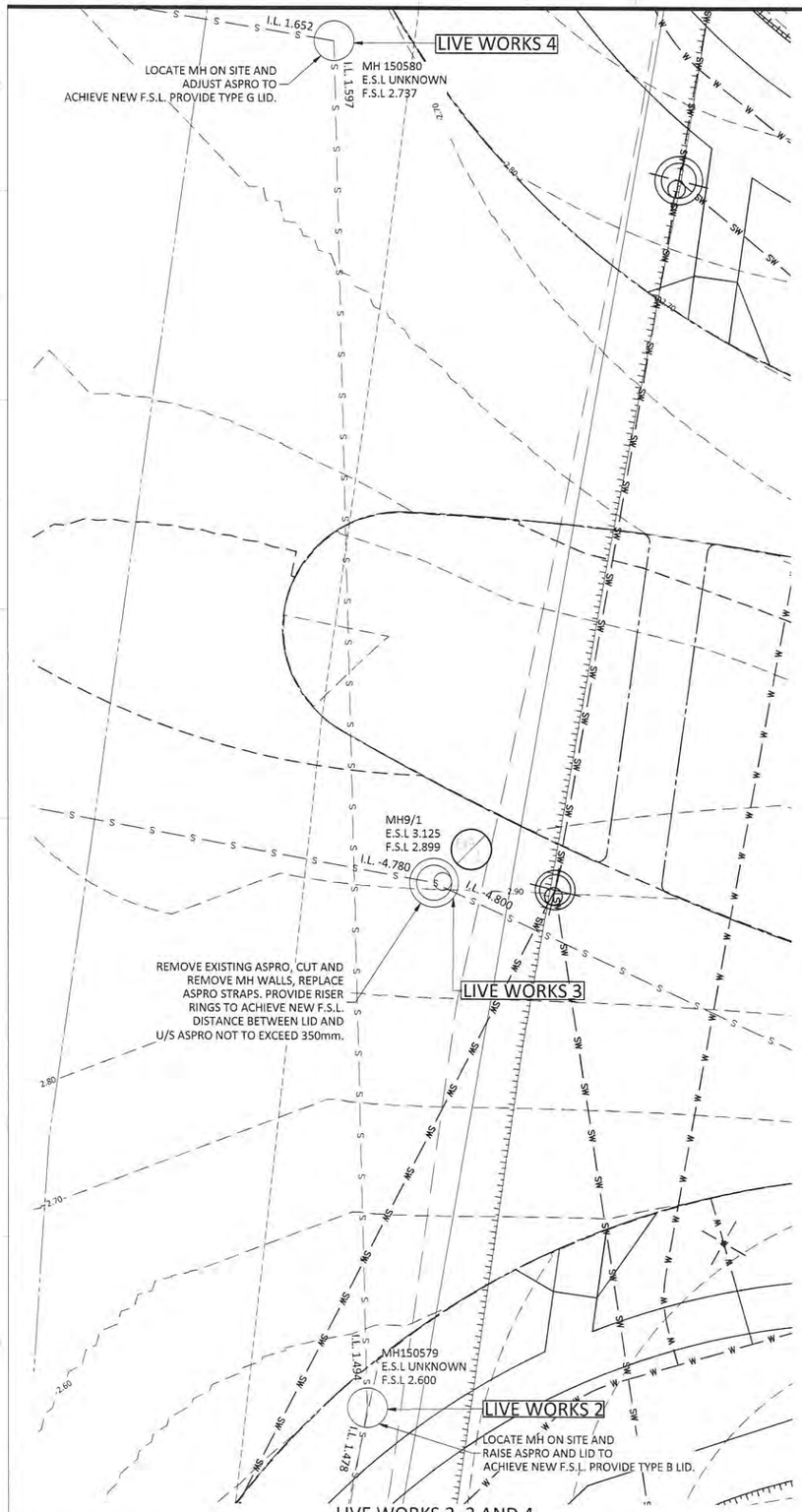
CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
SEWER RETICULATION LAYOUT

PROJECT No. 13267
DRAWING No. C0061
REVISION A

A1

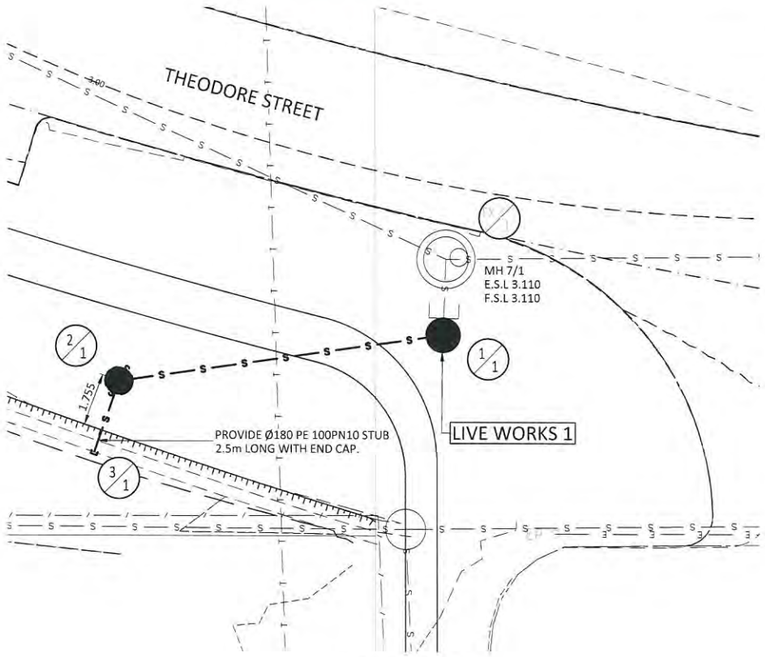


LIVE WORKS 2, 3 AND 4
SCALE A

LIVE SEWER WORK

CONSULTING ENGINEERS ARE TO CONTACT A QUU PROVIDER PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR THIS WORK TO BE CARRIED OUT. (EXCAVATION, SAFE-SHORING AND ASSOCIATED WORK BY CONTRACTOR.) EXCAVATION WORKS CARRIED OUT BY CONTRACTORS AT DEPTH OF 1.5m OR GREATER MUST PROVIDE A 'SAFE WORK PLAN' AS PER WORKPLACE HEALTH AND SAFETY LEGISLATION TO QUU PRIOR TO COMMENCING ANY WORKS. IT IS THE DEVELOPERS RESPONSIBILITY TO ENSURE ALL LIVE SEWER WORKS ARE COMPLETE BEFORE ALLOWING PRIVATE DRAINAGE TO BE CONNECTED.

No.	DESCRIPTION	DIA. SEWER	M.H. No.	M.H. TYPE	COVER TYPE	LOT NO	F.S.L.	E.S.L.	I.L	DEPTH
1a	CONTRACTOR TO CONSTRUCT NEW MH 1/1 OVER EXISTING END OF Ø315 PE LINE WITHOUT REMOVING END CAP. COMPLETE ALL UPSTREAM LINES.	315	MH1/1	F	B	-	3.171	-	0.165	3.005
1b	FOLLOWING SUCCESSFUL TESTING AND ON MAINTENANCE INSPECTION, QUU PROVIDER TO REMOVE END CAP AND COMPLETE BENCHING.									
2a	QUU PROVIDER TO RAISE EXISTING MH LEVEL AND COMPLETE ALL ASSOCIATED LIVE WORKS.		MH150579	-	B	-	2.600	-	1.478	1.122
3a	QUU PROVIDER TO RAISE EXISTING MH LEVEL AND COMPLETE ALL ASSOCIATED LIVE WORKS.		MH EX 9/1	-	-	-	2.899	3.125	-4.780	7.679
4a	QUU PROVIDER TO RAISE EXISTING MH LEVEL AND COMPLETE ALL ASSOCIATED LIVE WORKS.		MH150580	-	G	-	2.737	-	1.597	1.140



LIVE WORKS 1
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		PROPERTY BOUNDARY
	SW	STORMWATER DRAINAGE
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
-52-	-52-	CONTOURS
		FENCE
S	S	SEWER
E		UNDER GROUND ELECTRICITY

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

ASSET REGISTER - RETICULATION SEWER					
ESTATE/STAGE	THEODORE STREET				
SITE ADDRESS	THEODORE STREET, HAMILTON				
COUNCIL FILE	-				
QUU DELEGATE APP. DATE	-				
CLIENT	ECONOMIC DEVELOPMENT QLD				
JOB REFERENCE NO.	-				
MAINS	DIAMETER	MATERIAL DESIGN	MATERIAL CONST	LENGTH DESIGN	LENGTH CONST
-	180	PE		13.500	
PROPERTY CONNECTIONS	DIAMETER	MATERIAL DESIGN	MATERIAL CONST	LENGTH DESIGN	LENGTH CONST
-	180	PE		2.500	
MH'S		MH TYPE & NO.			
		G	F	X	MS
			1	-	1

DATE:
QUEENSLAND URBAN UTILITIES DELEGATE
(VALID FOR 12 MONTHS FROM DATE SHOWN)

CLIENT -
CONTACT: BORNHORST & WARD
QUU AUDITOR: AUDIT AND COMPLIANCE OFFICER
CONTACT: -

AS CONSTRUCTED DETAILS FOR AMEND.

I CERTIFY THAT THE "AS CONSTRUCTED" DETAILS SHOWN ON THIS PLAN ARE TRUE AND ACCURATE RECORD OF THE WORKS

SIGNED DATE:
NAME of SIGNATORY
RPEQ No. or LICENCE
COMPANY NAME
START DATE FINISH DATE

SHEET No. 3 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No. -
AMEND. -

QUEENSLAND UrbanUtilities

PROJECT NORTH

NOTE: SERVICE LOCATIONS AND DEPTHS ARE ESTIMATED FROM SURVEY DATA AND RECORDS. THE ACTUAL LOCATION OF SERVICES IS TO BE DETERMINED ON SITE BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS

"DIAL BEFORE YOU DIG" TO BE CONTACTED PH: 1100 FOR LOCATION FOR THE LOCATION OF EXISTING PUBLIC UTILITIES, PRIOR TO EXCAVATION

LEVEL DATUM

DATUM: AHD
PSM: 77618 LEVEL: 4.114
LOCATED: MACARTHUR AVENUE

R.P. DESCRIPTION

LOT 407 SP 187479
PARISH OF TOOMBUL

HIGH RISK ACTIVITY
ASBESTOS CEMENT PRODUCTS

THIS PROJECT MAY REQUIRE THE HANDLING, REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PRODUCTS. ANY ACTIVITY ASSOCIATED WITH ASBESTOS CEMENT PRODUCTS SHALL BE IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDLINES AND SAFETY REQUIREMENTS.

CONSTRUCTION INSPECTION:

NOTIFICATION OF INSPECTIONS MUST BE RECEIVED BY QUEENSLAND URBAN UTILITIES AT LEAST TWO (2) WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
PLEASE CONTACT QUU PH: 0412 436 579

A "PERMIT TO WORK" MUST BE OBTAINED FROM THE RELEVANT QUU CONTROL ROOM PRIOR TO COMMENCEMENT OF WORK ON SITE. A MINIMUM PERIOD OF TEN WORKING DAYS IS REQUIRED FOR THE ISSUING OF A PERMIT. CONTROL ROOM EAST (BRISBANE LG AREA)
EMAIL: PTW@URBANUTILITIES.COM.AU

"DIAL BEFORE YOU DIG" TO BE CONTACTED PH: 1100 FOR LOCATION FOR THE LOCATION OF EXISTING PUBLIC UTILITIES, PRIOR TO EXCAVATION

NOTE:
SERVICE LOCATIONS AND DEPTHS ARE ESTIMATED FROM SURVEY DATA AND RECORDS. THE ACTUAL LOCATION OF SERVICES IS TO BE DETERMINED ON SITE BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.

CONSULTANT: BORNHORST AND WARD PTY LTD
CONTACT: KRIS RENSCH
TELEPHONE: (07) 3013 4699

ALL WATER AND SEWER CONSTRUCTION WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 1995. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION. PHONE 1300 369 915

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED, A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 1.0 2.0 3.0 4.0 5.0m 1 : 100 / 1 : 200

STATUS
PRELIMINARY

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REV.	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
A	26.05.14	ISSUE FOR INFORMATION				

ASSOCIATED CONSULTANTS

APPROVED
RPEQ
DATE

CHECKED
DATE

BORNHORST + WARD
CONSULTING ENGINEERS
CIVIL AND STRUCTURAL
Level 4, 67 Astor Terrace, Spring Hill, QLD 4000
Bornhorst & Ward Pty Ltd
Brisbane Australia
Phone (07) 3013 4699
Facsimile (07) 3013 4611
mail@bornhorstward.com.au
www.bornhorstward.com.au
A.C.N. 010 151 354 A.B.N. 78 010 151 354
CONSULT AUSTRALIA Member Firm

CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

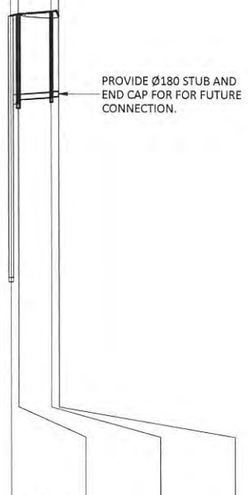
PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
SEWER RETICULATION LAYOUT AND DETAILS

PROJECT No. 13267
DRAWING No. C0062
REVISION A

A1

MANHOLE/END NAME		1/1	2/1	3/1
MANHOLE TYPE		F	MS	
LID TYPE		B	B	
JUNCTION LINE		1 80°		
DROP TYPE		C		
DEPTH TO HC				
HOUSE CONNECTION INVERT LEVEL				
HC TYPE				
HC LOT No.				
CH. FROM D/S MH				



DATUM RL	-14.000			
STREET ETC	THEODORE STREET			
DIAMETER		180Ø PE	180Ø PE	
GRADE		1 in 150	1 in 150	
JUNCTION INVERT LEVEL				
DEPTH TO INVERT		2.870 2.886	2.866 2.698	
INVERT LEVEL OF SEWER		0.300 0.374	0.394 0.410	
DESIGN SURFACE LEVEL		3.259	3.108	
SETOUT COORDINATES	E7812.798 N5057.444	E7812.687 N5046.463	E7814.897 N5045.294	
RUNNING CHAINAGE		2.545 10.982	13.530 2.500	16.030
	EX	1		

SEWER RETICULATION LONGITUDINAL SECTION
SCALE A (HOR)
B (VERT)

PLANS AND DOCUMENTS
referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

DATE:
QUEENSLAND URBAN UTILITIES DELEGATE
(VALID FOR 12 MONTHS FROM DATE SHOWN)

CLIENT -
CONTACT: BORNHORST & WARD
QUU AUDITOR: AUDIT AND COMPLIANCE OFFICER
CONTACT: -

AS CONSTRUCTED DETAILS FOR AMEND.

I CERTIFY THAT THE "AS CONSTRUCTED" DETAILS SHOWN ON THIS PLAN ARE TRUE AND ACCURATE RECORD OF THE WORKS

SIGNED DATE:
NAME of SIGNATORY
RPEQ No. or LICENCE
COMPANY NAME
START DATE FINISH DATE

SHEET No. 4 OF 4

QUEENSLAND URBAN UTILITIES DRAWING No. -
AMEND. -

QUEENSLAND UrbanUtilities

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES
A1 UNREDUCED
A3 REDUCED

SCALES
UNREDUCED / REDUCED
A 0 10 20 30 40 50m 1 : 1000 / 1 : 2000
B 0 1.0 2.0 3.0 4.0 5.0m 1 : 100 / 1 : 200

STATUS
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Level 4, 67 Astor Terrace, Spring Hill, QLD 4000

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www.bornhorstward.com.au
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CONSULT AUSTRALIA Member Firm

CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET ROADWORKS EXTENSION

SUBJECT
SEWER RETICULATION LONGITUDINAL SECTIONS

PROJECT No. 13267
DRAWING No. C0065
REVISION A

A1

EROSION & SEDIMENTATION CONTROL NOTES:

1. TOPSOIL

1.1. STRIP & STOCKPILE AVAILABLE TOPSOIL (ASSUMED AVERAGE DEPTH 150mm) FROM ALL DISTURBED AREAS PRIOR TO BULK EARTHWORKS. GRADE BULK EARTHWORKS SURFACE LEVEL EVENLY TO ENSURE SITE IS FREE DRAINING.

1.2. MINIMUM SLOPE ACROSS SITE TO BE 0.5%.

1.3. ALL FOOTPATHS, BATTERS, & EARTHWORK AFFECTED AREAS ARE TO BE TOPSOILED TO A MINIMUM DEPTH OF 100mm (LIGHTLY COMPACTED) & TURFED WHERE SPECIFIED.

1.4. SEDIMENT FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER TO IPWEAQ STD DWG DS-040. SEDIMENT FENCES TO BE REPAIRED & EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE CAPACITY FALLS BELOW 75 %.

2. SEDIMENT FENCES

2.1. FOR DETAILS OF SEDIMENT FENCE REFER TO IPWEAQ STD DWG DS-040

2.2. SEDIMENT FENCES TO BE REPAIRED AS REQUIRED & EXCESSIVE SEDIMENT DEPOSITS SHOULD BE REMOVED.

2.3. IN THE EVENT OF WET WEATHER, INSTALL KERB INLETS FILTER WITH GRAVEL RANGING FROM 50mm TO 75mm IN SIZE. REFER IPWEAQ STANDARD DRAWING DS-041. IF THE GRAVEL FILTER BECOMES CLOGGED WITH SEDIMENT DURING ITS USE, THE GRAVEL MUST BE PULLED AWAY FROM THE MESH & CLEANED OR REPLACED.

2.4. REGULAR WEEKLY CHECKS OF SILT FENCES IS TO BE MADE ALONG WITH A CHECK AFTER ANY SIGNIFICANT STORM EVENT TO ENSURE INTEGRITY & PERFORMANCE.

3. TURFING

3.1. PROVIDE TURFING TO ENTIRE WIDTH OF ALL SWALES, FOOTPATHS, & 1 IN 4 CUT & FILL BATTERS.

3.2. FOOTPATH BATTERS ARE TO BE STABILISED WITH TOPSOIL (& TURFED) AS SOON AS PRACTICAL AFTER THE BATTERS HAVE BEEN COMPLETED. REMAINING EXPOSED AREAS ON LOTS ARE TO BE SEEDED & MULCHED (E.G HYDROMULCHED).

4. DURING CONSTRUCTION SEQUENCE

4.1. TOPSOIL STOCKPILE SITE TO HAVE A SEDIMENTATION FENCE CONSTRUCTED ON DOWNSTREAM SIDE.

4.2. SEDIMENTATION FENCES TO BE PLACED AS SHOWN.

4.3. REGULARLY INSPECT BANKS & REPAIR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD.

4.4. REMOVE SEDIMENT TO AVOID PONDING FROM CATCH DRAINS.

4.5. REMOVE EXCESSIVE SEDIMENT FROM UPSTREAM OF CHECK DAM.

4.6. ROAD RESERVE TO BE USED AS HAUL ROAD.

4.7. A CATCH DRAIN BANK IS TO BE PROVIDED ON THE TOP SIDE OF ALL CUTS & DISCHARGE EITHER TO UNDISTURBED GRASS LANDS OR TO THE CROSS ROAD DRAINAGE

4.8. SUPPLEMENTARY EROSION & SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.

4.9. WATER QUALITY SAMPLES MUST BE TAKEN & 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 & 8.5. IF WATER QUALITY FAILS THE CRITERIA THEN THE USE OF A GYPSUM FLOCCULENT IS TO BE APPLIED AS DIRECTED BY THE MANAGING CONTRACTOR OR CONSULTING ENIGINEER.

4.10. ALL WATER QUALITY DATA INCLUDING DATES OF RAINFALL, TESTING & WATER RELEASE MUST BE MAINTAINED IN AN ON-SITE REGISTER. THIS REGISTER IS TO BE MAINTAINED FOR THE DURATION OF THE APPROVED WORKS & BE AVAILABLE ON SITE FOR INSPECTION ON REQUEST.

4.11. GRASS SEEDING IS TO ACHIEVE 70% COVER WITHIN 30 DAYS OF COMPLETION OF EARTHWORKS.

5. FOLLOWING CONSTRUCTION

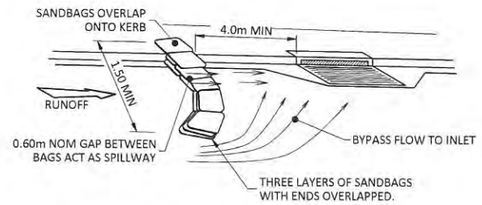
5.1. SEDIMENTATION FENCES TO BE MAINTAINED UNTIL TURFING IS COMPLETED & GRASS IS 80% ESTABLISHED.

5.2. SEDIMENT BASINS TO BE CHECKED & DE-SILTED AFTER EVERY SIGNIFICANT STORM EVENT OR IN THE CASE OF NO SIGNIFICANT STORM EVENT, EVERY 12 WEEKS.

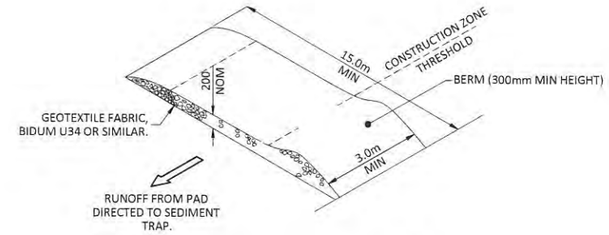
EROSION & SEDIMENT CONTROL PROGRAM

1. THIS PROGRAM AND ASSOCIATED PLANS SHALL 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 :
   - 2.1. IDENTIFY CRITICAL AREAS AND PROVIDE SPECIAL ATTENTION TO THOSE AREAS.
   - 2.2. PLAN SITE LAYOUTS SO THAT ACCESS TO ALL REQUIRED DRAINAGE EROSION AND SEDIMENT CONTROL MEASURES IS MAINTAINED.
   - 2.3. LIMIT EXPOSURE TIME BY PROGRAMMING TO MINIMISE THE AREA OF LAND EXPOSED TO POTENTIALLY ADVERSE WEATHER CONDITIONS AT ANY ONE TIME.
   - 2.4. PROVIDE CONTROL MEASURES INCLUDING TEMPORARY AND PERMANENT DRAINAGE, EROSION AND SEDIMENT CONTROLS.
3. THE EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH LOCAL AUTHORITY EROSION AND SEDIMENT CONTROL STANDARDS, THE SOIL EROSION AND SEDIMENTATION CONTROL - ENGINEERING GUIDELINES FOR QUEENSLAND (CURRENT EDITIONS), AND ALL OTHER LOCAL AUTHORITY EROSION AND SEDIMENT CONTROL GUIDELINES.
4. ALL ESC DEVICES ARE TO BE INSPECTED WEEKLY, PRIOR TO EXPECTED AND AFTER RAINFALL. ANY DAMAGE OR EXCESS EROSION/ SEDIMENT IS TO BE REPAIRED AND MANAGED AS REQUIRED TO MAINTAIN CONTROL DEVICES.
5. WATER DISCHARGE
   5.1 CRITERIA: Samples must be taken and analysed prior to the release of water from ponds.
   - TSS<50 mg/L
   - pH BETWEEN 6.5 AND 8.5.

   5.2 TREATMENT:
   - High TSS: Add Gypsum. BCC Guideline suggests 32 to 70kg/400m³ water.
   - Low ph: Add Aglime/Hydrated Lime or Sodium Bicarbonate. Refer QLD SPP 2/02 Guideline, Table 5 for suggested dosage rates.
   - High pH: Add Citric Acid. Testing for both pH & Alkalinity are necessary to determine dosage rates.
6. 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 ON REQUEST.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL (ESC) MEASURES TO BE MAINTAINED AND FULLY OPERATIONAL DURING THE MAINTENANCE PERIOD AND ARE TO BE REMOVED AS ADVISED BY THE MANAGING CONTRACTOR AND CONSULTING ENGINEER.
8. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR IS TO PROVIDE A DETAILED PROGRAM TO THE MANAGING CONTRACTOR AND CONSULTING ENGINEER SHOWING THE TIMING FOR ALL WORKS ASSOCIATED WITH THE PROJECT, NOMINATING, IN PARTICULAR, THE PROGRAM FOR INSTALLATION OF SOIL AND EROSION CONTROL SYSTEMS.
9. 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.
10. CONSTRUCTION EXIT SHALL BE AT ONLY ONE NOMINATED POINT ON THEODORE STREET.
11. FOR DETAILS OF TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP REFER TO IPWEAQ STANDARD DRAWING DS-040.
12. SUPPLEMENTARY EROSION AND SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE MANAGING CONTRACTOR OR CONSULTING ENGINEER.
13. SEDIMENT CONTROL DEVICES SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL AT LEAST 70% SOIL COVERAGE UPSTREAM AND DOWNSTREAM OF THE DEVICE IS ACHIEVED.
14. SEDIMENT FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER TO IPWEAQ STANDARD DRAWING DS-041. THE ENDS OF ALL SEDIMENT FENCES ARE TO RETURN UP THE CONTOUR SO AS TO RETAIN ALL SEDIMENT.
15. SEDIMENT FENCES TO BE REPAIRED AND EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE THE FENCE REACHES 75% OF ITS CAPACITY.
16. EXCAVATED MATERIAL WILL BE PLACED DIRECTLY INTO FILL AREAS IN ACCORDANCE WITH THE APPROVED EARTHWORKS SPECIFICATION.
17. ANY IMPORTED FILL MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION.

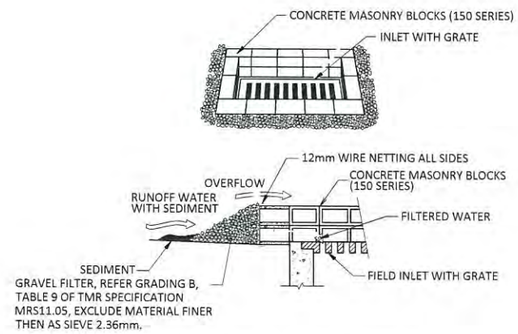


ON GRADE KERB INLET SEDIMENT TRAP
NTS

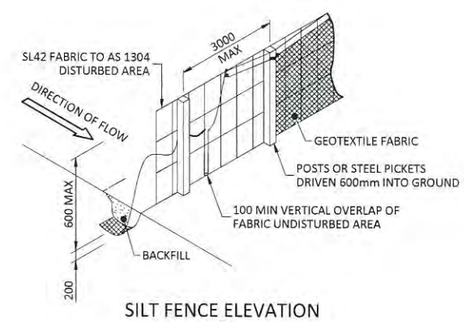


NOTE 1: UNBOUND PAVEMENT MATERIAL (GRAVEL) TO GRADING B, TABLE 9 OF QT SPECIFICATION MRS11.05, EXCLUDE MATERIAL FINER THAN AS SIEVE 2.36mm.

TEMPORARY CONSTRUCTION ENTRY / EXIT SEDIMENT TRAP
NTS



FIELD INLET SEDIMENT TRAP
N.T.S.



SILT FENCE ELEVATION
N.T.S.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

STATUS
PRELIMINARY

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A	26.05.14	ISSUE FOR INFORMATION				

ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

CHECKED — DATE

BORNHORST + WARD
CONSULTING ENGINEERS
CIVIL AND STRUCTURAL
Level 4, 67 Astor Terrace, Spring Hill, QLD 4000

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www.bornhorstward.com.au
A.C.N. 010 151 354 A.B.N. 78 010 151 354
CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

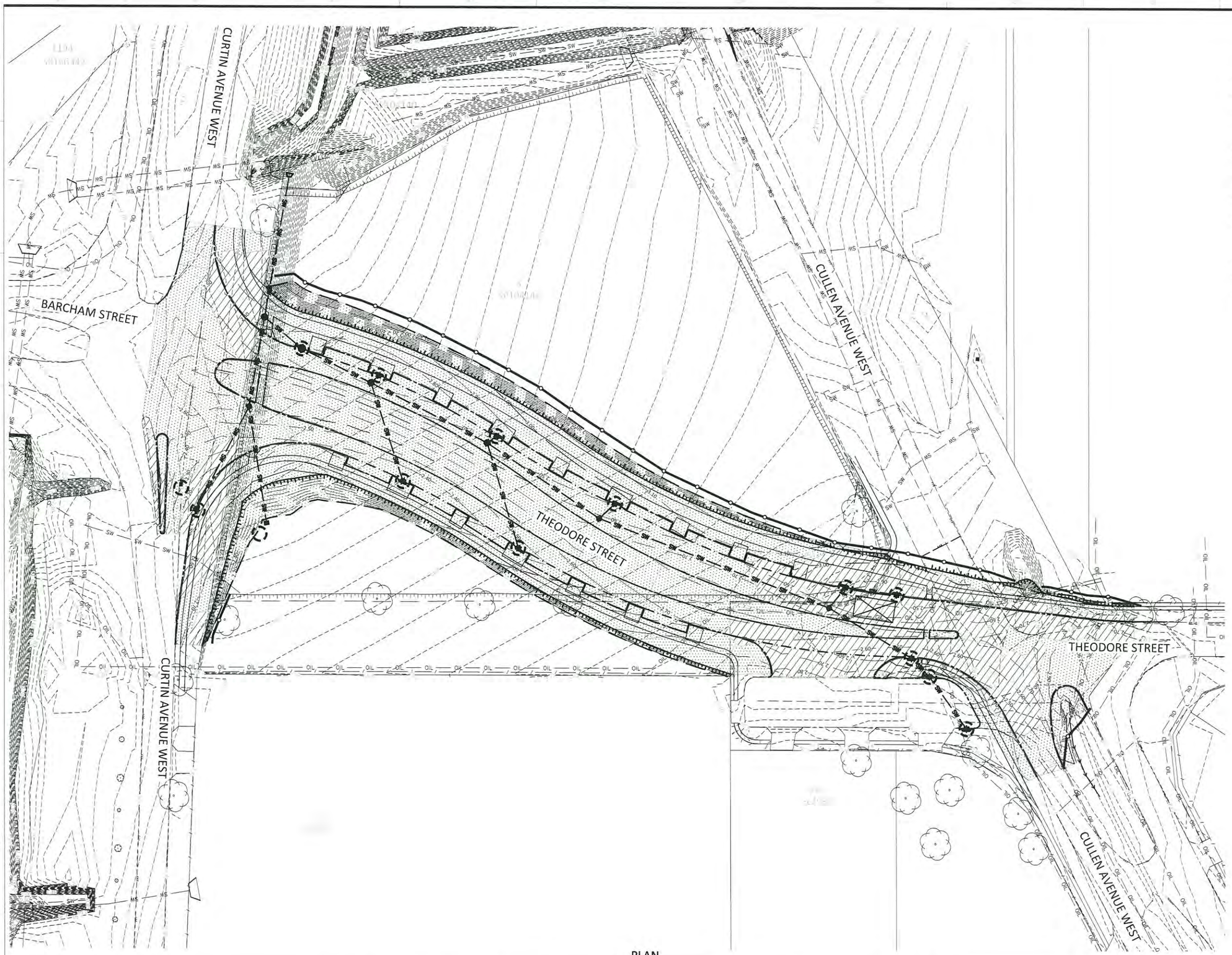
PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: EROSION & SEDIMENT CONTROL NOTES AND DETAILS

PROJECT No.: 13267

DRAWING No.: C0020 REVISION: A

A1



PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		KERB INVERT
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
SW	SW	STORMWATER DRAINAGE
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
		SWALE DRAIN
	52	CONTOURS
		FENCE
		FOOTPATH
		SILT FENCE
		INLET SEDIMENT TRAP
		TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP
		CUT
		FILL

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 5 10 15 20 25m 1 : 500 / 1 : 1000

STATUS
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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET ROADWORKS EXTENSION

SUBJECT: EROSION & SEDIMENT CONTROL LAYOUT

PROJECT No.: 13267

DRAWING No.: C0021 — REVISION: A

A1

Environmental Protection Agency

160 Ann Street • Brisbane, Queensland • PO Box 155 • BRISBANE ALBERT STREET QLD 4002 •AUSTRALIA
Telephone (07) 3227 6870 • Facsimile (07) 3227 7677 • www.env.qld.gov.au/environment/business/contaminated

ANNEXURE 1 - SITE MANAGEMENT PLAN

LOT : 3 PLAN : SP104140 FILE REF : BNE4063 PRINTED: 17/07/2001

PLANNING DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

DATE OF EFFECT : 17/07/2001

1.0 SUMMARY OF CONTAMINATION

The site has been used for uncontrolled dumping of construction and demolition material. Asbestos in the form of fibrous material, sheeting and piping formed the majority of the refuse. Bricks, steel, rubber tubes and concrete rubble were also disposed on the site. The fill material varied from 1.4 m to 2.5 m in thickness. To manage exposure to the fill the site has been capped with a 1 m thick engineered clay cap.

2.0 OBJECTIVE OF PLAN

The objective of the plan is to manage contamination on Lot 3 on SP104140 in a manner that protects human health and the environment. The objective will be achieved by:

- Establishment of barriers between users of the site and the contamination in areas where refuse exists (ie site capping).
- Ongoing maintenance of the capping of the site.
- Controls on site use .

3.0 ACHIEVEMENT AND MAINTENANCE OF OBJECTIVE

3.1 Responsibility for Plan

The owner of the land (as defined under the *Environmental Protection Act 1994)* is to ensure that the following conditions of this site management plan and any variations to the plan approved or required by the Environmental Protection Agency (EPA) are complied with.

The obligations and conditions set out in this site management plan bind the owner from time to time of the land.

The owner must provide any contractors, representatives and agents of the owner of the land associated with the design and construction of site facilities and infrastructure on the land with a copy of the approved SMP prior to the commencement of work on-site.

The owner must provide a copy of the SMP to any lessee who intends to undertake site excavations prior to commencement of work.

3.2 Land Use.

With the exception of the land identified as area B on Figure 1, the land is only to be used for commercial/industrial purposes. This includes premises such as shops and offices as well as factories and industrial sites, (but excluding uses where regular soil access by children is possible). Area B as identified on Figure 1 is not to be used for any purpose other than an area for the provision of services such as pipelines/utilities unless it is capped with concrete, bitumen on 150mm of road base or equivalent. If capped, area B is suitable for commercial/industrial purposes. This includes premises such as shops and

offices as well as factories and industrial sites, (but excluding uses where regular soil access by children is possible).

3.3 Capping Requirements

Compacted clay to a minimum thickness of 1 metre has been placed over the entire site, with the exception of Area B on the attached plan . This capping must be maintained in a sound condition at all times. Any buildings, roadways etc must be constructed over the 1 metre compacted clay cap. Excavations beneath the clay cap must ensure the cap is replaced on completion of the works with compacted clay or similar impervious material. Garden and grassed areas are to be covered with a minimum of 75mm topsoil over the capping. Grassed areas are to be maintained with a full vegetative cover after initial establishment to minimise erosion.

(Note: Area B was not clay capped so as to avoid interference or damage to existing services and utilities within the extent of Area B. Area B must be maintained with a good grass cover or equivalent so as to prevent dust generation and erosion.)

3.4 General Environmental Protection

Site work relating to the excavation, removal and/or disposal of soil and excavated refuse must be conducted in a manner which ensures that environmental harm is prevented (eg by preventing release of offensive or noxious odours, preventing spread of contamination by controlling site run-off and spillage from haulage trucks or improper disposal of contaminated stormwater seepage). Dust emissions (including the potential for airborne asbestos) are to be controlled by watering during site works. Sediment traps are to be established at locations throughout the site to capture sediment transported by stormwater or water used for dust control during construction. Surface water drainage is to be designed such that ponding is avoided, erosion is minimised and surface water flow is directed away from the site without contacting excavated material.

3.5 Workplace Heatlth & Safety Plan

A Workplace Health and Safety Plan (WH&S plan) which conforms to the requirements of the *Workplace Health and Safety Act 1995,* (or equivalent) is to be developed for all site excavations which penetrate the clay cap and all excavations on Area B.

3.6 Removal/Excavation of Soil

Contaminated soil must not be removed from the site without a permit issued under S424 of the *Environmental Protection Act 1994* or equivalent.

3.7 Underground Services

All underground services installed after July 2001 must be constructed in either uncontaminated material or in trenches in which services are surrounded by a minimum of 0.5m of uncontaminated fill.

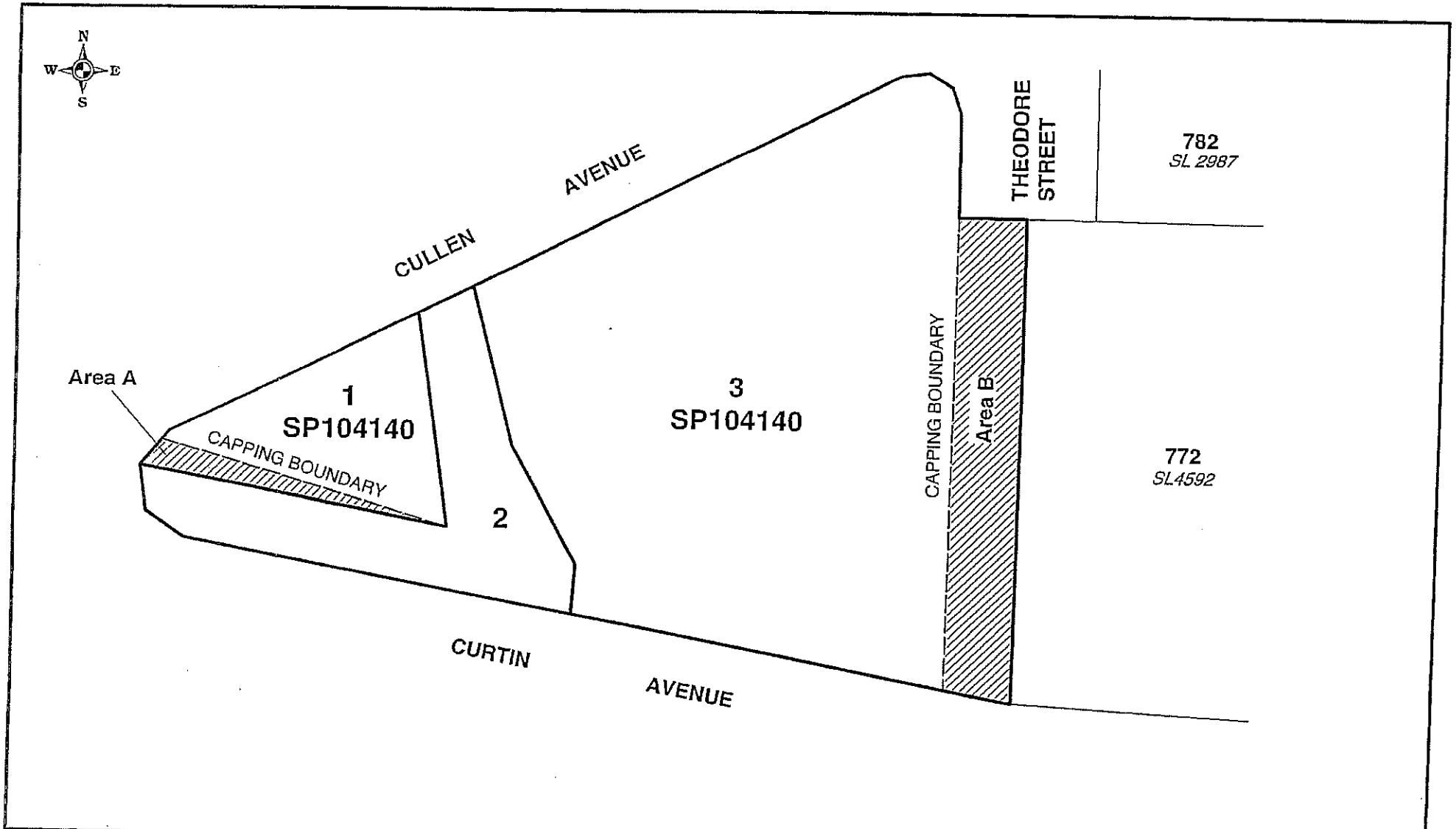
3.8 Slopes, Batters and Retaining Walls

All slopes, batters and retaining walls must be maintained so they are geotechnically stable and not subject to slumping or erosion.

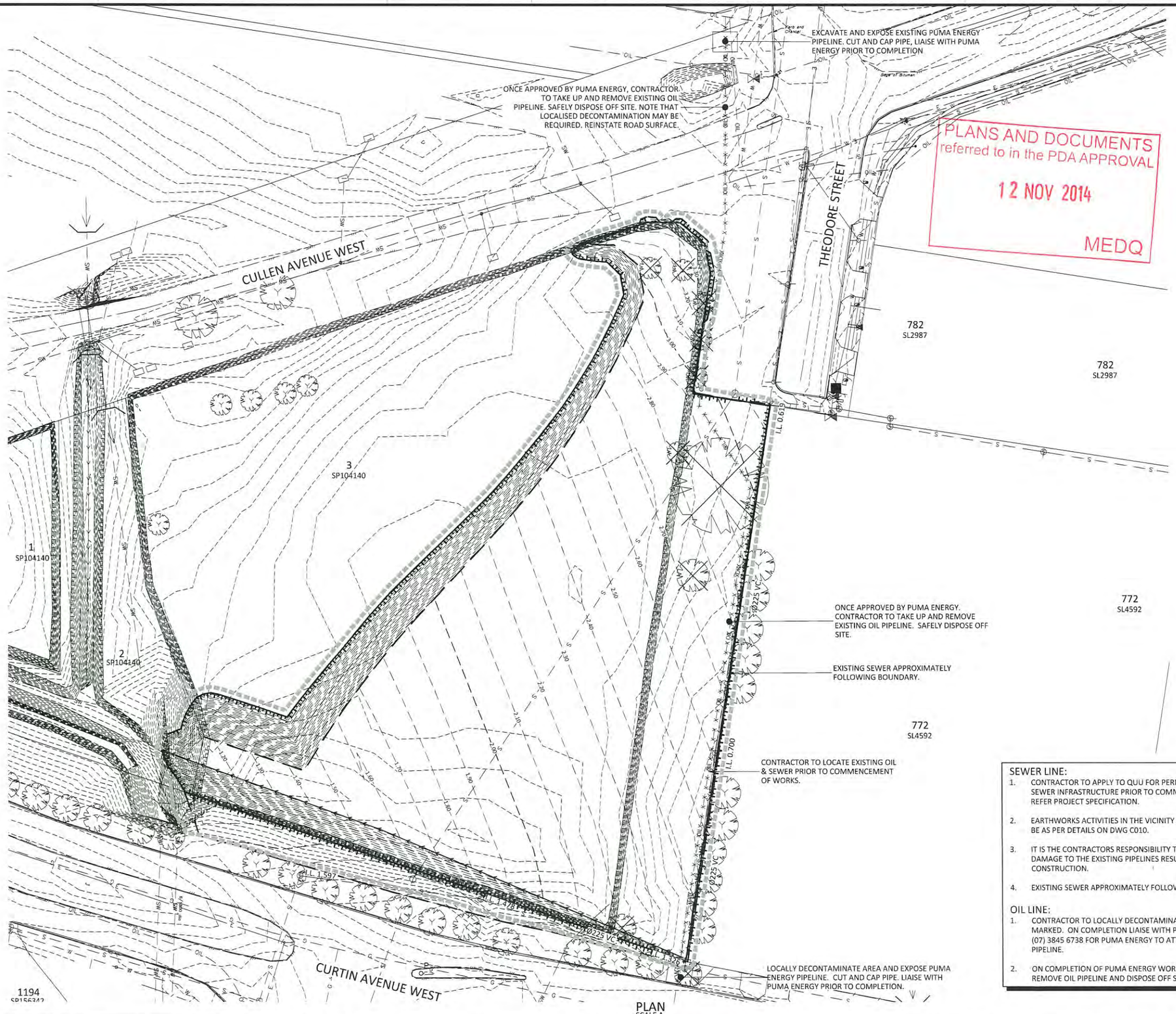
4.0 MAINTENANCE AND REPORTING REQUIREMENTS

To ensure compliance with the Site Management Plan, the owner is to undertake an annual inspection of

the site to ensure the integrity of the site capping. Records of these inspections and of any site excavations or permits issued under Section 424 of the *Environmental Protection Act 1994* are to be maintained by the owner for inspection by authorised officers. The annual period is to commence the effective date of this plan.



DATA SOURCE:	Prepared.	jvc		22.05.01	Workspace Fig1.wor		Scale: 1:1500	TITLE: HAMILTON INDUSTRIAL ESTATE SITE MANAGEMENT PLAN			
	Checked.				Location W:\env-gen\vq0296\gis\maps\						
	Approved.				Map Grid Non_Earth (metres)			Project No. VQ0296	Date. 22.05.01	A4	FIGURE 1	Sh 1 of 1	Rev. 0



PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
SW		STORMWATER DRAINAGE
		OPEN CHANNEL
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52		CONTOURS
		FENCE
S		SEWER
W		WATER
G		GAS
T		TELSTRA
TOF TOF		TELSTRA OPTIC FIBRE
OH PP		OVER HEAD POWER
OH E/T PP		OVERHEAD POWER AND TELSTRA
E		UNDER GROUND POWER
		ABANDONED SERVICE
		FOOTPATH
OIL		OIL/PETROLEUM PIPELINES (PLOTTED FROM RECORDS ONLY. CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION)
		TREE
		TREE TO BE REMOVED BY CONTRACTOR
		LINE OF VEGETATION
		EXTENT OF WORKS

SEWER LINE:

1. CONTRACTOR TO APPLY TO QUU FOR PERMIT TO WORK AROUND SEWER INFRASTRUCTURE PRIOR TO COMMENCEMENT OF WORK. REFER PROJECT SPECIFICATION.
2. EARTHWORKS ACTIVITIES IN THE VICINITY OF THE SEWER PIPELINE TO BE AS PER DETAILS ON DWG C010.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THERE IS NO DAMAGE TO THE EXISTING PIPELINES RESULTING FROM CONSTRUCTION.
4. EXISTING SEWER APPROXIMATELY FOLLOWING BOUNDARY.

OIL LINE:

1. CONTRACTOR TO LOCALLY DECONTAMINATE AROUND OIL PIPELINE AS MARKED. ON COMPLETION LIAISE WITH PUMA ENERGY JOE VONHOF (07) 3845 6738 FOR PUMA ENERGY TO ATTEND SITE AND FOAM FILL PIPELINE.
2. ON COMPLETION OF PUMA ENERGY WORK CONTRACTOR CAN REMOVE OIL PIPELINE AND DISPOSE OFF SITE.

HIGH RISK ACTIVITY
ASBESTOS CEMENT PRODUCTS

THIS PROJECT REQUIRES THE HANDLING, REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PRODUCTS. ANY ACTIVITY ASSOCIATED WITH ASBESTOS CEMENT PRODUCTS SHALL BE IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDLINES AND SAFETY REQUIREMENTS.

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED, A3 REDUCED

SCALES — UNREDUCED / REDUCED
A: 0 5 10 15 20 25m — 1 : 500 / 1 : 1000

STATUS
FOR TENDER

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REV	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
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A	24.06.13	ISSUE FOR TENDER	KR	KR	NR	NR

ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

CHECKED — DATE

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CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EXISTING SERVICES AND DEMOLITION PLAN

PROJECT No. 13130

DRAWING No. C005 — REVISION B

A1

EARTHWORKS NOTES

1. NOTWITHSTANDING THE LIMITS OF CUTTING & FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT AT THE PRE-START MEETING, ALTERATIONS TO THE EARTHWORKS MAY BE INSTRUCTED BY THE SUPERINTENDENT DURING CONSTRUCTION. FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY THE WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND SAFE DISPOSAL OF ALL CONTAMINATED MATERIAL BENEATH WORK ZONE. REPORTING OF DECONTAMINATION IS TO BE UNDERTAKEN BY THE CONTRACTOR PROVIDED TO THE SUPERINTENDENT.
3. REFER TO THE SPECIFICATION FOR COMPACTION DETAILS. ALL FILL MATERIALS WILL BE PLACED IN ACCORDANCE WITH THE APPROVED SPECIFICATION.
4. EXCAVATED MATERIAL NOT REQUIRED FOR ROADWORKS OR NOMINATED SITE FILLING SHALL BE LOCATED ON SITE AS DIRECTED BY THE SUPERINTENDENT.
5. ALL SITE PREPARATION SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798-2007, "GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS".
6. WHERE UNSUITABLE MATERIAL IN AREAS TO BE FILLED IS ENCOUNTERED, THIS WILL BE TREATED AS SET OUT IN THE SPECIFICATION.
7. LEVEL 1 INSPECTION & TESTING IS TO BE IMPLEMENTED ON THE SITE IN ACCORDANCE WITH AS 3798-2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS". THE INSPECTION & TESTING AUTHORITY IS TO PROVIDE A COMPLIANCE CERTIFICATE & REPORT SETTING OUT THE INSPECTIONS, SAMPLING & TESTING CARRIED OUT DURING THE BULK EARTHWORKS.
8. THE TOTAL COST OF THE GEOTECHNICAL INSPECTION & TESTING AUTHORITY (GITA) FOR THE LEVEL 1 INSPECTION & TESTING IS TO BE INCLUDED IN THE LUMP SUM OF THE TENDER. THE GITA IS TO MAINTAIN DAILY SITE RECORD SHEETS AS SET OUT IN AS 3798-2007.
9. UNLESS NOTED OTHERWISE THE FREQUENCY OF TESTING IS TO BE IN ACCORDANCE WITH TABLE 8.1 OF AS 3798-2007.
10. THE CONTRACTOR IS TO COMPLY WITH ALL REGULATIONS CONCERNING WORK HOURS, WARNING SIGNS, FENCING OR SECURITY & EMISSIONS FROM THE SITE INCLUDING DUST, WATER, SILT, NOISE & SMOKE.
11. FILL BATTER SLOPES ARE TO BE OVERFILLED & TRIMMED BACK TO PROFILE.
12. ALL VEHICLES EXITING FROM THE SITE WILL DO SO VIA THE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP. VEHICLES WILL BE CLEANED & TREATED AS TO PREVENT MATERIAL BEING TRACKED OR DEPOSITED ON THE ADJOINING PUBLIC ROADS. REFER EROSION & SEDIMENT DRAWINGS FOR FURTHER DETAILS OF EROSION & SEDIMENT CONTROLS.

EARTHWORKS PERFORMANCE NOTES

1. THESE NOTES ARE TO BE READ IN CONJUNCTION WITH AS3798 (2007) - GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS, MRTS04 - MAIN ROADS SPECIFICATION FOR GENERAL EARTHWORKS AND THE BUILDING EARTHWORKS SPECIFICATION PROVIDED FOR THIS PROJECT.

2. FILL MATERIAL GENERALLY IS TO BE INORGANIC, NON-PERISHABLE CLEAN FILL MATERIAL WITH NO CONTAMINANTS.

   (SULPHUR CONTENT: DO NOT PROVIDE FILLING WITH SULPHUR CONTENT EXCEEDING 0.5% WITHIN 500 MM OF CEMENT BOUND ELEMENTS (FOR EXAMPLE CONCRETE STRUCTURES OR MASONRY) UNLESS SUCH ELEMENTS ARE PROTECTED BY IMPERMEABLE MEMBRANES OR EQUIVALENT MEANS).

3. STRUCTURAL FILL SHALL EXCLUDE MATERIALS SUCH AS;
   - ORGANIC SOILS;
   - MATERIALS CONTAMINATED THROUGH PAST SITE USAGE;
   - MATERIALS WHICH CONTAIN SUBSTANCES WHICH CAN BE DISSOLVED OR LEACHED OUT, OR WHICH UNDERGO VOLUME CHANGE OR LOSS OF STRENGTH WHEN DISTURBED AND EXPOSED TO MOISTURE;
   - SILTS OR SILT-LIKE MATERIALS;
   - CLAY MATERIALS OR MATERIALS CONTAINING TRACES OF CLAY
   - FILL CONTAINING WOOD, METAL, PLASTIC, BOULDERS OR OTHER DELETERIOUS MATERIAL.

4. ALL FILL IMPORTED ONTO THE SITE IS TO BE FROM SUITABLE SOURCES AS APPROVED BY THE SUPERVISING GEOTECHNICAL ENGINEER AND SUPERINTENDENT.

5. FILL RESULTING FROM SPOIL RECOVERED FROM SITE EXCAVATIONS; OR BORROW MATERIAL FROM DESIGNATED BORROW PITS IS TO BE CONFIRMED BY THE GEOTECHNICAL ENGINEER ON ITS SUITABILITY AS FILL MATERIAL.

6. FILL TYPES

   IMPORTED SELECT FILL: GRANULAR MATERIAL COMPLYING WITH BCC SPECIFICATION FOR EARTHWORKS S140 AND THE FOLLOWING:
   a. MAXIMUM PARTICLE SIZE: 75 MM.
   b. PROPORTION PASSING 0.075 MM SIEVE: 25%MAXIMUM.
   c. PLASTICITY INDEX: 2%, 12%.
   d. WEIGHTED PLASTICITY <140 (WPI)
   e. MINIMUM CBR 15
   f. SHRINK-SWELL INDEX ISS = 1%.

7. COMPACTION - ALL FILL MATERIAL PLACED UNDER STRUCTURES AND PAVEMENTS ARE TO BE COMPACTED IN ACCORDANCE WITH AS3798 AND THE "EARTHWORKS SPECIFICATION" PROVIDED FOR THIS PROJECT. NOTWITHSTANDING THE ABOVE;

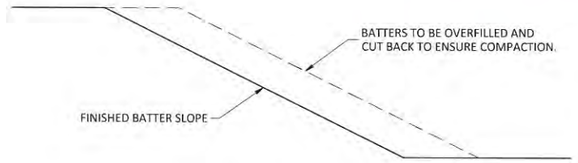
   - COMPACT ALL MATERIAL TO A MINIMUM 98% STANDARD COMPACTION WITH A MOISTURE CONTENT WITHIN +/-5% OMC.

   - FILL IS TO BE COMPACTED IN LAYERS NOT EXCEEDING 250mm IN DEPTH.

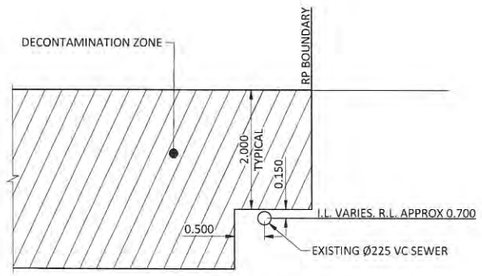
ORDER OF WORKS:

1. CLEAR SITE AND REMOVE EXISTING TREES.
2. LOCATE ALL EXISTING SERVICES WITHIN WORKS SITE.
3. OBTAIN QUU PERMIT TO WORK.
4. LOCALLY DECONTAMINATE AROUND PUMA ENERGY OIL PIPELINE AND LIAISE WITH PUMA ENERGY PRIOR TO CUTTING AND CAPPING PIPE. REFER DRG C005.
5. STRIP TOPSOIL FROM CLAY CAP AND DISPOSE OFF SITE.
6. REMOVE EXISTING CLAY CAP OVER CONTAMINATED MATERIAL TO WITHIN 150mm OF PREVIOUS SURFACE LEVEL.
7. STOCKPILE CLEAN FILL ON ADJACENT CLAY CAP IN LOT 1 OR 3 SP104140. ENSURE SUFFICIENT EROSION & SEDIMENT CONTROL FENCES ARE IN PLACE.
8. DECONTAMINATE SITE AREA AS MARKED ON DRG-C011 OR DRG-C016. LICENSED SUBCONTRACTOR TO BE USED WITH CONTAMINATED FILL MATERIAL BEING SAFELY AND LEGALLY DISPOSED OFF SITE. REMOVE OIL PIPELINE AND DISPOSE OFF SITE.
9. REPORTING AND CERTIFICATION OF DECONTAMINATION TO BE PROVIDED TO THE SUPERINTENDENT.
10. COMPLETE SURVEY OF DECONTAMINATED SURFACE PRIOR TO BACKFILL TO CONFIRM QUANTITIES.
11. CONTRACTOR TO BACKFILL AREA TO LEVELS SHOWN ON DRG C011 OR C016 EARTHWORKS LAYOUT, UNDER LEVEL 1 SUPERVISION.
12. IMPORT FILL AS NECESSARY, ADHERING TO THE EARTHWORKS PERFORMANCE NOTES & SPECIFICATION.
13. STABILISE ALL BATTERS AND EARTHWORKS AREAS AS DETAILED ON DRG-C020, C021 OR C022.
14. REINSTATE TURF & HYDROMULCH TO ADJACENT AREAS (VERGE & CLAY CAP) DISTURBED DURING CONSTRUCTION AS PER COMPLETED OPTION.
15. COMPLETE 12 WEEK LANDSCAPE MAINTENANCE PERIOD.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ



BATTER CUTBACK DETAIL
N.T.S.



SEWER CROSS SECTION 1 C011\C016
SCALE 1:50

NOTE:
DECONTAMINATION EXTENT IS TO SITE BOUNDARIES. CONTRACTOR TO PROVIDE SAFE WORK METHODS TO STABILISE FACE OF EXCAVATION AND PROTECT EXISTING SURFACE AND FEATURES OUTSIDE PROPERTY.

HIGH RISK ACTIVITY
ASBESTOS CEMENT PRODUCTS
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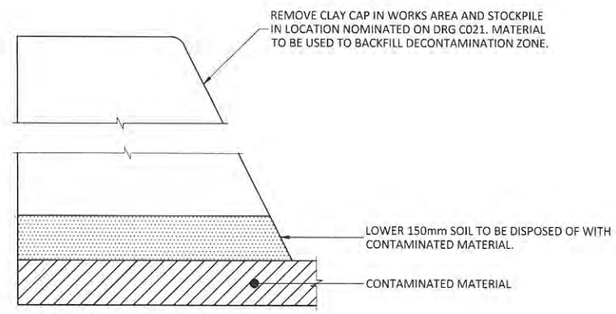

DECONTAMINATION DETAIL
SCALE 1:100

STATUS
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ASSOCIATED CONSULTANTS

APPROVED
RPEQ
DATE

CHECKED
DATE

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CONSULT AUSTRALIA Member Firm

CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET DECONTAMINATION

SUBJECT
EARTHWORKS NOTES AND DETAILS

PROJECT No.
13130

DRAWING No.
C010

REVISION
B

A1

HIGH RISK ACTIVITY

ASBESTOS CEMENT PRODUCTS

THIS PROJECT REQUIRES THE HANDLING, REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PRODUCTS.

ANY ACTIVITY ASSOCIATED WITH ASBESTOS CEMENT PRODUCTS SHALL BE IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDLINES AND SAFETY REQUIREMENTS.

PT NO	EASTING	NORTHING	LEVEL
1	7799.223	5057.226	3.069
2	7819.106	5054.17	3.112
3	7797.172	4911.557	2.605
4	7789.516	4914.15	2.865
5	7778.857	4917.76	2.76
6	7764.824	4922.513	2.721
7	7751.182	4927.133	2.81
8	7736.895	4931.973	2.718
9	7722.832	4936.735	2.889
10	7707.921	4941.786	2.986
11	7695.531	4945.982	3.119
12	7685.657	4949.327	3.149
13	7670.502	4954.459	3.224
14	7672.221	4962.345	1.103
15	7686.588	4957.135	1.251
16	7699.749	4952.363	1.386
17	7711.03	4948.272	1.502
18	7725.002	4942.83	1.647
19	7738.807	4936.961	1.792
20	7752.611	4931.092	1.937
21	7765.495	4925.615	2.073
22	7779.299	4919.746	2.218
23	7789.422	4915.442	2.324
24	7673.717	4969.207	1.173
25	7699.304	4960.541	1.444
26	7729.922	5001.561	1.958
27	7748.658	5021.753	2.234
28	7787.027	5081.737	2.951
29	7785.449	5090.003	3.035
30	7779.212	5095.248	3.116
31	7771.065	5095.382	3.198
32	7787.994	5101.085	3.377
33	7796.142	5100.952	3.377
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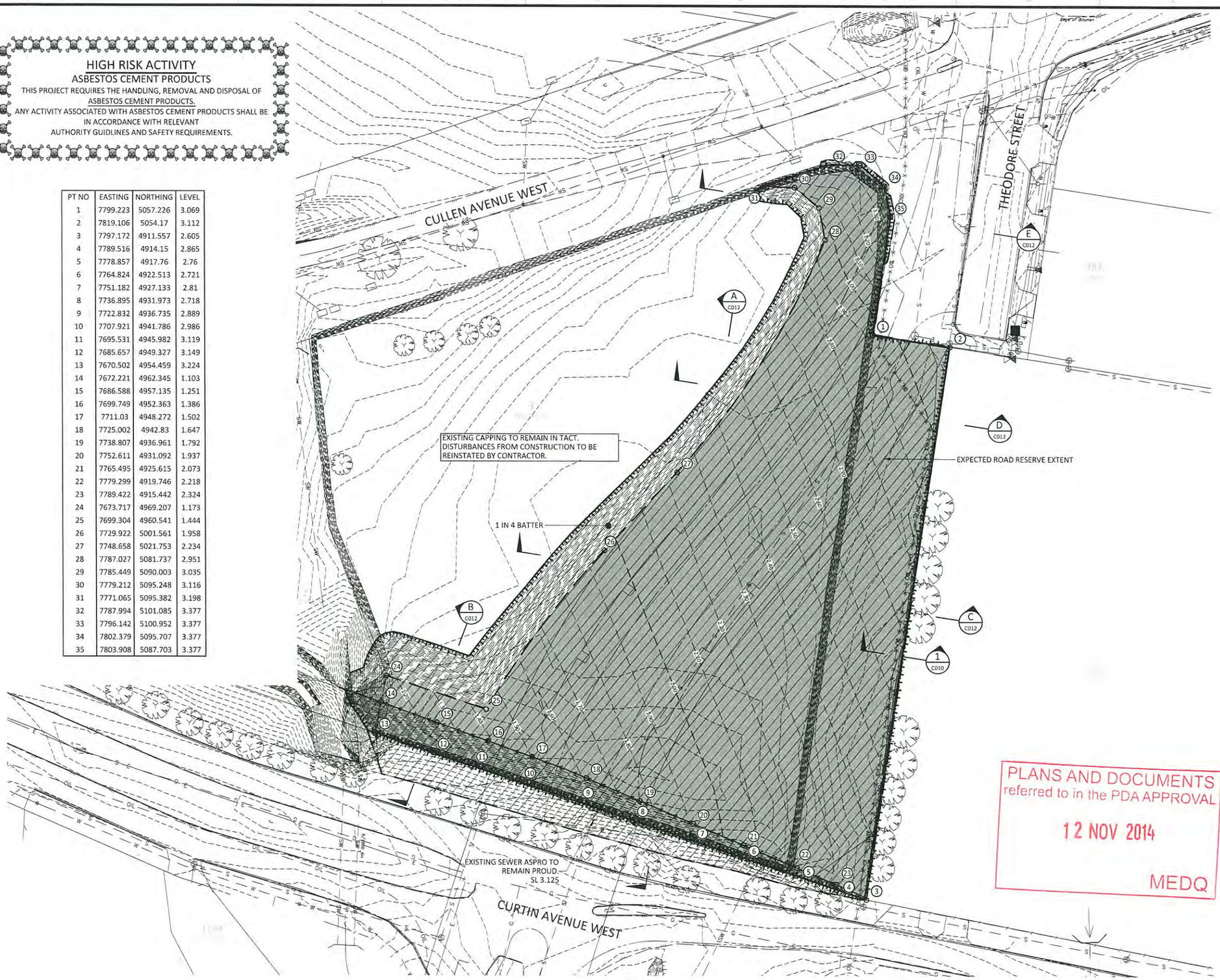

PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		EDGE OF BITUMEN
		EXTENT OF BUILDING
		PROPERTY BOUNDARY
SW		STORMWATER DRAINAGE
RW		ROOFWATER DRAINAGE
		OPEN CHANNEL
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52	52	CONTOURS
F		FENCE
S		SEWER
W		WATER
G		GAS
T		TELSTRA
TOF TOF		TELSTRA OPTIC FIBRE
OH PP		OVER HEAD POWER
OH E/T PP		OVERHEAD POWER AND TELSTRA
E		UNDER GROUND POWER
x x x x x x x x		ABANDONED SERVICE
		FOOTPATH
OIL		OIL/PETROLEUM PIPELINES (PLOTTED FROM RECORDS ONLY. CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION)
		TREE
		CUT
		FILL
		DECONTAMINATION EXTENT
	3	SETOUT POINT

NOTE:
1. FINISHED SURFACE CONTOURS SHOWN ONLY.
2. SETOUT LEVELS ARE TO FINISHED SURFACE. CONTRACTOR TO PLACE 100mm OF TOPSOIL ON EARTHWORKS SURFACE. REFER DRG C020.
3. EXISTING OIL MAIN SIGNAGE TO BE REMOVED OFF SITE.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 5 10 15 20 25m 1 : 500 / 1 : 1000

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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EARTHWORKS LAYOUT OPTION 1

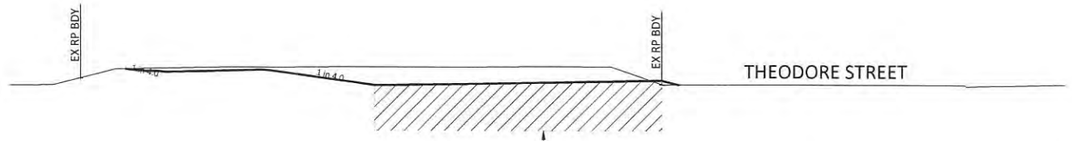
PROJECT No. 13130

DRAWING No. C011 — REVISION B

A1

LEGEND

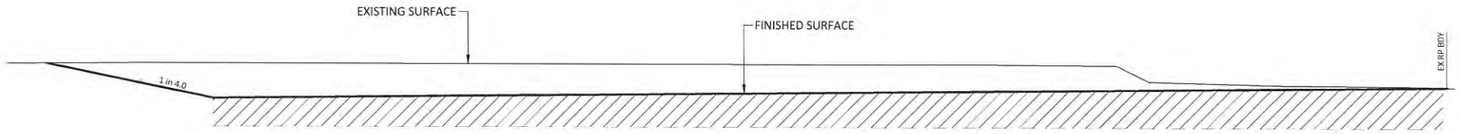
- DESIGN SURFACE
- EXISTING SURFACE
- FUTURE SURFACE
- AREA OF DECONTAMINATION



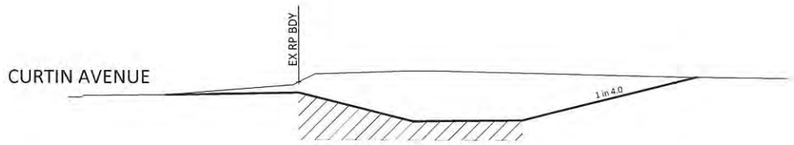
SECTION E C011

COMPLETE SURVEY OF DECONTAMINATED SURFACE PRIOR TO BACKFILL.

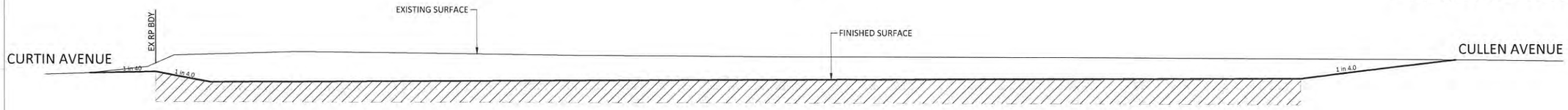
SECTION D C011



SECTION C C011



SECTION B C011



SECTION A C011

PLANS AND DOCUMENTS referred to in the PDA APPROVAL

12 NOV 2014

MEDQ

HIGH RISK ACTIVITY

ASBESTOS CEMENT PRODUCTS

THIS PROJECT REQUIRES THE HANDLING, REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PRODUCTS.
ANY ACTIVITY ASSOCIATED WITH ASBESTOS CEMENT PRODUCTS SHALL BE IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDLINES AND SAFETY REQUIREMENTS.

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED

A 0 2.5 5.0 7.5 10.0 12.5m 1 : 250 / 1 : 500

STATUS: FOR TENDER

EARTHWORK SECTIONS

SCALE A

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B	12.06.14	ISSUE FOR TENDER				
A	24.06.13	ISSUE FOR TENDER	KR	KR	NR	NR

ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

CHECKED — DATE

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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EARTHWORKS SECTIONS OPTION 1

PROJECT No. 13130 -

DRAWING No. C012 — REVISION B

A1

HIGH RISK ACTIVITY

ASBESTOS CEMENT PRODUCTS

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POINT NO	EASTING	NORTHING	LEVEL
1	7799.223	5057.226	3.069
2	7819.106	5054.170	3.112
3	7797.172	4911.557	2.605
4	7789.516	4914.150	2.865
5	7778.857	4917.760	2.760
6	7764.824	4922.513	2.721
7	7751.182	4927.133	2.810
8	7736.895	4931.973	2.718
9	7722.832	4936.735	2.889
10	7707.921	4941.786	2.986
11	7695.531	4945.982	3.119
12	7685.657	4949.327	3.149
13	7670.502	4954.459	3.224
14	7663.085	4965.657	1.009
15	7672.486	4962.248	1.106
16	7687.528	4956.794	1.261
17	7698.809	4952.703	1.377
18	7711.030	4948.272	1.502
19	7725.923	4942.438	1.657
20	7738.807	4936.961	1.792
21	7752.611	4931.092	1.937
22	7765.495	4925.615	2.073
23	7779.299	4919.746	2.218
24	7790.343	4915.051	2.334
25	7673.717	4969.207	1.173
26	7666.418	4987.179	1.406
27	7659.006	5007.407	1.665
28	7657.741	5017.315	1.784
29	7655.960	5033.672	1.982
30	7655.632	5036.681	2.018
31	7654.619	5056.862	2.261
32	7677.704	5064.710	2.368
33	7700.230	5073.382	2.475
34	7727.139	5081.646	2.599
35	7741.395	5086.764	2.666
36	7762.343	5093.309	2.763
37	7771.065	5095.382	3.198
38	7787.994	5101.085	3.377
39	7796.142	5100.952	3.377
40	7802.379	5095.707	3.377
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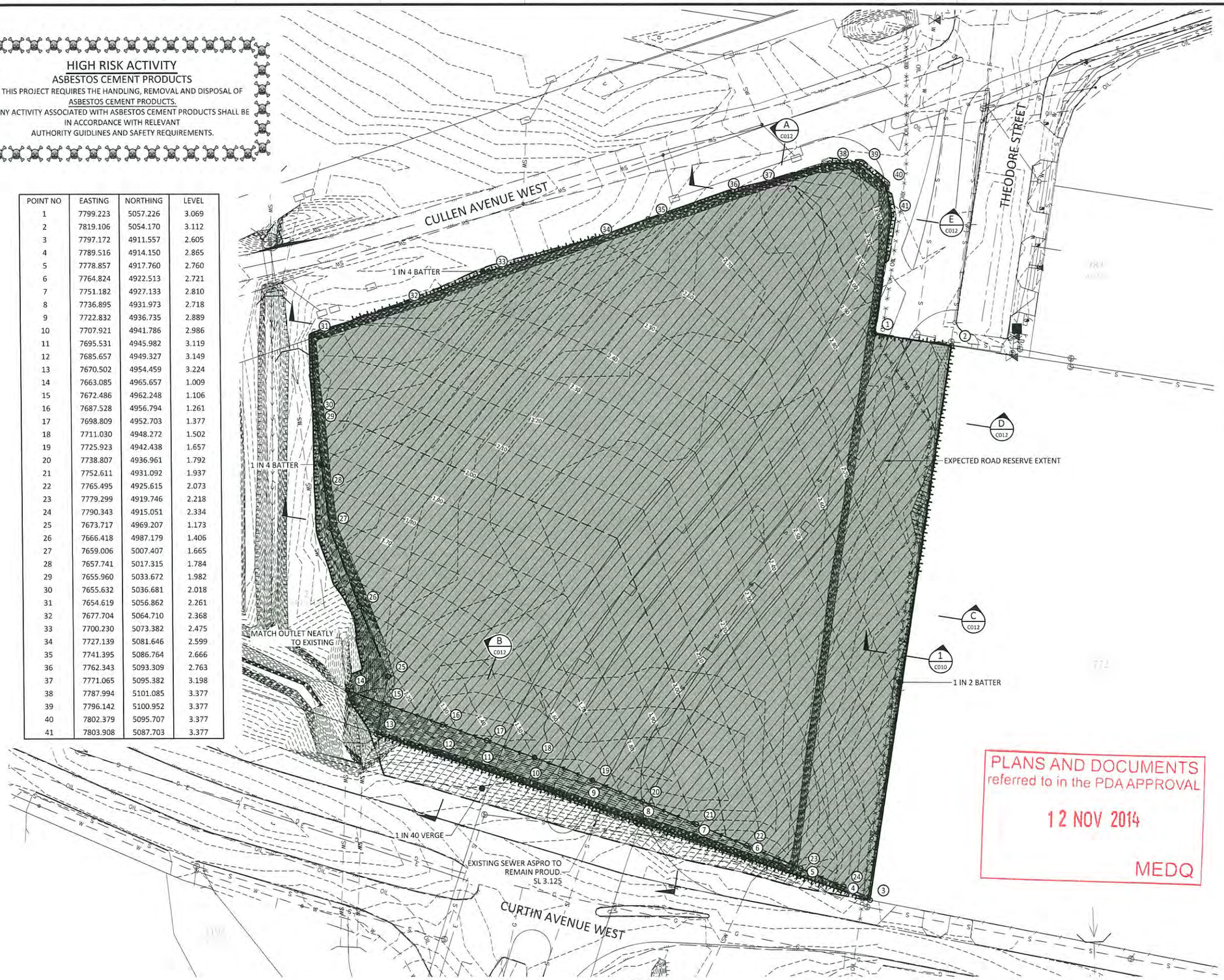

PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		KERB ONLY
		KERB FLUSH
		EDGE OF BITUMEN
		EXTENT OF BUILDING
		PROPERTY BOUNDARY
SW		STORMWATER DRAINAGE
RW		ROOFWATER DRAINAGE
		OPEN CHANNEL
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52	52	CONTOURS
		FENCE
S		SEWER
W		WATER
G		GAS
T		TELSTRA
TOF TOF		TELSTRA OPTIC FIBRE
OH PP		OVER HEAD POWER
OH E/T PP		OVERHEAD POWER AND TELSTRA
E		UNDER GROUND POWER
		ABANDONED SERVICE
		FOOTPATH
OIL		OIL/PETROLEUM PIPELINES (PLOTTED FROM RECORDS ONLY. CONTRACTOR TO CONFIRM LOCATION PRIOR TO CONSTRUCTION)
		TREE
		LINE OF VEGETATION
		CUT
		FILL
		DECONTAMINATION EXTENT
	3	SETOUT POINT

NOTE:
1. FINISHED SURFACE CONTOURS SHOWN ONLY.
2. SETOUT LEVELS ARE TO FINISHED SURFACE. CONTRACTOR TO PLACE 100mm OF TOPSOIL ON EARTHWORKS SURFACE. REFER DRG C020.
3. EXISTING OIL MAIN SIGNAGE TO BE REMOVED OFF SITE.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED, A3 REDUCED

SCALES — UNREDUCED / REDUCED
A 0 5 10 15 20 25m 1 : 500 / 1 : 1000

STATUS
FOR TENDER

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CONSULT AUSTRALIA Member Firm

CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EARTHWORKS LAYOUT OPTION 2

PROJECT No. 13130

DRAWING No. C016 — REVISION A

A1

LEGEND

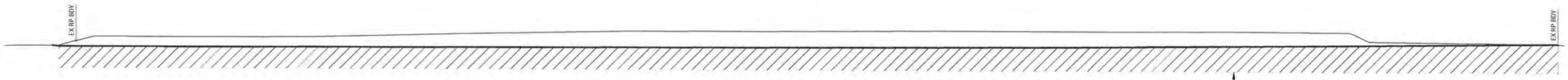
DESIGN SURFACE

EXISTING SURFACE

AREA OF DECONTAMINATION

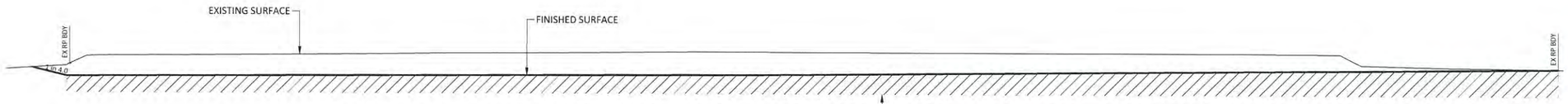
APPROXIMATE EXTENT OF DECONTAMINATION SHOWN ONLY. DEPTH OF EXCAVATION TO BE DETERMINED ON SITE IN CONJUNCTION WITH THE LEVELS FROM THE GEOTECHNICAL ENGINEER.

SECTION E C011



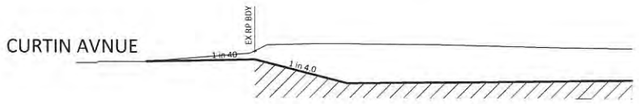
COMPLETE SURVEY OF DECONTAMINATED SURFACE PRIOR TO BACKFILL.

SECTION D C011

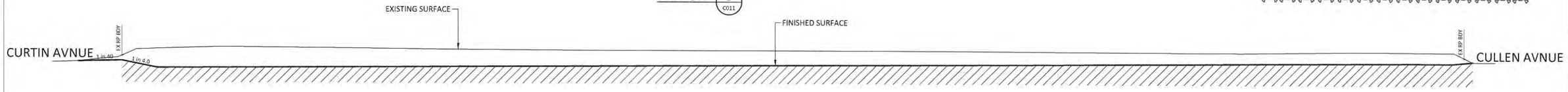


SECTION C C011

APPROXIMATE EXTENT OF DECONTAMINATION SHOWN ONLY. DEPTH OF EXCAVATION TO BE DETERMINED ON SITE IN CONJUNCTION WITH THE LEVELS FROM THE GEOTECHNICAL ENGINEER.



SECTION B C011



SECTION A C011

PLANS AND DOCUMENTS referred to in the PDA APPROVAL

12 NOV 2014

MEDQ

HIGH RISK ACTIVITY

ASBESTOS CEMENT PRODUCTS

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DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES

A1 UNREDUCED

A3 REDUCED

SCALES

UNREDUCED / REDUCED

A 0 2.5 5.0 7.5 10.0 12.5m 1 : 250 / 1 : 500

EARTHWORK SECTIONS

SCALE A

STATUS

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CONSULT AUSTRALIA Member Firm

CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT
THEODORE STREET DECONTAMINATION

SUBJECT
EARTHWORKS SECTIONS OPTION 2

PROJECT No. 13130

DRAWING No. C017

REVISION A

A1

EROSION & SEDIMENTATION CONTROL NOTES:

1. TOPSOIL

1.1. STRIP TOPSOIL FROM ALL CLAY CAP PRIOR TO BULK EARTHWORKS AND DISPOSE OFF SITE. GRADE EVENLY ACROSS FINISHED SURFACE LEVELS & ENSURE LOTS ARE FREE DRAINING.

1.2. MINIMUM SLOPE ACROSS ALLOTMENT TO BE 1%.

1.3. ALL FOOTPATHS, BATTERS, & EARTHWORK AFFECTED ALLOTMENTS ARE TO BE TOPSOILED TO A MINIMUM DEPTH OF 100mm (LIGHTLY COMPACTED) & TURFED OR SEEDED AS SPECIFIED.

1.4. SEDIMENT FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER DETAIL. SEDIMENT FENCES TO BE REPAIRED & EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE CAPACITY FALLS BELOW 75 %.

2. SEDIMENT FENCES

2.1. FOR DETAILS OF SEDIMENT FENCE REFER DETAIL.

2.2. SEDIMENT FENCES TO BE REPAIRED AS REQUIRED & EXCESSIVE SEDIMENT DEPOSITS SHOULD BE REMOVED.

2.3. REGULAR WEEKLY CHECKS OF SILT FENCES IS TO BE MADE ALONG WITH A CHECK AFTER ANY SIGNIFICANT STORM EVENT TO ENSURE INTEGRITY & PERFORMANCE.

3. TURFING

3.1. PROVIDE TURFING TO ENTIRE WIDTH OF ALL SWALES, FOOTPATHS, & 1 IN 4 CUT & FILL BATTERS.

3.2. FOOTPATH BATTERS ARE TO BE STABILISED WITH TOPSOIL (& TURFED) AS SOON AS PRACTICAL AFTER THE BATTERS HAVE BEEN COMPLETED. REMAINING EXPOSED AREAS ON LOTS ARE TO BE SEEDED & HYDROMULCHED AS NOTED ON C021.

4. DURING CONSTRUCTION SEQUENCE

4.1. STOCKPILE SITE TO HAVE A SEDIMENTATION FENCE CONSTRUCTED ON D/S SIDE.

4.2. SEDIMENTATION FENCES TO BE PLACED AS SHOWN.

4.3. REGULARLY INSPECT BANKS & REPAIR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD.

4.4. SUPPLEMENTARY EROSION & SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.

4.5. WATER QUALITY SAMPLES MUST BE TAKEN & 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 & 8.5. IF WATER QUALITY FAILS THE CRITERIA THEN THE USE OF A GYPSUM FLOCULENT IS TO BE APPLIED AS DIRECTED BY THE SUPERINTENDENT.

4.6. ALL WATER QUALITY DATA INCLUDING DATES OF RAINFALL, TESTING & WATER RELEASE MUST BE MAINTAINED IN AN ON-SITE REGISTER. THIS REGISTER IS TO BE MAINTAINED FOR THE DURATION OF THE APPROVED WORKS & BE AVAILABLE ON SITE FOR INSPECTION BY COUNCIL OFFICERS ON REQUEST.

4.7. GRASS SEEDING IS TO ACHIEVE 70% COVER WITHIN 30 DAYS OF COMPLETION OF EARTHWORKS.

4.8. THE CONTRACTOR IS ULTIMATLY RESPONSIBLE FOR PROVISION OF & MAINTENANCE OF ALL SEDIMENT & EROSION CONTROL DEVICES, WITH SUITABLE MEASURES BEING IMPLEMENTED DURING ALL STAGES OF CONSTRUCTION. THE MEASURES SHOWN ON DRG C021 ARE CONSIDERED THE MINIMUM STANDARD ONLY.

5. FOLLOWING CONSTRUCTION

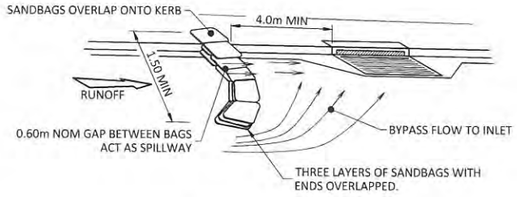
5.1. SEDIMENTATION FENCES TO BE MAINTAINED UNTIL TURFING IS COMPLETED & GRASS IS 80% ESTABLISHED.

EROSION & SEDIMENT CONTROL PROGRAM

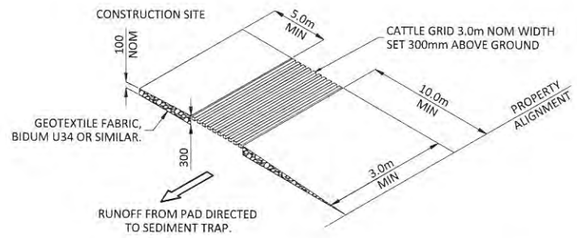
1. THIS PROGRAM AND ASSOCIATED PLANS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION'S INCORPORATED IN THE CONTRACT DOCUMENTS. THE PROVISIONS OF THE SPECIFICATION'S ARE TO BE STRICTLY ADHERED TO.
2. THE BASIC OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL ARE :
   - 2.1. IDENTIFY CRITICAL AREAS AND PROVIDE SPECIAL ATTENTION TO THOSE AREAS.
   - 2.2. PLAN SITE LAYOUTS SO THAT ACCESS TO ALL REQUIRED DRAINAGE EROSION AND SEDIMENT CONTROL MEASURES IS MAINTAINED.
   - 2.3. LIMIT EXPOSURE TIME BY PROGRAMMING TO MINIMISE THE AREA OF LAND EXPOSED TO POTENTIALLY ADVERSE WEATHER CONDITIONS AT ANY ONE TIME.
   - 2.4. PROVIDE CONTROL MEASURES INCLUDING TEMPORARY AND PERMANENT DRAINAGE, EROSION AND SEDIMENT CONTROLS.
3. THE EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH BCC EROSION AND SEDIMENT CONTROL STANDARDS, THE SOIL EROSION AND SEDIMENTATION CONTROL - ENGINEERING GUIDELINES FOR QUEENSLAND (CURRENT EDITIONS), AND ALL OTHER BCC EROSION AND SEDIMENT CONTROL GUIDELINES.
4. ALL ESC DEVICES ARE TO BE INSPECTED WEEKLY, PRIOR TO EXPECTED AND AFTER RAINFALL. ANY DAMAGE OR EXCESS EROSION/ SEDIMENT IS TO BE REPAIRED AND MANAGED AS REQUIRED TO MAINTAIN CONTROL DEVICES.
5. WATER DISCHARGE

   5.1 CRITERIA: Samples must be taken and analysed prior to the release of water from ponds.
   - TSS<50 mg/L
   - pH BETWEEN 6.5 AND 8.5.

   5.2 TREATMENT:
   - High TSS: Add Gypsum. BCC Guideline suggests 32 to 70kg/400m³ water.
   - Low ph: Add Aglime/Hydrated Lime or Sodium Bicarbonate. Refer QLD SPP 2/02 Guideline, Table 5 for suggested dosage rates.
   - High pH: Add Citric Acid. Testing for both pH & Alkalinity are necessary to determine dosage rates.
6. 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.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL (ESC) MEASURES 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.
8. 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.
9. 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.
10. CONSTRUCTION ACCESS SHALL BE AT ONLY ONE NOMINATED POINT ON THEODORE STREET.
11. FOR DETAILS OF SHAKE DOWN AREA REFER DETAIL.
12. SUPPLEMENTARY EROSION AND SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE SUPERINTENDENT AND/OR COUNCIL.
13. SEDIMENT CONTROL DEVICES SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL AT LEAST 70% SOIL COVERAGE UPSTREAM AND DOWNSTREAM OF THE DEVICE IS ACHIEVED AND/OR AS DIRECTED BY COUNCIL.
14. SEDIMENT FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER TO IPWEAQ STANDARD DRAWING DS-040. THE ENDS OF ALL SEDIMENT FENCES ARE TO RETURN UP THE CONTOUR SO AS TO RETAIN ALL SEDIMENT.
15. SEDIMENT FENCES TO BE REPAIRED AND EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE THE FENCE REACHES 75% OF ITS CAPACITY.
16. EXCAVATED MATERIAL WILL BE PLACED DIRECTLY INTO FILL AREAS IN ACCORDANCE WITH THE APPROVED EARTHWORKS SPECIFICATION.
17. ANY IMPORTED FILL MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION.



KERB INLET SEDIMENT TRAP
NTS



NOTE 1: UNBOUND PAVEMENT MATERIAL (GRAVEL) TO GRADING B, TABLE 9 OF QT SPECIFICATION MRS11.05, EXCLUDE MATERIAL FINER THAN AS SIEVE 2.36mm.

TEMPORARY CONSTRUCTION ENTRY / EXIT SEDIMENT TRAP
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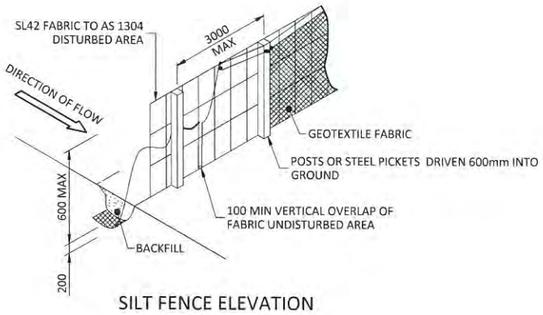

SILT FENCE ELEVATION
N.T.S.

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

STATUS
FOR TENDER

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ASSOCIATED CONSULTANTS

APPROVED ..... RPEQ
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CHECKED .....
DATE

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CLIENT
ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

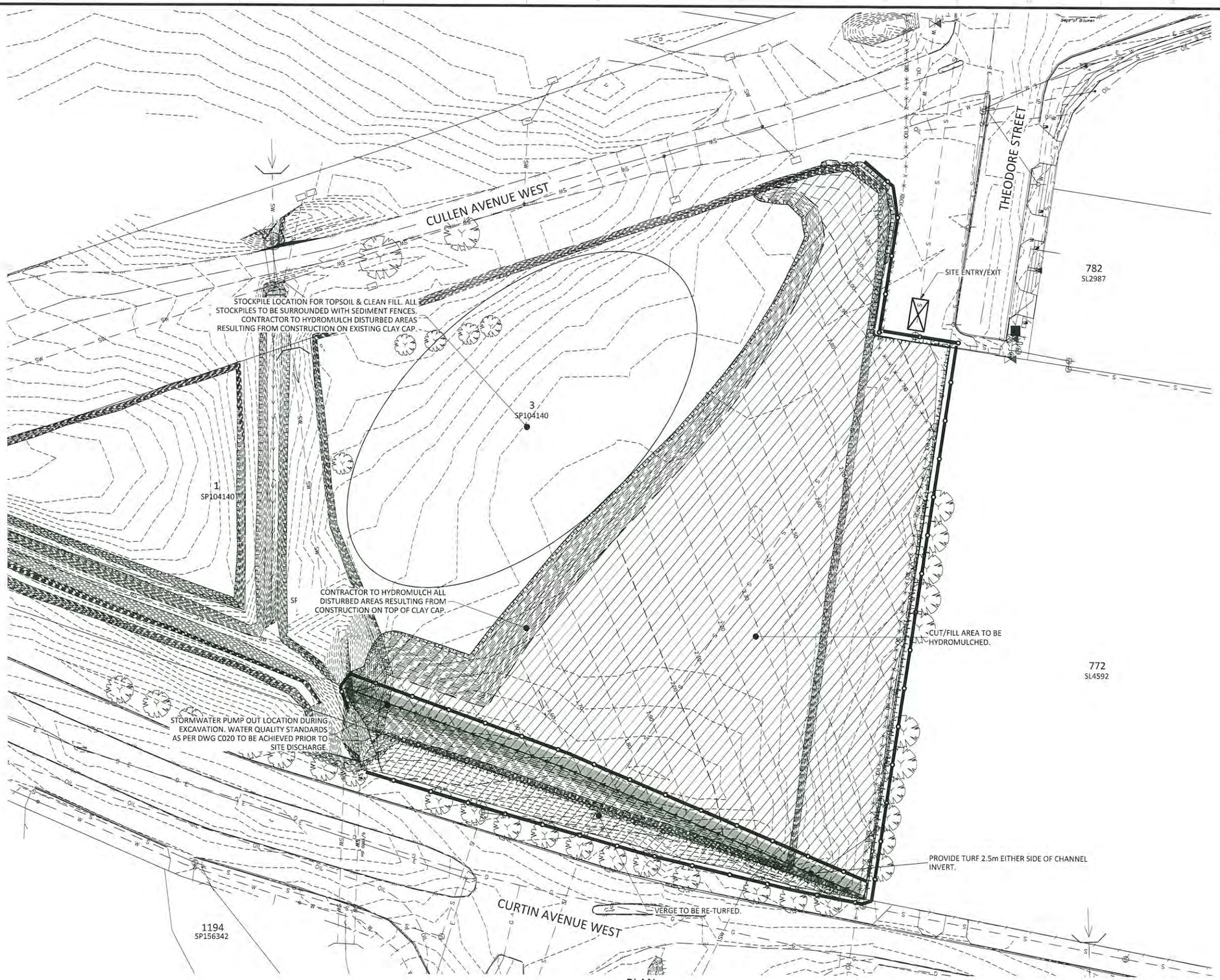
PROJECT
THEODORE STREET DECONTAMINATION

SUBJECT
EROSION & SEDIMENT CONTROL NOTES AND DETAILS

PROJECT No. 13130

DRAWING No. C020 REVISION B

A1



PLAN
SCALE A

LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
SW		STORMWATER DRAINAGE
		OPEN CHANNEL
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52	52	CONTOURS
		FENCE
		ABANDONED SERVICES
		TREE
		SEDIMENT FENCE
		ENTRY/EXIT SEDIMENT TRAP
		STOCKPILE LOCATION
		CUT
		FILL

PLANS AND DOCUMENTS referred to in the PDA APPROVAL
12 NOV 2014
MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES — A1 UNREDUCED / A3 REDUCED

SCALES — UNREDUCED / REDUCED

A — 0 5 10 15 20 25m — 1 : 500 / 1 : 1000

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CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

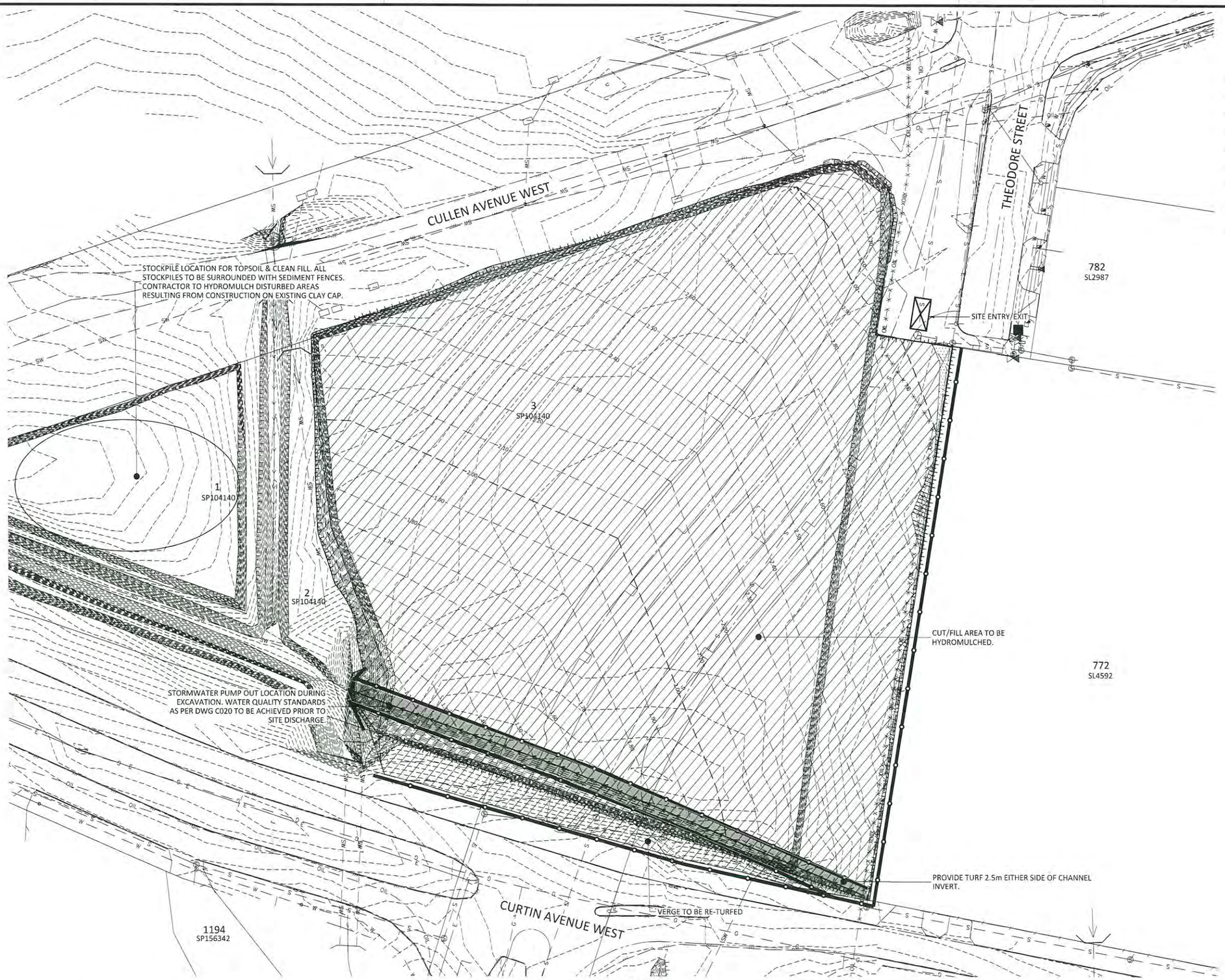
PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EROSION & SEDIMENT CONTROL OPTION 1

PROJECT No. 13130

DRAWING No. C021 — REVISION B

A1



LEGEND

EXISTING	PROPOSED	
		KERB AND CHANNEL
		EDGE OF BITUMEN
		PROPERTY BOUNDARY
		EASEMENT
SW		STORMWATER DRAINAGE
		OPEN CHANNEL
TOP OF BATTER / TOE OF BATTER	TOP OF BATTER / TOE OF BATTER	BATTER
52	52	CONTOURS
		FENCE
		TREE
		SEDIMENT FENCE
		ENTRY/EXIT SEDIMENT TRAP
		STOCKPILE LOCATION
		CUT
		FILL

PLANS AND DOCUMENTS referred to in the PDA APPROVAL

12 NOV 2014

MEDQ

PROJECT NORTH

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE. CULVERT AND PIPE SIZES IN MILLIMETRES

A1 UNREDUCED
A3 REDUCED

SCALES — UNREDUCED / REDUCED

A — 0 5 10 15 20 25m — 1 : 500 / 1 : 1000

PLAN
SCALE A

STATUS

FOR TENDER

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REV.	DATE	AMENDMENT / ISSUE	DWN	DES	CHK	APP
A	12.06.14	ISSUE FOR TENDER				

ASSOCIATED CONSULTANTS

APPROVED — RPEQ — DATE

CHECKED — DATE

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CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND (EDQ)

PROJECT: THEODORE STREET DECONTAMINATION

SUBJECT: EROSION & SEDIMENT CONTROL OPTION 2

PROJECT No. 13130

DRAWING No. C022 — REVISION A

A1