

GENERAL NOTES

- GN1. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
- GN2. THE DATUM FOR ALL LEVELS IS THE AUSTRALIAN HEIGHT DATUM IN METERS AND PROJECTIONS ARE BASED ON REAL WORLD MGA ZONE 56 COORDINATES.
- GN3. ALL CONSTRUCTION SHALL JOIN SMOOTHLY TO EXISTING.
- GN4. THE CONTRACTOR SHALL CONTACT ALL RELEVANT SERVICE AUTHORITIES FOR DETAILED LOCATION AND LEVEL OF SERVICES PRIOR TO COMMENCEMENT OF WORKS AND THE SITE. ANY DAMAGE TO EXISTING SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- GN5. ALL WORK SHALL CONFORM WITH THE RELEVANT CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES, SPECIFICATIONS AND REQUIREMENTS.

CLEARING OF VEGETATION

- VE1. NO CLEARING SHALL BE CARRIED OUT BEYOND THE EXTENT OF EARTHWORKS OR WHERE NECESSARY FOR SERVICES CONSTRUCTION WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.
- VE2. ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND FULLY OPERATIONAL BEFORE COMMENCING ANY CLEARING.

EARTHWORKS AND PAVEMENT CONSTRUCTION NOTES

- EW1. THE CONTRACTOR SHALL PROVIDE CERTIFICATION FROM A RPEQ QUALIFIED ENGINEER THAT THE INSPECTION AND TESTING HAS BEEN UNDERTAKEN IN ACCORDANCE WITH CMDG CP1-CONSTRUCTION PROCEDURES, SECTION CP1.15, INCLUDING MANDATORY HOLD POINT INSPECTIONS.
- EW2. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL INVESTIGATION REPORT - (IF AVAILABLE)
- EW3. ALL EXISTING UNDERGROUND SERVICES TO BE LOCATED AND MARKED PRIOR TO COMMENCING EARTHWORKS.
- EW4. ALL EXCAVATIONS ARE ASSUMED TO ENCOUNTER WATER SEEPAGE AND THEREFORE THE CONTRACTOR SHALL MAKE PROVISION FOR WATER INGRESS DURING CONSTRUCTION.
- EW5. THE CONTRACTOR IS REQUIRED TEST THE INSITU SUBGRADE CBR, SHRINK / SWELL POTENTIAL, AND LIME DEMAND TO ASSESS ANY ADDITIONAL SUBGRADE TREATMENT REQUIREMENTS PRIOR TO PAVEMENT CONSTRUCTION.
- EW6. SUBGRADES WITH CBR LESS THAN 3% REQUIRE ADDITIONAL MINIMUM COVER TO PROVIDE A STABLE CONSTRUCTION PLATFORM CONSISTING OF GEOTEXTILE WRAPPED GRANULAR MATERIAL, COMPRISING OF EITHER COARSE UNBOUND GRANULAR MATERIAL (TYPE 2.5 MATERIAL IN DRY CONDITIONS, OR TYPE 2.4 MATERIAL IN WET CONDITIONS) OR ROCK FILL (MRTS04 GENERAL EARTHWORKS), WITH THICKNESS AS INDICATED IN TABLE 1. (ALSO REFER TMR SUPPLEMENT TO AGPT PART 2, TABLE 3.14.1.)

TABLE 2:

IN SITU SUBGRADE CBR AT TIME OF CONSTRUCTION (%)	TYPICAL MINIMUM COVER OF GRANULAR FILL TO PROVIDE A STABLE CONSTRUCTION PLATFORM (mm)
1.0-1.4	400
1.5-1.9	300
2.0-2.4	200
2.5-2.9	100

- EW7. WHERE THE SUBGRADE IS CLASSIFIED AS HAVING HIGH EXPANSIVE NATURE (HAVING SWELL > 5.0%) ADDITIONAL MINIMUM COVER THICKNESS (INCLUSIVE OF PAVEMENT AND ANY NON-REACTIVE FILL / SUBGRADE TREATMENTS) IS REQUIRED TO MINIMISE VOLUME CHANGE IMPACTS ON THE OVERLYING PAVEMENT CAUSED BY SEASONAL MOISTURE VARIATION. THE TOTAL COVER THICKNESS REQUIREMENTS ARE PROVIDED IN TABLE 2. WHERE THE SUBGRADE SWELL IS > 10% ADDITIONAL GEOTECHNICAL ADVICE MUST BE SOUGHT. (ALSO REFER TO TMR SUPPLEMENT TO AGPT PART 2, TABLE 5.3.5 AND FIGURE 5.3.5.)

EARTHWORKS AND PAVEMENT CONSTRUCTION NOTES (CONT.)

TABLE 2:

TYPICAL COVER THICKNESS OVER HIGHLY AND VERY HIGHLY EXPANSIVE MATERIAL FOR FLEXIBLE PAVEMENTS		
TRAFFIC	HIGHLY EXPANSIVE SOIL (SWELL 2.5% TO 5.0%)	VERY HIGHLY EXPANSIVE SOIL (SWELL 5.0% TO 10%)
3.5E = 05 ESAs	615 mm	910 mm
6.0E = 05 ESAs	650 mm	950 mm
8.0E = 05 ESAs	680 mm	980 mm

- EW8. ALL FILLING SHALL BE CLEAN EXCAVATED MATERIAL FREE FROM TOPSOIL AND VEGETATION.
- EW9. THE EXISTING SITE WON MATERIALS MAY CONTAIN ROCKS AND COBBLES AND THESE SHALL BE EXCLUDED OVER 50mm NOMINAL SIZE IN ANY EXISTING MATERIAL USED AS FILLING.
- EW10. ANY IMPORTED FILLING MATERIAL REQUIRED TO MAKE UP SHORTFALLS IN QUANTITIES SHALL BE CLEAN SOIL MATERIAL FREE FROM TOPSOIL, VEGETABLE MATTER AND OTHER DELETERIOUS MATERIAL. THE FILLING SHALL BE FREE FROM COBBLES OR ROCKS IN EXCESS OF 50mm NOMINAL SIZE. THE MATERIAL SHALL HAVE A MINIMUM SOAKED CBR 15 UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
- EW11. ALL FILLING SHALL BE PLACED IN MAXIMUM 200mm LOOSE LAYER THICKNESS WITH EACH LAYER COMPACTED TO AT LEAST 98% COMPACTING AS MEASURED BY THE STANDARD METHOD DESCRIBED IN AS 1289.
- EW12. FILL DENSITY TESTING SHALL CONFORM TO THE FOLLOWING:
- 1 TEST PER 500 cu.m - GENERALLY
 - 1 TEST PER 2 LAYERS PER 40m - TRENCH BACKFILL
- EW13. PLACEMENT OF FILL SHALL CONFORM TO THE FOLLOWING MINIMUM DRY DENSITY RATIO (M.D.D.R.) COMPACTION STANDARDS:
- ALLOTMENTS = 98% STD
 - ROAD VERGES/EMBANKMENTS = 98% STD
 - PAVEMENT SUBGRADE = 98% STD (70% DENSITY INDEX FOR COHESIONLESS MATERIALS)
- EW14. ALL EXISTING GRASSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE TOP SOILED TO A MINIMUM DEPTH OF 100mm AND TURFED OR SEEDED WITH A MINIMUM STRIKE RATE OF 80% PRIOR TO PRACTICAL COMPLETION INSPECTION.
- EW15. ALL TEMPORARY STOCKPILES (IF APPLICABLE) TO HAVE 1:6 MAXIMUM SIDE BATTERS (GRASS SEEDED). NO TEMPORARY STOCKPILES SHALL BE PLACED WITHIN 10m OF A FLOODWAY.

ROADWORKS NOTES

- RD1. THE CONTRACTOR SHALL ESTABLISH THE LOCATION, LINE & LEVEL OF ALL PUBLIC AND PRIVATE UTILITY SERVICES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. WHERE UTILITY SERVICES ARE SHOWN ON THE PLANS, THEY ARE SHOWN FOR THE INFORMATION OF THE CONTRACTOR ONLY. THE PRINCIPAL SHALL NOT BE LIABLE FOR ANY OMISSION OF SERVICES FROM THE PLANS OR THE ACCURACY OF ANY SERVICES SHOWN ON THE PLANS.
- RD2. SURFACE LEVELS OVER THE SITE HAVE BEEN INTERPOLATED THROUGH COMPUTER MODELING OF FIELD SURVEY DATA. THESE CALCULATED LEVELS MAY VARY FROM THE ACTUAL GROUND LEVEL.
- RD3. ALL CONSTRUCTION LEVELS SHALL BE SET BY THE CONTRACTOR WITH REFERENCE TO SURVEYED BENCH MARKS PROVIDED BY THE PRINCIPAL'S APPOINTED SURVEYOR.
- RD4. ALL KERBING SHALL CONFORM TO RELEVANT CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES STANDARD DRAWINGS.
- RD5. ALL ROADSIDE VERGE AREAS AND BATTERS SHALL BE TOP SOILED TO A MINIMUM DEPTH OF 100mm (LIGHTLY COMPACTED) AND TURFED OR SEEDED.
- RD6. PAVEMENT MARKINGS AND SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH THE QUEENSLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

DRAINAGE NOTES




- DN1. THE CONTRACTOR SHALL CONFIRM ALL LEVELS BEFORE COMMENCING WORK.
- DN2. ALL EXISTING UNDERGROUND SERVICES TO BE LOCATED AND MARKED PRIOR TO COMMENCING EARTHWORKS.
- DN3. PIPE BEDDING AND BACKFILL ARE IN ACCORDANCE WITH CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES, SPECIFICATION AND/OR STANDARD DRAWINGS.
- DN4. MATERIALS AND CONSTRUCTION ARE IN ACCORDANCE WITH COUNCIL'S STANDARD SPECIFICATION FOR STORMWATER DRAINAGE.
- DN5. REINFORCED CONCRETE DRAINAGE PIPES UP TO 600 Ø SHALL BE RUBBER JOINTED CLASS 4 RCP'S UNLESS NOTED OTHERWISE.
- DN6. REINFORCED CONCRETE DRAINAGE PIPES 675 Ø OR LARGER SHALL BE FLUSH JOINTED CLASS 3 RCP'S UNLESS NOTED OTHERWISE.
- DN7. STORMPRO (PPE, RRJ, MINIMUM CLASS SN8), OR APPROVED EQUIVALENT, MAY BE ACCEPTED WITH SITE SPECIFIC COUNCIL APPROVAL. TRENCH WIDTHS AND BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING DS-030 AND AS2566.2. COMPACTION OF BEDDING AND BACKFILL MATERIAL SHALL BE MINIMUM 90% MMDD IN ACCORDANCE WITH AS2566.2. HDPE PIPES SHALL BE OVALITY TESTED PRIOR TO PRACTICAL COMPLETION WITH COUNCIL, TO DEMONSTRATE <7.5% DEFORMATION.
- DN8. FIBRE REINFORCED CONCRETE DRAINAGE PIPES SHALL NOT BE PERMITTED.
- DN9. ALL STORMWATER BEDDING SHALL BE TYPE 'H2'.
- DN10. FILL BETWEEN TWIN BOX CULVERTS TO BE DRY LEAN MIX.
- DN11. BITUTHENE TAPE TO BE USED ON BOX CULVERT JOINTS.
- DN12. DE-WATERING WHERE REQUIRED TO BE AT THE CONTRACTORS COST.
- DN13. INVERT LEVELS SHOWN ON PLAN ARE AT PIPE/STRUCTURE JUNCTION.
- DN14. NOMINAL COVER TO RCP'S IS 600mm IN ROADWAYS AND 400mm IN LANDSCAPED AREAS. NOMINAL COVER TO RCBC'S ARE 300mm IN ROADWAYS.
- DN15. THE CONTRACTOR IS TO ENSURE THE METHOD OF COMPACTION OF THE BACKFILL IS SUITABLE FOR THE CLASS OF PIPE INDICATED ON THE DRAWINGS.
- DN16. LIDS TO CAST-IN-SITU MANHOLES ARE HEAVY DUTY, CLOSE FITTING BOLT DOWN CAST IRON OR GALVANISED STEEL, CONCRETE INFILL TYPE (GATIC LIGHT DUTY, POLYCRETE BROADSTEL OR SIMILAR) OF APPROXIMATELY THE SAME INTERNAL DIMENSIONS AS THE MANHOLE.
- DN17. ALL STEEL GRATES AND FRAMES TO BE HOT DIPPED GALVANIZED AND SHALL BE CYCLE PROOF IN ACCORDANCE WITH AS 3996.
- DN18. LIDS MATCH FINISHED SURFACE GROUND SLOPE AND SIT PROUD AS SHOWN ON THE LOCAL AUTHORITIES STANDARD AND ARE MARKED "STORMWATER" IMPRESSED INTO THE CONCRETE INFILL. INFILL CONCRETE IS CLASS N25.
- DN19. UPVC PIPE AND KERB ADAPTORS ARE USED WHERE DISCHARGE IS INTO THE KERB AND CHANNEL.

UNDERGROUND SERVICES

- US1. UNDERGROUND SERVICES HAVE BEEN LOCATED ONLY WHERE OBVIOUS. SOME SERVICES THAT WERE NOT OBVIOUS AND ARE NOT SHOWN ON THE DRAWINGS MAY STILL BE PRESENT. IT IS THE RESPONSIBILITY OF ANY PERSON EXCAVATING / BUILDING ON, OR ADJACENT TO THE SITE TO CONFIRM WITH THE RELEVANT AUTHORITY THE LOCATION OF SERVICES.
- US2. NEITHER THE PRINCIPAL OR THE CONSULTING ENGINEER EXCEPTS RESPONSIBILITY FOR DAMAGE TO SERVICES SHOWN OR NOT SHOWN ON THE DESIGN DRAWINGS.
- US3. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DAMAGE INCURRED TO EXISTING UTILITY SERVICES AS A RESULT OF THE EXECUTION OF WORK UNDER THE CONTRACT. ANY DAMAGE TO EXISTING SERVICES (WHETHER IDENTIFIED ON DRAWINGS OR NOT) SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- US4. BEFORE YOU DIG AUSTRALIA TO BE CONTACTED FOR THE LOCATION OF EXISTING PUBLIC UTILITIES PRIOR TO EXCAVATION.

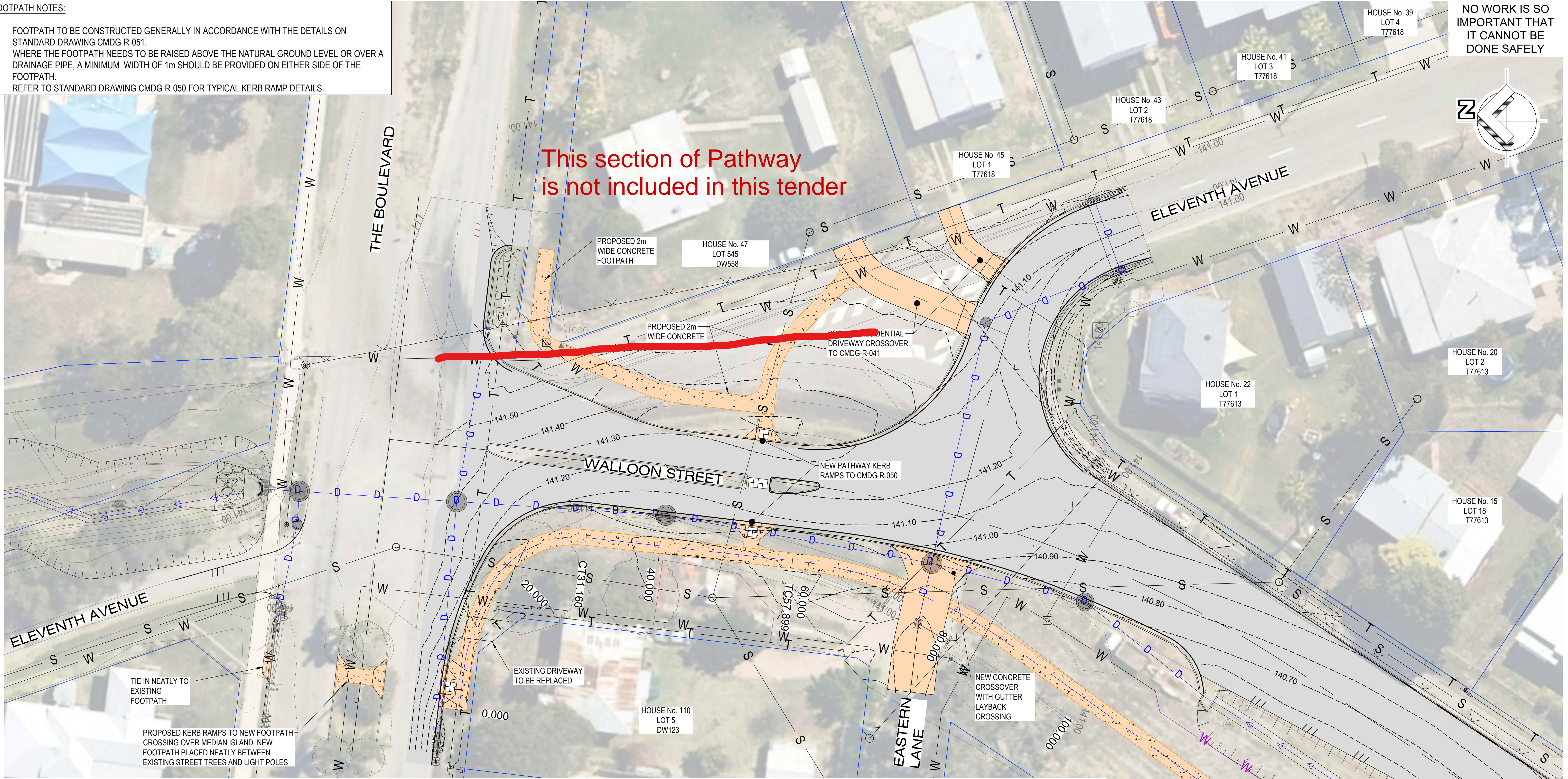


NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

				DESIGN CS		 		WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS GENERAL NOTES							
				DRAWN CS											
				DESIGN CHECK SS											
				 Director: TONY SHELLEY (RPEQ 7736)		p 07 5443 8285 e office@barlowshelley.com.au w www.barlowshelley.com.au a PO Box 899 Maroochydyore 4558 ABN 89 215 591 077		Scale		Dwg. No.		Sheet		Issue	
1		ISSUE FOR CONSTRUCTION		17.11.2023		AS SHOWN		2320-002		2 OF 85		1			
No.		Revision		Date											

- FOOTPATH NOTES:**
1. FOOTPATH TO BE CONSTRUCTED GENERALLY IN ACCORDANCE WITH THE DETAILS ON STANDARD DRAWING CMDG-R-051.
 2. WHERE THE FOOTPATH NEEDS TO BE RAISED ABOVE THE NATURAL GROUND LEVEL OR OVER A DRAINAGE PIPE, A MINIMUM WIDTH OF 1m SHOULD BE PROVIDED ON EITHER SIDE OF THE FOOTPATH.
 3. REFER TO STANDARD DRAWING CMDG-R-050 FOR TYPICAL KERB RAMP DETAILS.

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



LEGEND

	EXISTING PROPERTY BOUNDARY		EXISTING FENCE		PROPOSED FOOTPATH COUNCIL SETOUT OPTION		PROPOSED ROAD SHOULDER
	EXISTING WATERMAIN		EXISTING BITUMEN		PROPOSED DRIVEWAY		PROPOSED KERB
	PROPOSED WATER MAIN		EXISTING KERB & CHANNEL		PROPOSED ROAD SURFACE		PROPOSED CONTROL LINE (ROADWORKS)
	EXISTING GRAVITY SEWER		EXISTING SWALE		PROPOSED INLET PIT		PROPOSED CONTROL LINE (FOOTPATH)
	EXISTING STORMWATER		EXISTING TREE		PROPOSED STORMWATER		PROPOSED SWALE
	EXISTING ELECTRICAL		EXISTING TREE - PROTECTED SPECIES LIVISTONIA NITIDA		PROPOSED HEADWALL		PROPOSED SURFACE CONTOURS
	EXISTING TELECOMMUNICATIONS		EXISTING SURVEY STAKES		PROPOSED FINISHED SURFACE LEVEL		EXISTING SURFACE CONTOURS
	NEWLY CONSTRUCTED IRRIGATION MAIN (BY OTHERS)						EARTHWORK BATTERS

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY (RPEQ 7736)

Banana SHIRE
 SHIRE OF OPPORTUNITY

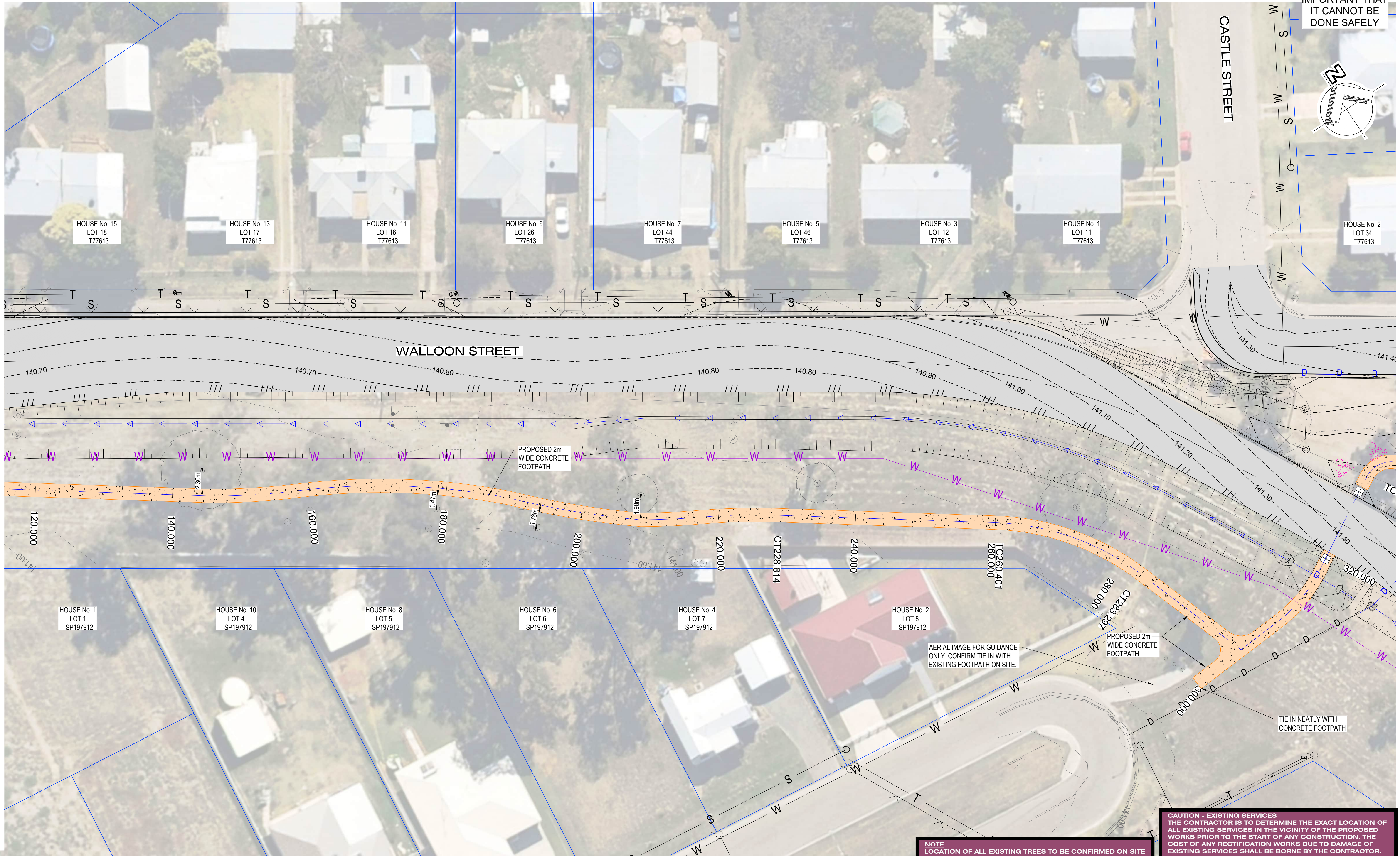
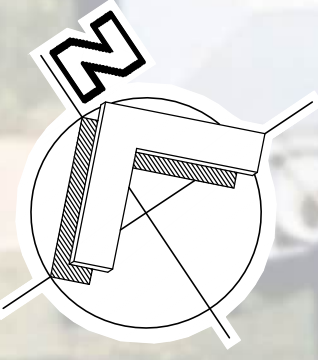
Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
 PAVEMENT WIDENING AND REHABILITATION WORKS
 FOOTPATH LAYOUT PLAN 1 OF 6

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-150	48 OF 85	1

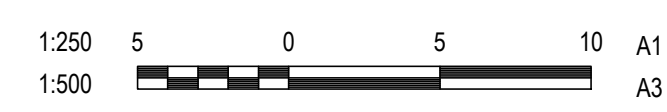
NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



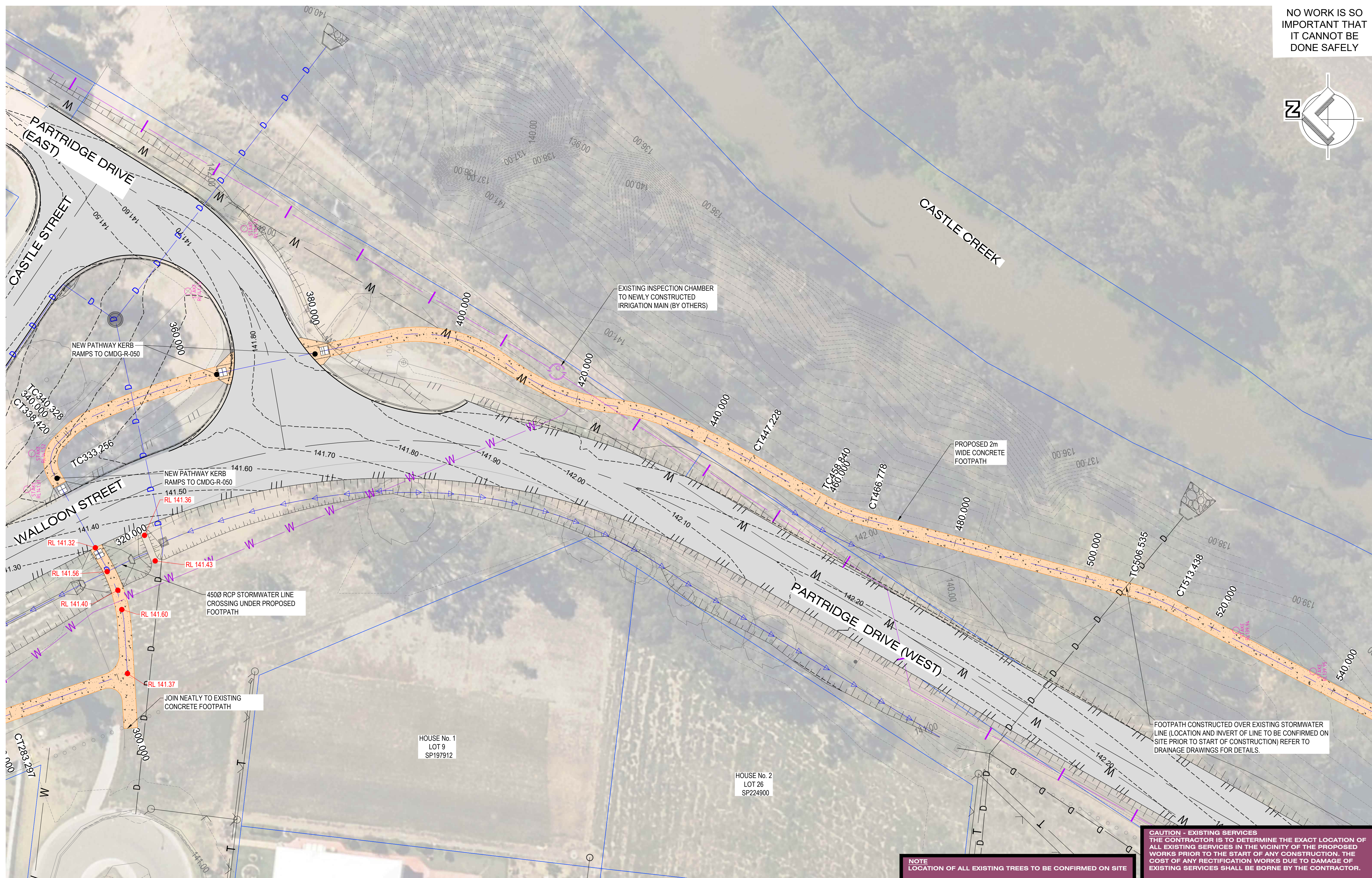
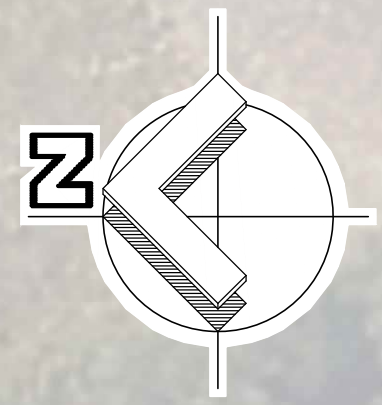
DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS FOOTPATH LAYOUT PLAN 2 OF 6			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-151	49 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

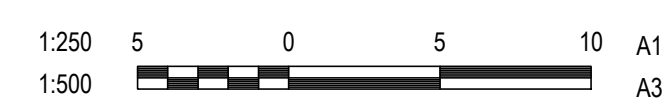


FOOTPATH CONSTRUCTED OVER EXISTING STORMWATER LINE (LOCATION AND INVERT OF LINE TO BE CONFIRMED ON SITE PRIOR TO START OF CONSTRUCTION) REFER TO DRAINAGE DRAWINGS FOR DETAILS.

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)



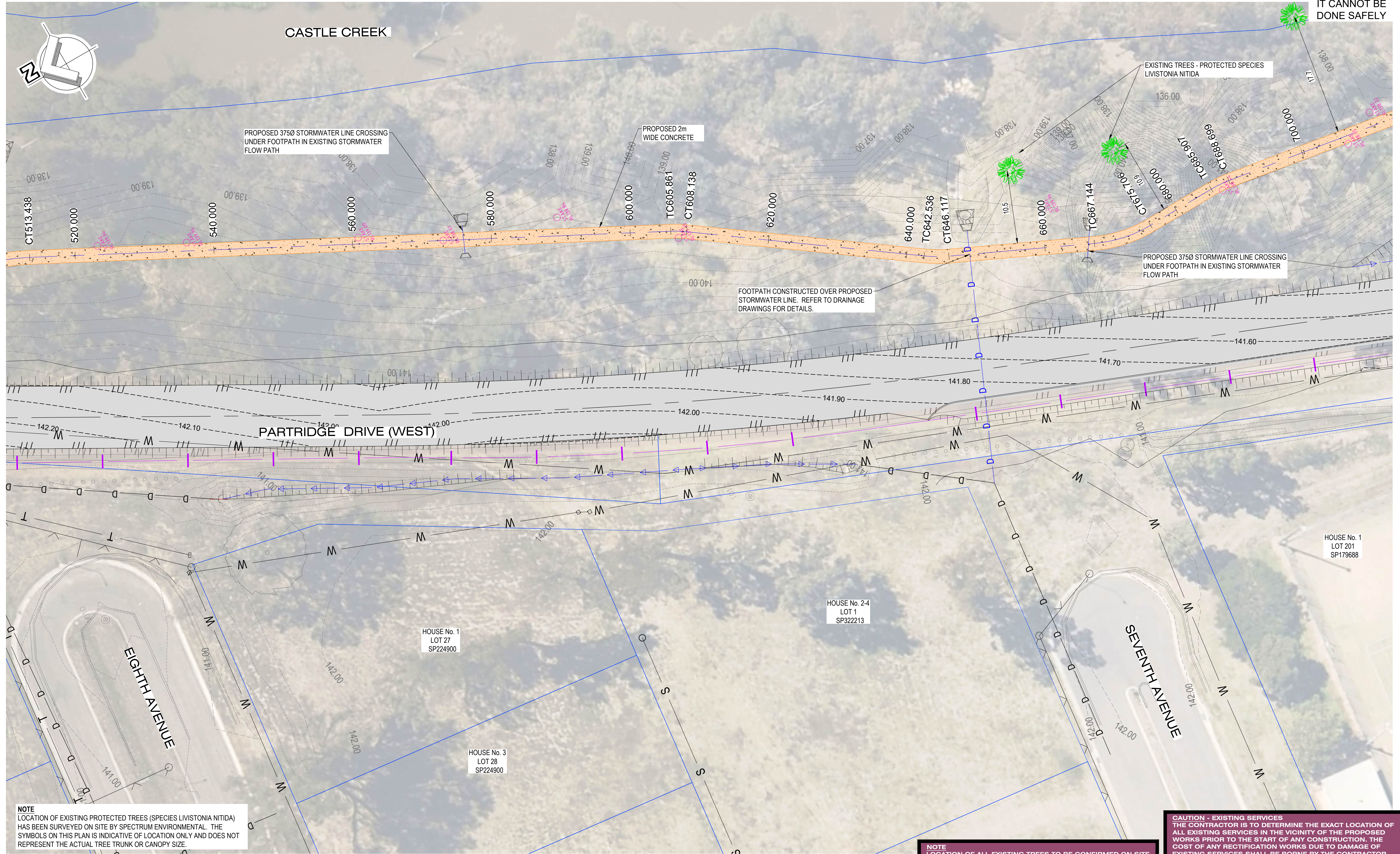
Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
 PAVEMENT WIDENING AND REHABILITATION WORKS
 FOOTPATH LAYOUT PLAN 3 OF 6

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-152	50 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



NOTE
 LOCATION OF EXISTING PROTECTED TREES (SPECIES LIVISTONIA NITIDA) HAS BEEN SURVEYED ON SITE BY SPECTRUM ENVIRONMENTAL. THE SYMBOLS ON THIS PLAN IS INDICATIVE OF LOCATION ONLY AND DOES NOT REPRESENT THE ACTUAL TREE TRUNK OR CANOPY SIZE.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

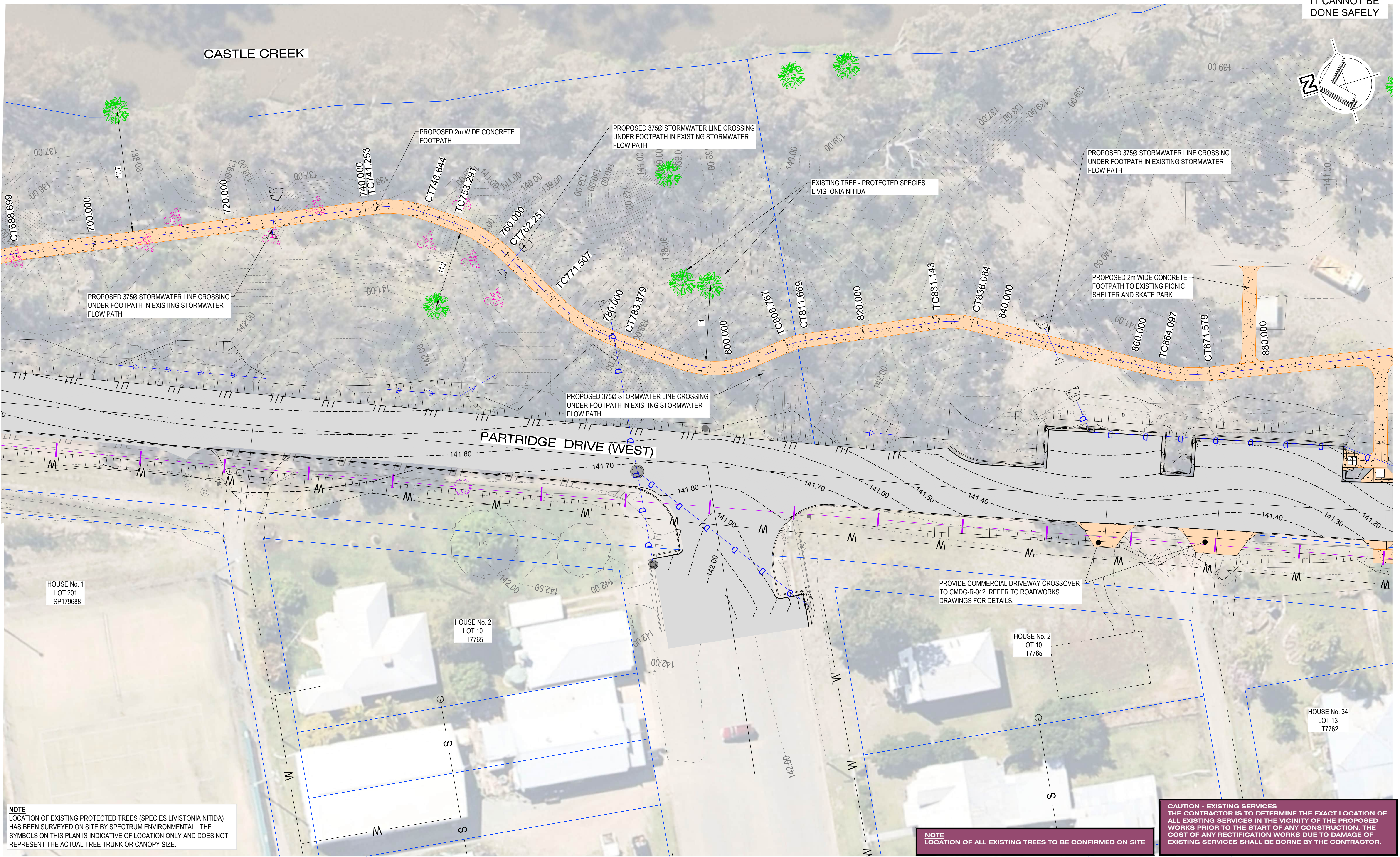
Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE			
PAVEMENT WIDENING AND REHABILITATION WORKS			
FOOTPATH LAYOUT PLAN 4 OF 6			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-153	51 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

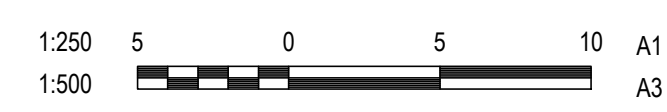


NOTE
 LOCATION OF EXISTING PROTECTED TREES (SPECIES LIVISTONIA NITIDA) HAS BEEN SURVEYED ON SITE BY SPECTRUM ENVIRONMENTAL. THE SYMBOLS ON THIS PLAN IS INDICATIVE OF LOCATION ONLY AND DOES NOT REPRESENT THE ACTUAL TREE TRUNK OR CANOPY SIZE.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

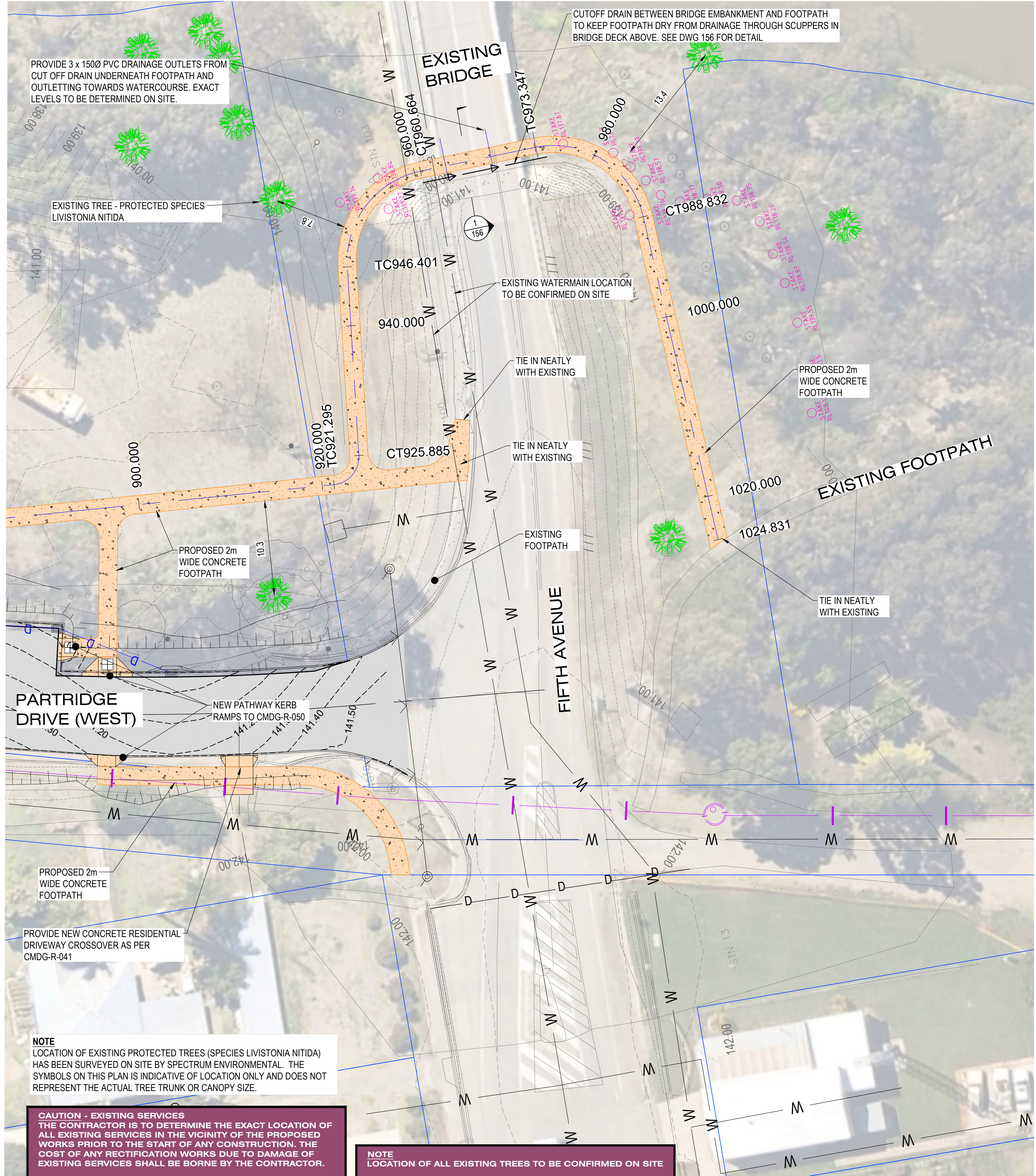
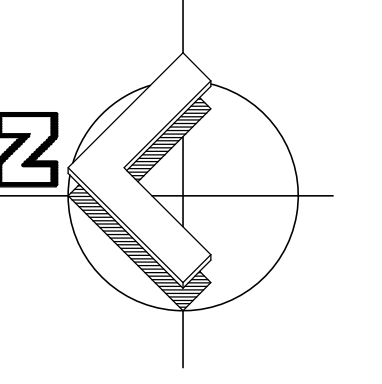
Banana SHIRE
 SHIRE OF OPPORTUNITY

Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS FOOTPATH LAYOUT PLAN 5 OF 6	
Scale AS SHOWN	Dwg. No. 2320-154
Sheet 52 OF 85	Issue 1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



NOTE
 LOCATION OF EXISTING PROTECTED TREES (SPECIES LIVISTONIA NITIDA) HAS BEEN SURVEYED ON SITE BY SPECTRUM ENVIRONMENTAL. THE SYMBOLS ON THIS PLAN IS INDICATIVE OF LOCATION ONLY AND DOES NOT REPRESENT THE ACTUAL TREE TRUNK OR CANOPY SIZE.

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

NOTE
 LOCATION OF ALL EXISTING TREES TO BE CONFIRMED ON SITE

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023

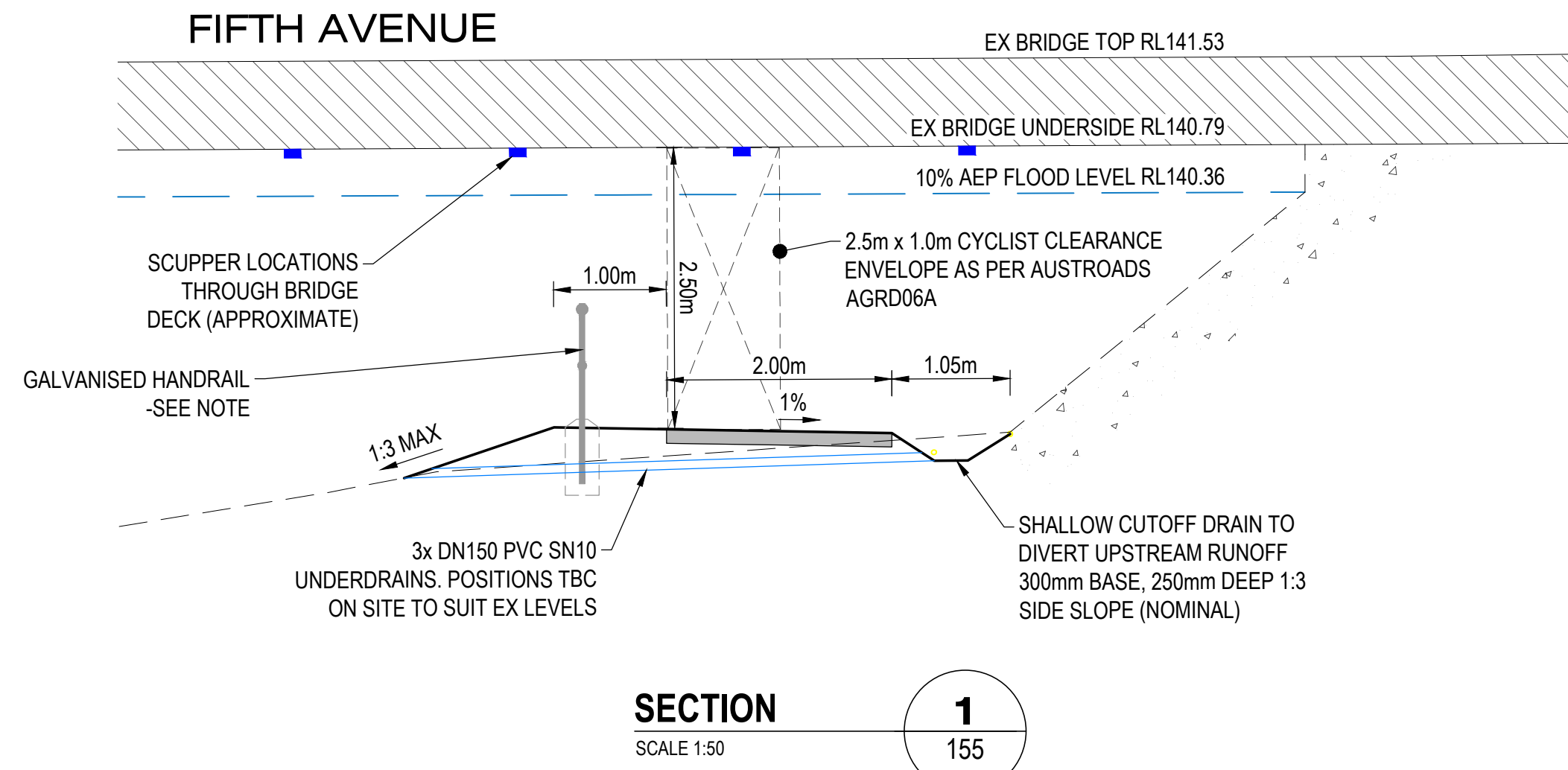


DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

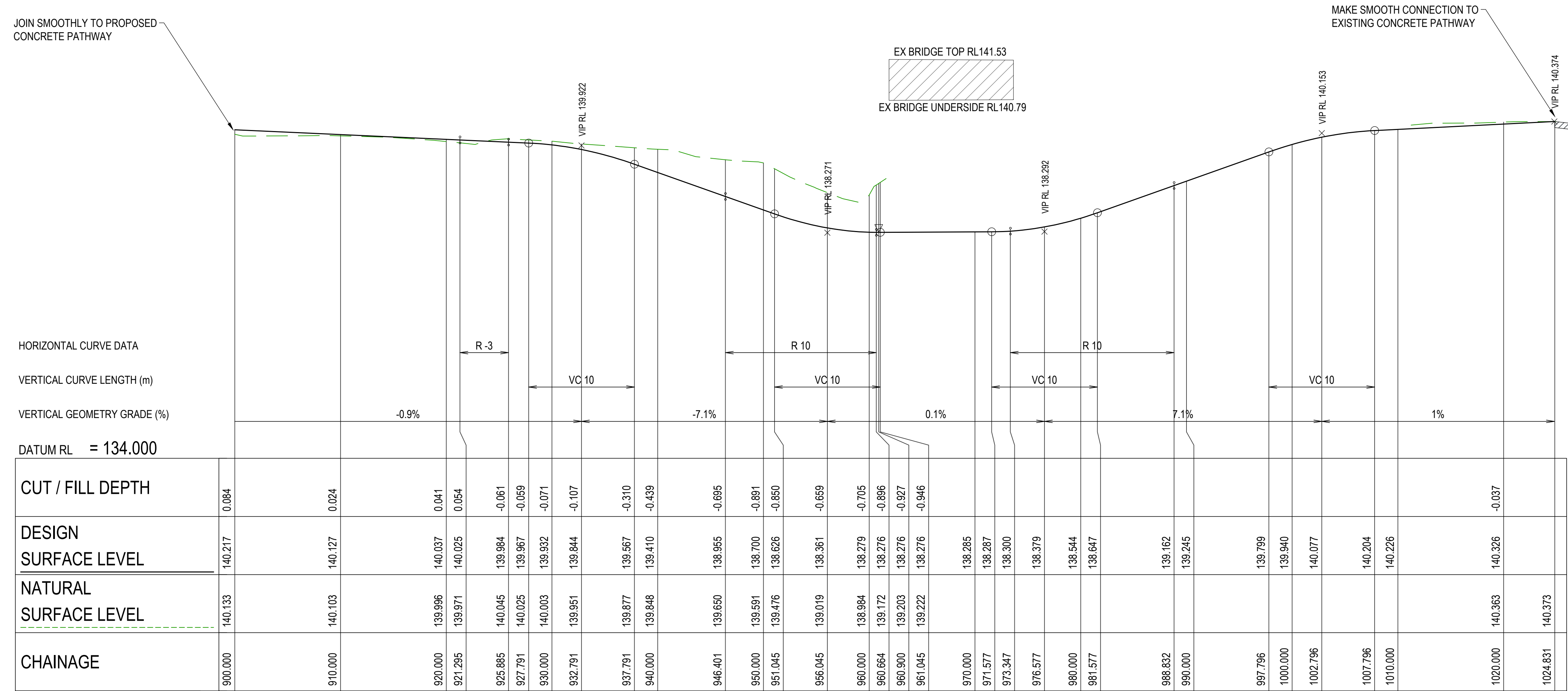
Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)



WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS FOOTPATH LAYOUT PLAN 6 OF 6			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-155	53 OF 85	1

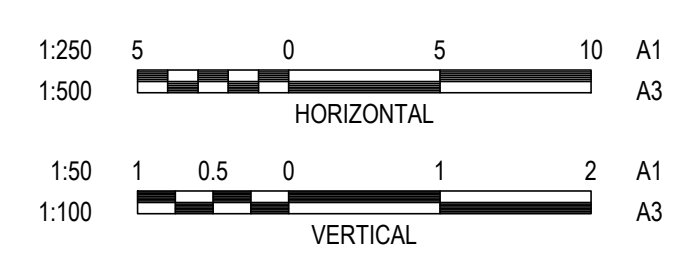


HANDRAIL NOTES:
GALVANISED HANDRAIL (WEBFORGE MONOWILLS, OR SIMILAR APPROVED) TO BE GENERALLY IN ACCORDANCE WITH STANDARD DRAWINGS CMDG-G-014, TYPE 2 TUBULAR STEEL FENCE WITH SLEEVE POST FOOTINGS.



HORIZONTAL SCALE 1:250
VERTICAL SCALE 1:50

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023



DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY (RPEQ 7736)

Banana SHIRE
SHIRE OF OPPORTUNITY

Barlow Shelley
CONSULTING ENGINEERS

P 07 5443 8285
E office@barlowshelley.com.au W www.barlowshelley.com.au
PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
FOOTPATH UNDERPASS LONGITUDINAL SECTION
AND CROSS SECTION

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-156	54 OF 85	1

NO WORK IS SO
IMPORTANT THAT
IT CANNOT BE
DONE SAFELY

SETOUT TABLE - PROPOSED FOOTPATH

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	204781.003	7238324.820	7°20'53.55"			
IP 2	6.694	204781.859	7238331.459				
IP 3	11.039	204782.801	7238335.717		R = 42.867	8.690	11°36'54.69°
IP 4	15.384	204784.580	7238339.697				
IP 5	23.272	204788.308	7238348.036		R = 12.500	15.776	72°18'46.31°
IP 6	31.160	204797.385	7238347.018				
TC	57.899	204823.957	7238344.038	96°23'53.16"			
IP 7	64.865	204830.912	7238343.258		R = 59.000	13.931	13°31'44.34°
IP 8	71.831	204837.491	7238340.873				
IP 9	78.894	204843.977	7238338.078				
IP 10	83.473	204848.069	7238336.003		R = 59.962	9.158	8°45'03.30°
IP 11	88.052	204851.797	7238333.329				
IP 12	145.729	204898.647	7238299.686				
IP 13	151.941	204903.818	7238296.231		R = -101.000	12.424	7°02'52.93°
CC	158.153	204909.375	7238293.436	116°41'52.48°			
IP 14	173.630	204923.316	7238286.426		R = 99.000	30.954	17°54'51.67°
IP 15	189.107	204934.424	7238275.467				
IP 16	198.784	204940.966	7238268.311		R = -127.112	19.354	8°43'25.97°
IP 17	208.461	204948.518	7238262.229				
IP 18	208.551	204948.588	7238262.173		R = -2.000	0.179	5°07'53.16°
IP 19	208.640	204948.662	7238262.124				
IP 20	212.874	204952.186	7238259.772		R = -101.000	8.467	4°48'12.06°
IP 21	217.107	204955.895	7238257.725				
IP 22	222.961	204961.025	7238254.892		R = 99.000	11.707	6°46'30.55°
CT	228.814	204965.785	7238251.474	125°40'56.60°			
TC	260.401	204991.442	7238233.049	125°40'56.60°			
IP 23	271.849	205001.044	7238226.154		R = 37.300	22.895	35°10'09.34°
CT	283.297	205004.921	7238214.987	160°51'05.93°			
IP 24	301.504	205010.893	7238197.787				
IP 25	308.178	205017.554	7238198.199				
IP 26	312.849	205022.294	7238198.521		R = -21.008	9.344	25°29'00.98°
IP 27	317.521	205026.433	7238200.850				
IP 28	319.973	205028.577	7238202.041				
IP 29	330.986	205038.167	7238207.454				
IP 30	333.256	205040.146	7238208.567				
IP 31	335.838	205042.771	7238210.045		R = 4.000	5.164	73°58'16.40°
CT	338.420	205044.916	7238207.930	134°36'02.84°			
TC	340.328	205046.275	7238206.590	134°36'02.84°			
IP 32	342.345	205047.727	7238205.158		R = 11.000	4.033	21°00'30.28°
CC	344.361	205048.569	7238203.300	155°36'33.12°			
IP 33	354.348	205052.705	7238194.178		R = 108.000	19.974	10°35'47.62°
IP 34	364.336	205055.093	7238184.452				
IP 35	390.114	205060.440	7238159.234				
IP 36	399.177	205062.443	7238149.772		R = 21.000	18.127	49°27'26.99°
CC	408.241	205056.554	7238142.100	217°30'30.80°			
IP 37	416.677	205051.287	7238135.238		R = -31.000	16.871	31°10'56.40°
CC	425.112	205050.334	7238126.640	186°19'34.40°			
IP 38	429.475	205049.850	7238122.275		R = 31.000	8.725	16°07'36.69°
CC	433.838	205048.173	7238118.216	202°27'11.08°			
IP 39	440.533	205045.612	7238112.020		R = 106.000	13.390	7°14'16.33°

SETOUT TABLE - PROPOSED FOOTPATH

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
CT	447.228	205042.291	7238106.197	209°41'27.41°			
TC	458.840	205036.540	7238096.109	209°41'27.41°			
IP 40	462.809	205034.563	7238092.642		R = -31.000	7.938	14°40'17.59°
CT	466.778	205033.529	7238088.788	195°01'09.82°			
TC	506.535	205023.226	7238050.389	195°01'09.82°			
IP 41	509.987	205022.328	7238047.042		R = 31.000	6.903	12°45'31.10°
CT	513.438	205020.713	7238043.975	207°46'40.92°			
TC	605.861	204977.639	7237962.203	207°46'40.92°			
IP 42	607.000	204977.108	7237961.194		R = 16.000	2.277	8°09'19.51°
CT	608.138	204976.438	7237960.270	215°56'00.42°			
TC	642.536	204956.252	7237932.419	215°56'00.42°			
IP 43	644.326	204955.198	7237930.965		R = -19.000	3.581	10°47'59.96°
CT	646.117	204954.436	7237929.339	205°08'00.47°			
TC	667.144	204945.505	7237910.303	205°08'00.47°			
IP 44	671.425	204943.655	7237906.360		R = -19.000	8.562	25°49'06.37°
CT	675.706	204943.707	7237902.006	179°18'54.09°			
TC	685.907	204943.829	7237891.805	179°18'54.09°			
IP 45	687.303	204943.846	7237890.405		R = 16.000	2.793	10°00'00.00°
CT	688.699	204943.619	7237889.024	189°18'54.09°			
TC	741.253	204935.113	7237837.163	189°18'54.09°			
IP 46	744.949	204934.504	7237833.450		R = 16.000	7.391	26°28'05.20°
CT	748.644	204932.304	7237830.398	215°46'59.29°			
TC	753.291	204929.586	7237826.628	215°46'59.29°			
IP 47	757.771	204926.927	7237822.937		R = 21.000	8.960	24°26'43.54°
CT	762.251	204922.978	7237820.679	240°13'42.83°			
TC	771.507	204914.944	7237816.083	240°13'42.83°			
IP 48	777.693	204909.491	7237812.964		R = -29.000	12.373	24°26'43.54°
CT	783.879	204905.818	7237807.867	215°46'59.29°			
IP 49	792.934	204900.524	7237800.522				
IP 50	798.078	204897.373	7237796.151		R = -14.000	10.287	42°06'02.23°
IP 51	803.221	204897.966	7237790.795				
TC	808.767	204898.576	7237785.283	173°40'41.80°			
IP 52	810.218	204898.737	7237783.833		R = 11.000	2.902	15°06'57.48°
CT	811.669	204898.514	7237782.390	188°47'39.28°			
TC	831.143	204895.537	7237763.145	188°47'39.28°			
IP 53	833.614	204895.154	7237760.674		R = 13.000	4.941	21°46'29.20°
CT	836.084	204893.883	7237758.521	210°34'08.48°			
TC	864.097	204879.636	7237734.402	210°34'08.48°			
IP 54	867.838	204877.714	7237731.148		R = -21.712	7.483	19°44'45.15°
CT	871.579	204877.005	7237727.436	190°49'23.33°			
TC	921.295	204867.669	7237678.605	190°49'23.33°			
IP 55	923.590	204867.128	7237675.776		R = -3.000	4.590	87°39'32.00°
CT	925.885	204869.933	7237675.120	103°09'51.33°			
TC	946.401	204889.909	7237670.448	103°09'51.33°			
IP 56	953.532	204898.332	7237668.478		R = 10.000	14.264	81°43'29.26°
CT	960.664	204897.595	7237659.858	184°53'20.59°			
TC	973.347	204896.514	7237647.222	184°53'20.59°			
IP 57	981.089	204895.681	7237637.478		R = 10.000	15.485	88°43'10.99°
CT	988.832	204885.921	7237638.094	273°36'31.58°			
IP 58	1024.831	204849.993	7237640.360	273°36'31.58°			

DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)



Banana SHIRE
SHIRE OF OPPORTUNITY



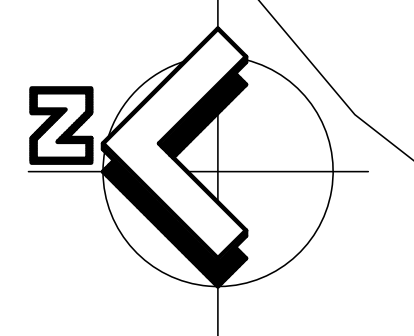
Barlow Shelley
CONSULTING ENGINEERS
P 07 5443 8285
E office@barlowshelley.com.au W www.barlowshelley.com.au
A PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
FOOTPATH SETOUT TABLES

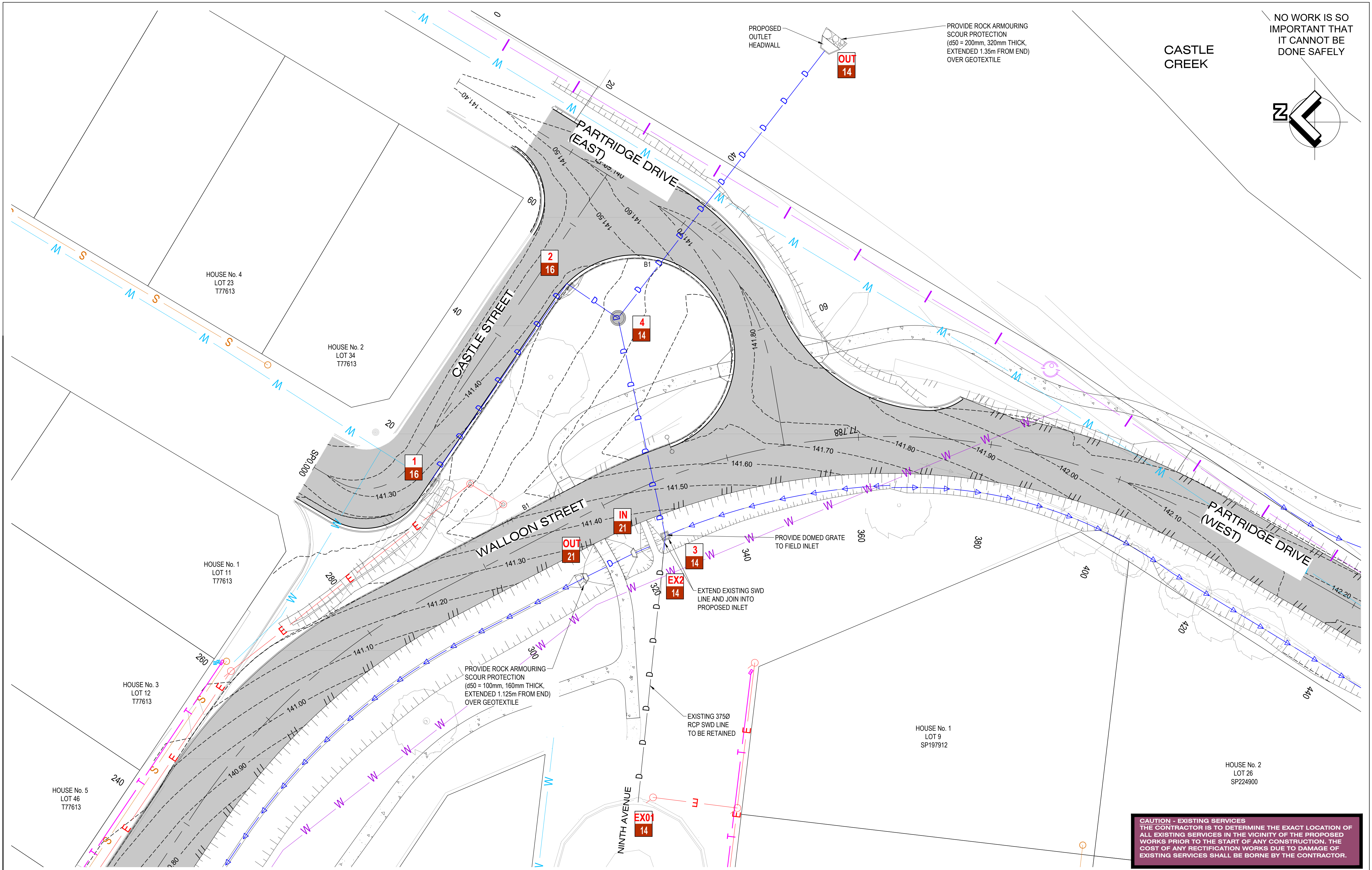
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-157	55 OF 85	1

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	17.11.2023

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



CASTLE CREEK



PROVIDE ROCK ARMOURING SCOUR PROTECTION (d50 = 200mm, 320mm THICK, EXTENDED 1.35m FROM END) OVER GEOTEXTILE

PROPOSED OUTLET HEADWALL

PROVIDE ROCK ARMOURING SCOUR PROTECTION (d50 = 100mm, 160mm THICK, EXTENDED 1.125m FROM END) OVER GEOTEXTILE

EXTEND EXISTING SWD LINE AND JOIN INTO PROPOSED INLET

PROVIDE DOMED GRATE TO FIELD INLET

EXISTING 3750 RCP SWD LINE TO BE RETAINED

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

Banana SHIRE
 SHIRE OF OPPORTUNITY

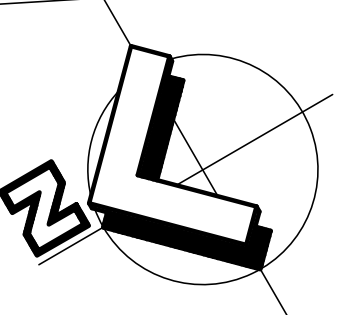
Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

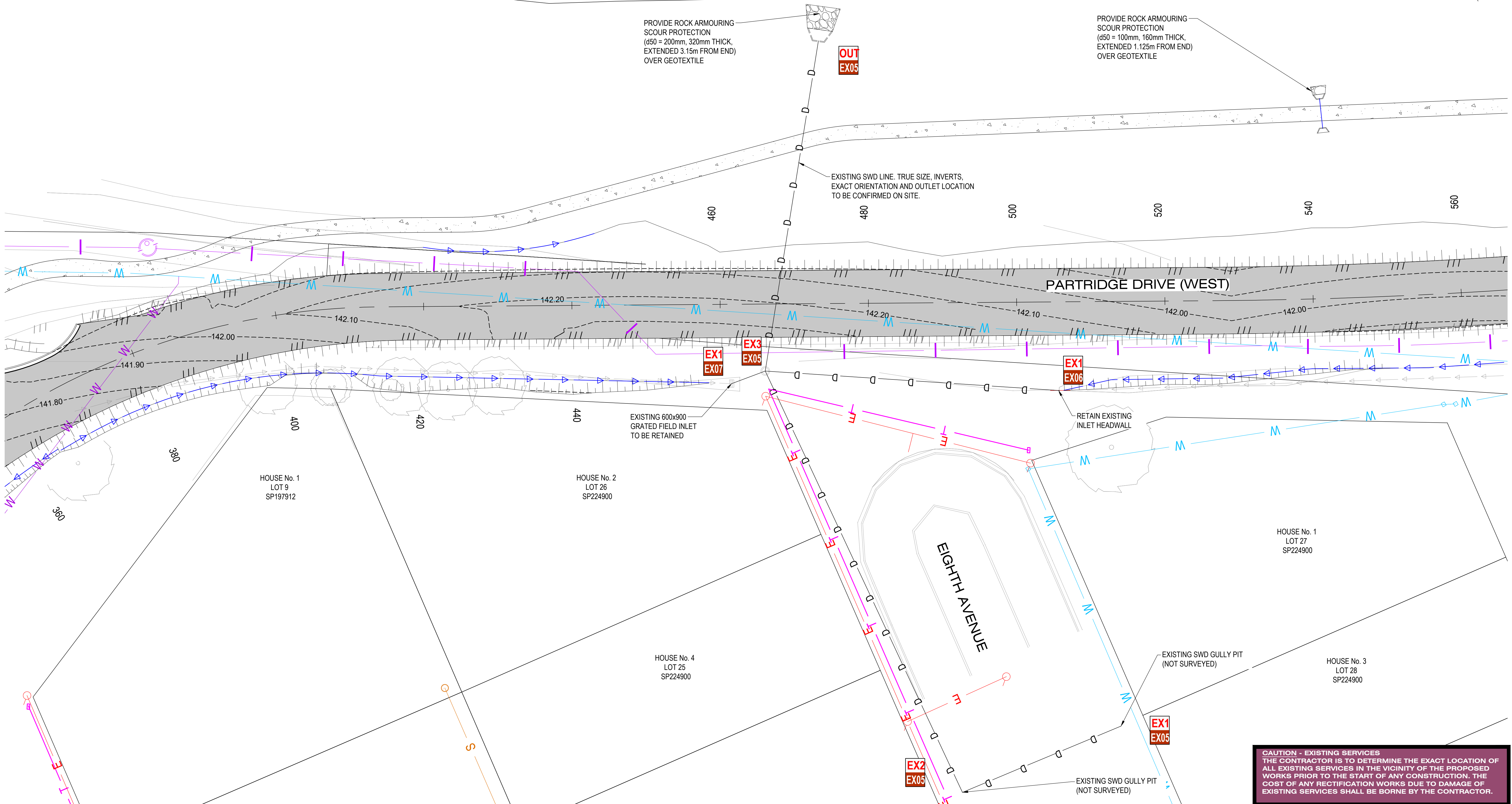
WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
 PAVEMENT WIDENING AND REHABILITATION WORKS
 DRAINAGE LAYOUT PLAN SHEET 4 OF 7

Scale AS SHOWN Dwg. No. 2320-203 Sheet 63 OF 85 Issue 1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



CASTLE CREEK



PROVIDE ROCK ARMOURING SCOUR PROTECTION (d50 = 200mm, 320mm THICK, EXTENDED 3.15m FROM END) OVER GEOTEXTILE

PROVIDE ROCK ARMOURING SCOUR PROTECTION (d50 = 100mm, 160mm THICK, EXTENDED 1.125m FROM END) OVER GEOTEXTILE

EXISTING SWD LINE. TRUE SIZE, INVERTS, EXACT ORIENTATION AND OUTLET LOCATION TO BE CONFIRMED ON SITE.

EXISTING 600x900 GRATED FIELD INLET TO BE RETAINED

RETAIN EXISTING INLET HEADWALL

EXISTING SWD GULLY PIT (NOT SURVEYED)

EXISTING SWD GULLY PIT (NOT SURVEYED)

CAUTION - EXISTING SERVICES
THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY (RPEQ 7736)



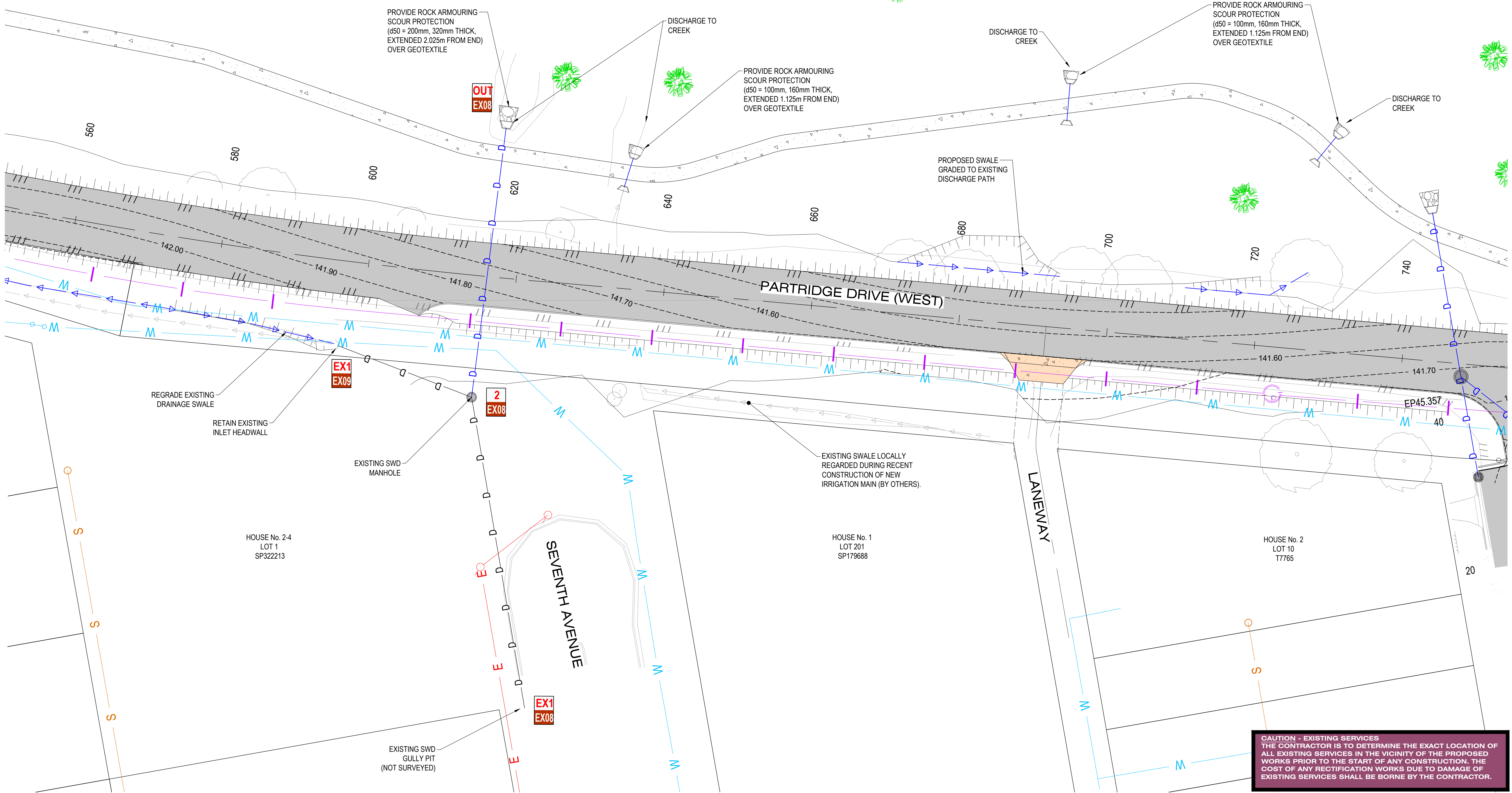
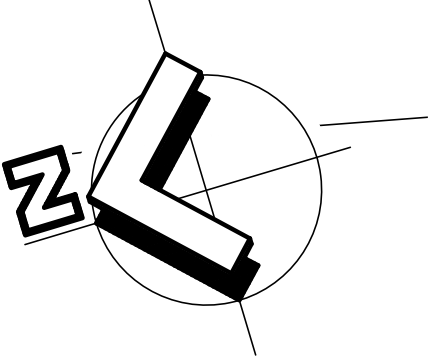
Barlow Shelley
CONSULTING ENGINEERS

p 07 5443 8285
e office@barlowshelley.com.au w www.barlowshelley.com.au
a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS DRAINAGE LAYOUT PLAN SHEET 5 OF 7			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-204	64 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

CASTLE CREEK



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

Barlow Shelley
 CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
 PAVEMENT WIDENING AND REHABILITATION WORKS
 DRAINAGE LAYOUT PLAN SHEET 6 OF 7

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-205	65 OF 85	1

CAUTION - EXISTING SERVICES
 THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

CASTLE

CREEK

PROVIDE 3 x 150Ø PVC DRAINAGE OUTLETS FROM CUT OFF DRAIN UNDERNEATH FOOTPATH AND OUTLETING TOWARDS WATERCOURSE. EXACT LEVELS TO BE DETERMINED ON SITE.

PROVIDE ROCK ARMOURING SCOUR PROTECTION (Ø50 = 200mm, 320mm THICK, EXTENDED 2.025m FROM END) OVER GEOTEXTILE

PROVIDE ROCK ARMOURING SCOUR PROTECTION (Ø50 = 100mm, 160mm THICK, EXTENDED 1.125m FROM END) OVER GEOTEXTILE

EXISTING SHADED SKATE PARK

EXISTING PICNIC SHELTER

PARTRIDGE DRIVE (WEST)

SIXTH AVENUE

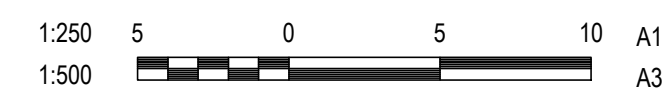
FIFTH AVENUE

HOUSE No. 1
LOT 12
T77612

HOUSE No. 34
LOT 13
T7762

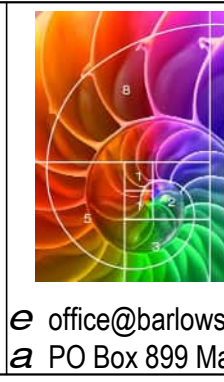
HOUSE No. 31
LOT 28
T7767

CAUTION - EXISTING SERVICES
THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE OF EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.



DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)



Barlow Shelley
CONSULTING ENGINEERS

P 07 5443 8285
E office@barlowshelley.com.au W www.barlowshelley.com.au
PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
DRAINAGE LAYOUT PLAN SHEET 7 OF 7

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-206	66 OF 85	1

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

STRUCTURE NAME	1/10	2/10	OUT/10
STRUCTURE DESCRIPTION	FIELD INLET 900x300 TYPE 2	MANHOLE 1800mm DIA	HEADWALL
PIPE SIZE (mm)	450x450	675	
PIPE CLASS	BC	RCP	
PIPE GRADE (%)	0.30%	0.50%	
PIPE SLOPE (1 in X)	333.3	200.0	
PIPE FLOW (cumecs)	0.268	0.609	
CAPACITY FLOW (cumecs)	0.199	0.595	
FULL PIPE VELOCITY (m/s)	1.32	1.70	
NORMAL DEPTH VELOCITY (m/s)	1.32	1.89	
DATUM RL	107.000		
HGL ELEVATION	141.705 141.266	141.131 140.013 138.624	
DEPTH TO INVERT	0.941	0.936 2.661	1.000 1.000
INVERT LEVEL OF DRAIN	140.841	140.800 138.075	139.000 139.000
DESIGN (& EXISTING) SURFACE LEVEL	141.752	141.736	139.477
SETOUT COORDINATES	204873.789E 7237813.473N	204887.282E 7237811.429N	204902.142E 7237809.649N
CHAINAGE	0.000	13.738	14.966 28.704

LINE 10

STRUCTURE NAME	1/11	2/10
STRUCTURE DESCRIPTION	ROAD PIT SAG	MANHOLE 1800mm DIA
PIPE SIZE (mm)	450x375	
PIPE CLASS	BC	
PIPE GRADE (%)	0.30%	
PIPE SLOPE (1 in X)	333.3	
PIPE FLOW (cumecs)	0.346	
CAPACITY FLOW (cumecs)	0.155	
FULL PIPE VELOCITY (m/s)	2.05	
NORMAL DEPTH VELOCITY (m/s)	2.05	
DATUM RL	108.000	
HGL ELEVATION	141.528 141.165	140.987 140.013 139.624
DEPTH TO INVERT	0.687	0.991 2.661
INVERT LEVEL OF DRAIN	140.841	140.745 139.075
DESIGN (& EXISTING) SURFACE LEVEL	141.529	141.736
SETOUT COORDINATES	204861.087E 7237793.104N	204887.282E 7237811.429N
CHAINAGE	0.000	31.968 31.968

LINE 11

STRUCTURE NAME	1/12	2/12	3/12	4/12	OUT/12
STRUCTURE DESCRIPTION	ROAD PIT SAG	FIELD INLET 900x300 TYPE 2	FIELD INLET 900x300 TYPE 2	ROAD PIT SAG	HEADWALL
PIPE SIZE (mm)	375	375	375	375	
PIPE CLASS	RCP	RCP	RCP	RCP	
PIPE GRADE (%)	0.35%	0.50%	0.50%	0.50%	
PIPE SLOPE (1 in X)	285.7	200.0	200.0	200.0	
PIPE FLOW (cumecs)	0.056	0.087	0.095	0.139	
CAPACITY FLOW (cumecs)	0.104	0.124	0.124	0.124	
FULL PIPE VELOCITY (m/s)	0.51	0.78	0.86	1.26	
NORMAL DEPTH VELOCITY (m/s)	0.96	1.21	1.24	1.26	
DATUM RL	108.000				
HGL ELEVATION	140.899 140.769	140.756 140.769	140.648 140.623	140.578 140.600 140.382	140.321
DEPTH TO INVERT	0.580	0.647	0.994 0.924	0.910 0.930	0.554 0.555
INVERT LEVEL OF DRAIN	140.362	140.316 140.296	140.188 140.168	140.091 140.071	140.046 140.045
DESIGN (& EXISTING) SURFACE LEVEL	140.923	140.964	141.092	141.001	140.450
SETOUT COORDINATES	204853.140E 7237701.413N	204861.274E 7237711.759N	204868.588E 7237732.059N	204873.843E 7237746.539N	204875.757E 7237747.139N
CHAINAGE	0.000	13.142 13.142	21.600 34.742	15.404 50.146	4.951 55.086

LINE 12

STRUCTURE NAME	EX/1/14	EX/2/14	3/14	4/14	OUT/14
STRUCTURE DESCRIPTION	ROAD PIT		FIELD INLET 900x300 TYPE 1 WITH DOME GRD	MANHOLE 1800mm DIA	HEADWALL
PIPE SIZE (mm)	375	375	600	(2x)450	
PIPE CLASS	RCP	RCP	RCP	RCP	
PIPE GRADE (%)	0.68%	0.68%	0.50%	0.50%	
PIPE SLOPE (1 in X)	147.8	147.9	200.0	200.0	
PIPE FLOW (cumecs)	0.323	0.319	0.569	0.628	
CAPACITY FLOW (cumecs)	0.144	0.144	0.434	0.403	
FULL PIPE VELOCITY (m/s)	2.93	2.89	2.01	1.97	
NORMAL DEPTH VELOCITY (m/s)	2.93	2.89	2.01	1.97	
DATUM RL	108.000				
HGL ELEVATION	141.002 141.002	141.002 140.844	140.831 140.831	140.831 140.831	139.350
DEPTH TO INVERT	0.974	1.650 1.650	1.075 1.428	2.406 2.426	1.252 1.253
INVERT LEVEL OF DRAIN	140.028	139.770 139.770	139.756 139.403	139.235 139.215	138.962 138.961
DESIGN (& EXISTING) SURFACE LEVEL	141.003	141.159	140.832	141.642	140.215
SETOUT COORDINATES	204950.242E 7238196.500N	205026.189E 7238192.673N	205030.251E 7238192.462N	205062.988E 7238199.572N	205103.186E 7238168.534N
CHAINAGE	0.000	38.145 38.145	2.074 40.219	33.509 73.728	50.754 124.483

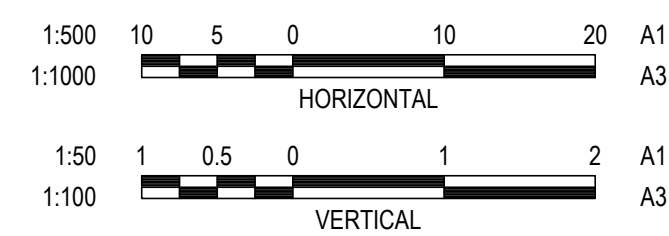
LINE 14

STRUCTURE NAME	1/16	2/16	4/14
STRUCTURE DESCRIPTION	ROAD PIT	ROAD PIT SAG	MANHOLE 1800mm DIA
PIPE SIZE (mm)	375	450	
PIPE CLASS	RCP	RCP	
PIPE GRADE (%)	0.50%	0.51%	
PIPE SLOPE (1 in X)	199.9	197.1	
PIPE FLOW (cumecs)	0.034	0.062	
CAPACITY FLOW (cumecs)	0.124	0.203	
FULL PIPE VELOCITY (m/s)	0.31	0.39	
NORMAL DEPTH VELOCITY (m/s)	0.96	1.12	
DATUM RL	108.000		
HGL ELEVATION	140.894 140.866	140.852 140.855 140.835	140.831
DEPTH TO INVERT	1.008	1.313 1.333	1.646 1.253
INVERT LEVEL OF DRAIN	140.242	140.062 140.042	139.965 139.215
DESIGN (& EXISTING) SURFACE LEVEL	141.250	141.376	141.642
SETOUT COORDINATES	205036.575E 7238227.669N	205066.197E 7238207.243N	205062.988E 7238199.572N
CHAINAGE	0.000	35.974 35.974	9.262 45.235

LINE 16

STRUCTURE NAME	IN/20	OUT/20
STRUCTURE DESCRIPTION	HEADWALL	HEADWALL
PIPE SIZE (mm)	1200x750	
PIPE CLASS	BC	
PIPE GRADE (%)	0.30%	
PIPE SLOPE (1 in X)	333.3	
PIPE FLOW (cumecs)	1.637	
CAPACITY FLOW (cumecs)	1.427	
FULL PIPE VELOCITY (m/s)	1.82	
NORMAL DEPTH VELOCITY (m/s)	1.98	
DATUM RL	108.000	
HGL ELEVATION	140.559 139.816	139.684
DEPTH TO INVERT	1.381	1.344
INVERT LEVEL OF DRAIN	139.178	139.109
DESIGN (& EXISTING) SURFACE LEVEL	139.728	139.230
SETOUT COORDINATES	204956.968E 7238304.389N	204574.258E 7238286.582N
CHAINAGE	0.000	23.035 23.035

LINE 20



DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)

Banana SHIRE
SHIRE OF OPPORTUNITY

Barlow Shelley
CONSULTING ENGINEERS

p 07 5443 8285
e office@barlowshelley.com.au w www.barlowshelley.com.au
a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 4

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-211	69 OF 85	1

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

STRUCTURE NAME	IN/21	OUT/21
STRUCTURE DESCRIPTION	HEADWALL	HEADWALL

DESIGN SURFACE
EXISTING SURFACE

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	450	300
PIPE CLASS	RCP	BC
PIPE GRADE (%)	0.70%	0.15%
PIPE SLOPE (1 in X)	143.7	648.0
PIPE FLOW (cumecs)	0.000	0.000
CAPACITY FLOW (cumecs)	0.238	0.038
FULL PIPE VELOCITY (m/s)	0.00	0.00
NORMAL DEPTH VELOCITY (m/s)	0.00	0.00
DATUM RL	108.000	108.000
HGL ELEVATION	140.701	140.620
DEPTH TO INVERT	0.698	0.503
INVERT LEVEL OF DRAIN	140.701	140.620
DESIGN (& EXISTING) SURFACE LEVEL	140.924	140.812
SETOUT COORDINATES	204927.498E 7238197.528N	204924.218E 7238204.159N
CHAINAGE	0.000	7.398

LINE 21

EX1/EX03	1/5
HEADWALL	FIELD INLET 900x900 TYPE 2

DESIGN SURFACE
EXISTING SURFACE

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	450	300
PIPE CLASS	RCP	BC
PIPE GRADE (%)	0.70%	0.15%
PIPE SLOPE (1 in X)	143.7	648.0
PIPE FLOW (cumecs)	0.000	0.000
CAPACITY FLOW (cumecs)	0.238	0.038
FULL PIPE VELOCITY (m/s)	0.00	0.00
NORMAL DEPTH VELOCITY (m/s)	0.00	0.00
DATUM RL	108.000	108.000
HGL ELEVATION	140.701	140.620
DEPTH TO INVERT	0.698	0.503
INVERT LEVEL OF DRAIN	140.701	140.620
DESIGN (& EXISTING) SURFACE LEVEL	140.924	140.812
SETOUT COORDINATES	204927.498E 7238197.528N	204924.218E 7238204.159N
CHAINAGE	0.000	7.398

EX03

EX1/EX05	EX2/EX05	EX3/EX05	OUT/EX05
ROAD PIT	ROAD PIT LARGE LINTEL	MANHOLE 1200mm DIA	HEADWALL

EXISTING SWD LINES NOT SURVEYED SHOWN INDICATIVELY ONLY
EXISTING SWD LINE. TRUE SIZE, INVERTS, EXACT ORIENTATION AND OUTLET LOCATION TO BE CONFIRMED ON SITE.

NEWLY CONSTRUCTED 1050Ø IRRIGATION MAIN
10AEP HGL

PIPE SIZE (mm)	450	450	1050
PIPE CLASS	RCP	RCP	RCP
PIPE GRADE (%)	0.50%	0.50%	0.50%
PIPE SLOPE (1 in X)	200.0	200.0	200.4
PIPE FLOW (cumecs)	0.000	1.392	1.578
CAPACITY FLOW (cumecs)	0.202	0.202	1.930
FULL PIPE VELOCITY (m/s)	0.00	8.75	1.82
NORMAL DEPTH VELOCITY (m/s)	0.00	8.75	2.48
DATUM RL	107.000	107.000	107.000
HGL ELEVATION	140.201	140.919	140.418
DEPTH TO INVERT	0.718	0.522	0.650
INVERT LEVEL OF DRAIN	140.201	140.038	139.954
DESIGN (& EXISTING) SURFACE LEVEL	140.919	140.085	141.544
SETOUT COORDINATES	204935.597E 7238053.444N	204936.597E 7238076.433N	204999.118E 7238070.872N
CHAINAGE	0.000	23.185	85.951

EX05

EX1/EX06	EX3/EX05
HEADWALL	MANHOLE 1200mm DIA

DESIGN SURFACE
EXISTING SURFACE

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	375
PIPE CLASS	RCP
PIPE GRADE (%)	0.72%
PIPE SLOPE (1 in X)	138.6
PIPE FLOW (cumecs)	0.078
CAPACITY FLOW (cumecs)	0.149
FULL PIPE VELOCITY (m/s)	0.70
NORMAL DEPTH VELOCITY (m/s)	1.36
DATUM RL	107.000
HGL ELEVATION	140.418
DEPTH TO INVERT	0.522
INVERT LEVEL OF DRAIN	140.038
DESIGN (& EXISTING) SURFACE LEVEL	140.919
SETOUT COORDINATES	204976.591E 7238037.867N
CHAINAGE	0.000

EX06

EX1/EX07	EX3/EX05
FIELD INLET 900x900 TYPE 1	MANHOLE 1200mm DIA

DESIGN SURFACE
EXISTING SURFACE

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	375
PIPE CLASS	RCP
PIPE GRADE (%)	4.16%
PIPE SLOPE (1 in X)	24.1
PIPE FLOW (cumecs)	0.150
CAPACITY FLOW (cumecs)	0.358
FULL PIPE VELOCITY (m/s)	1.36
NORMAL DEPTH VELOCITY (m/s)	3.09
DATUM RL	106.000
HGL ELEVATION	140.654
DEPTH TO INVERT	0.850
INVERT LEVEL OF DRAIN	139.954
DESIGN (& EXISTING) SURFACE LEVEL	141.544
SETOUT COORDINATES	204999.118E 7238070.872N
CHAINAGE	0.000

EX07

EX1/EX08	2/EX08	OUT/EX08
ROAD PIT LARGE LINTEL	MANHOLE 1350mm DIA	HEADWALL

EXISTING SWD LINES NOT SURVEYED SHOWN INDICATIVELY ONLY
NEWLY CONSTRUCTED 1050Ø IRRIGATION MAIN

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	450	675
PIPE CLASS	RCP	RCP
PIPE GRADE (%)	0.50%	0.50%
PIPE SLOPE (1 in X)	199.7	200.0
PIPE FLOW (cumecs)	0.588	0.644
CAPACITY FLOW (cumecs)	0.202	0.595
FULL PIPE VELOCITY (m/s)	3.69	1.80
NORMAL DEPTH VELOCITY (m/s)	3.69	1.80
DATUM RL	108.000	108.000
HGL ELEVATION	141.934	141.007
DEPTH TO INVERT	1.072	1.370
INVERT LEVEL OF DRAIN	140.862	140.649
DESIGN (& EXISTING) SURFACE LEVEL	141.934	142.020
SETOUT COORDINATES	204880.671E 7237945.252N	204922.888E 7237940.062N
CHAINAGE	0.000	42.533

EX08

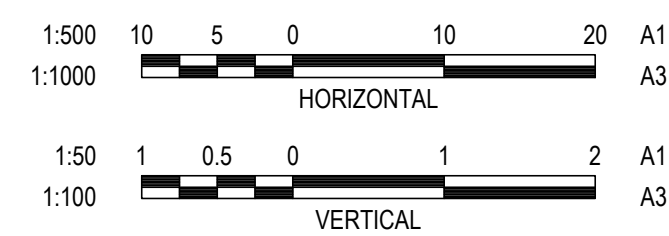
EX1/EX09	2/EX08
HEADWALL	MANHOLE 1350mm DIA

DESIGN SURFACE
EXISTING SURFACE

RETAIN EXISTING INLET HEADWALL AND CONSTRUCT NEW INLET PIT OVER EXISTING PIPE

PIPE SIZE (mm)	450
PIPE CLASS	RCP
PIPE GRADE (%)	0.50%
PIPE SLOPE (1 in X)	200.0
PIPE FLOW (cumecs)	0.065
CAPACITY FLOW (cumecs)	0.202
FULL PIPE VELOCITY (m/s)	0.41
NORMAL DEPTH VELOCITY (m/s)	1.13
DATUM RL	108.000
HGL ELEVATION	140.923
DEPTH TO INVERT	0.550
INVERT LEVEL OF DRAIN	140.864
DESIGN (& EXISTING) SURFACE LEVEL	140.923
SETOUT COORDINATES	204934.726E 7237955.372N
CHAINAGE	0.000

EX09



DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)

Banana SHIRE
SHIRE OF OPPORTUNITY

Barlow Shelley
CONSULTING ENGINEERS

P 07 5443 8285
e office@barlowshelley.com.au w www.barlowshelley.com.au
a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 4

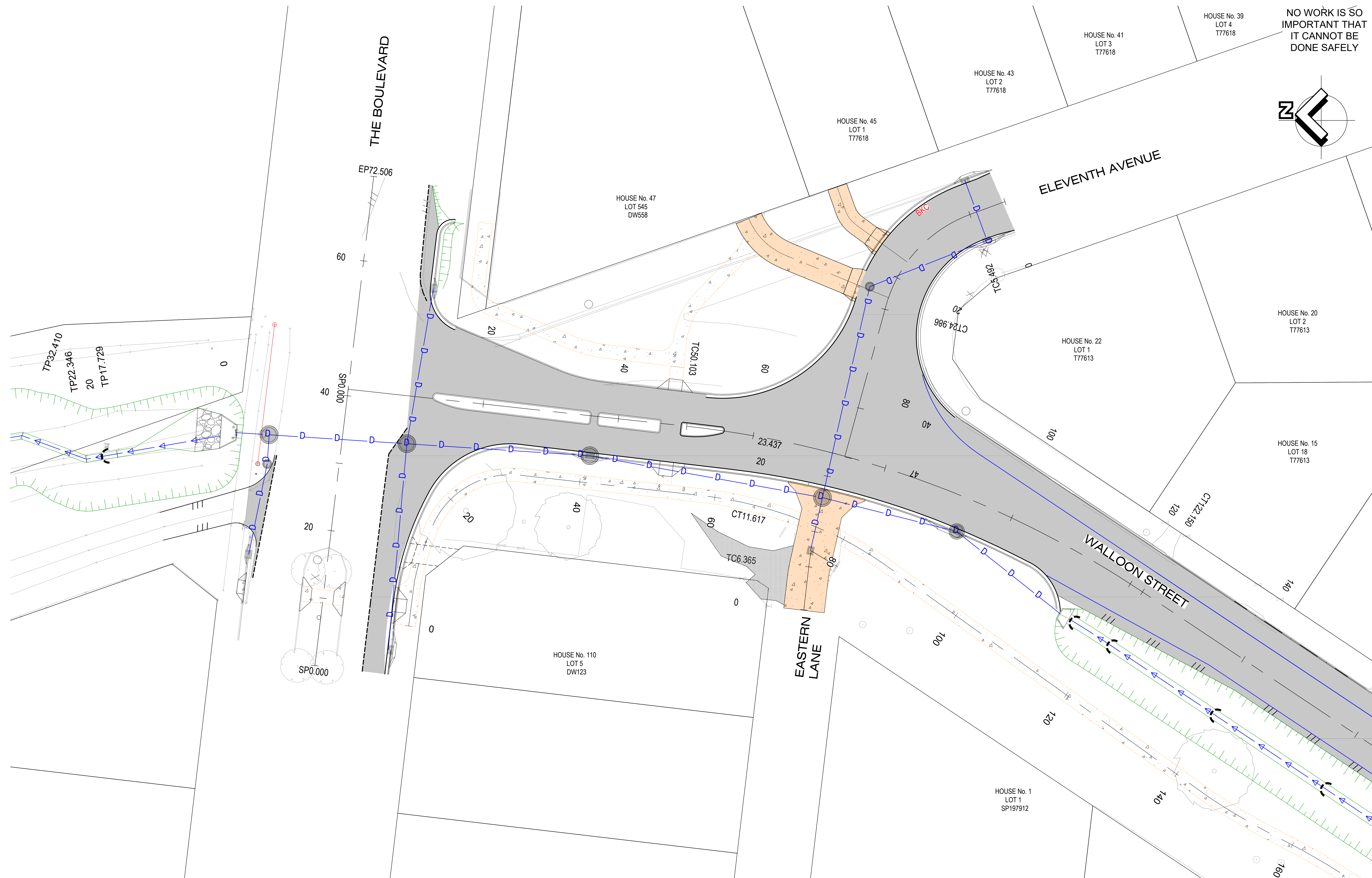
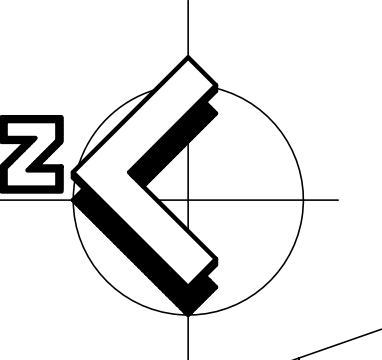
Scale AS SHOWN Dwg. No. 2320-212 Sheet 70 OF 85 Issue 1

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023

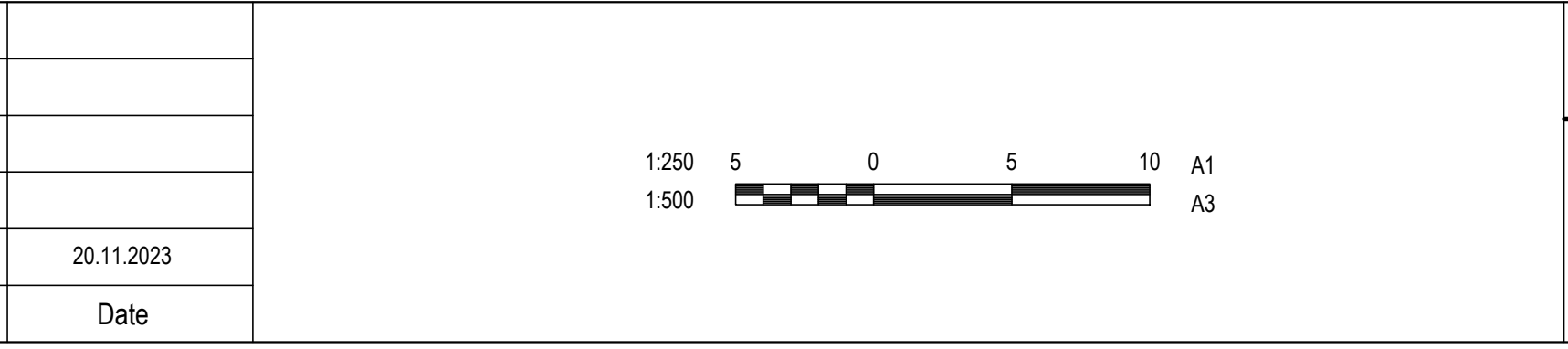
NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

Node Name	Node Type	Setout Easting	Setout Northing	Setout RL	Grate RL	Road Name	Road Chainage	Road Offset	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CA	Partial CA	Partial Sum CA	Partial Qc=CA	Direct Flow Qdg	Approach Flow Qa	Road Capacity	Flooded Depth	Flooded Width	Flooded Vel.Dep	Road Grade	Road Xfall	Max Pond Depth	Choke Factor	Inlet Curve Name	Inlet Flow Qg	Bypass Flow Qb	Bypass Node			
(-)	(-)	(m)	(m)	(m)	(m)	(-)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(%)	(%)	(m)	(-)	(-)	(L/s)	(L/s)	(-)			
1/1	HW inlet	204876.9	7238327	140.04	141.05				1P	15	129	0.75	0.7862	0.5896	1.651	591.6	0.1965	1.2579	660.4		660.4	134.2	0.187	2.57	0.43	2.5	3		0.8		660.4		LOST			
2/1	RD PIT L	204861.6	7238339	140.72	140.75	ROAD 01	93.33	5.13	1P	15	129	0.75	0.0484	0.0363	0.1017	36.4	0.0121	0.0775	40.7		40.7	2357.6	0.075	2.1	0.04	0.8	3		0.8	0.5-1G,3.3X	32.5	8.1	LOST			
3/1	MH2100	204841.9	7238344	141.21	141.21				1I	5	189	0.9	0.0726	0.0654			0.0654																-			
4/1	SAG RD PIT	204807.7	7238350	141	141	ROAD 01	36.45	5.86	1P	15	129	0.75	0.1444	0.1083	0.3031	108.6	0.0361	0.231	121.3		121.3	139	0.136					0.15	0.5	SAG	121.3		-			
5/1	MH2100	204780.7	7238352	141.4	141.4				1I	5	189	0.9	0.2165	0.1949			0.1949																-			
6/1	MH2100	204760.5	7238353	141.44	141.44																													-		
OUT/1	HW	204755.6	7238353	139.56	141.24																													-		
1/2	SAG RD PIT	204757.5	7238335	140.95	140.95	THE BOULEVARD	15.1	-11.63	1P	15	129	0.75	0.1759	0.1319	0.3694	132.4	0.044	0.2815	147.8		147.8	139	0.159					0.15	0.5	SAG	147.8		-			
2/2	MH1050	204760.2	7238349	141.41	141.41				1I	5	189	0.9	0.2639	0.2375			0.2375																	-		
1/3	SAG RD PIT	204778	7238321	140.87	140.87	THE BOULEVARD	3.62	10.44	1P	15	129	0.75	0.1444	0.1083	0.3032	108.6	0.0361	0.231	121.3		121.3	139	0.136					0.15	0.5	SAG	121.3		-			
1/5	SF1	204840.1	7238336	141.08	141.08				1I	5	189	0.9	0.2165	0.1949			0.1949				0	31.8	0					0.075	0.5	SAG	0		2/1			
1/6	RD PIT	204862.9	7238390	140.88	140.88	ELEVENTH AVE	4.45	4.78	1P	15	129	0.75	0.0432	0.0324	0.0907	32.5	0.0108	0.0691	36.3		36.3	400.6	0.093	2.27	0.04	2	3.9		0.8	2-8G,3.3X	27.1	9.2	LOST			
2/6	SAG RD PIT	204866.3	7238381	140.88	140.88	ELEVENTH AVE	4.45	-4.97	1P	15	129	0.75	0.0668	0.0501	0.1403	50.3	0.0167	0.1069	56.1		56.1	139	0.088					0.15	0.5	SAG	56.1		-			
3/6	MH1050	204848.8	7238375	141.08	141.08	ELEVENTH AVE	22.64	3.14	1I	5	189	0.9	0.1002	0.0902			0.0902																	-		
1/7	SAG RD PIT	204784.2	7238374	141.37	141.37	THE BOULEVARD	57.1	10.23	1P	15	129	0.75	0.0185	0.0139	0.0388	13.9	0.0046	0.0296	15.5		15.5	139	0.031					0.15	0.5	SAG	15.5		-			
1/10	SF1	204873.8	7237813	141.78	141.78	SIXTH AVE	32.54	-10.06	1P	15	129	0.75	0.3191	0.2393	0.6701	240.1	0.0798	0.5105	268		268	87	0.374					0.15	0.5	SAG	268		-			
2/10	MH1800	204887.3	7237811	141.74	141.74				1I	5	189	0.9	0.0277	0.0249			0.0249																	-		
OUT/10	HW OUT	204902.1	7237810	139.48	140	SIXTH AVE	45.35	-18.95																										-		
1/11	SAG RD PIT	204861.1	7237793	141.53	141.53	SIXTH AVE	22.53	11.76	1P	15	129	0.75	0.4124	0.3093	0.8659	310.3	0.1031	0.6598	346.4		346.4	139	0.225					0.15	0.5	SAG	346.4		-			
1/12	SAG RD PIT	204853.1	7237701	140.92	140.92	ROAD 01	863.46	-4.5	1P	15	129	0.75	0.0672	0.0504	0.1412	50.6	0.0168	0.1076	56.5		56.5	139	0.088					0.15	0.5	SAG	56.5		-			
2/12	SF1	204861.3	7237712	140.96	140.96	ROAD 01	850.82	-9.15	1P	15	129	0.75	0.0361	0.0271	0.0759	27.2	0.009	0.0578	30.3		30.3	87	0.073					0.15	0.5	SAG	30.3		-			
3/12	SF1	204868.6	7237732	141.09	141.09	ROAD 01	829.07	-9.15	1P	15	129	0.75	0.0111	0.0083	0.0233	8.4	0.0028	0.0178	9.3		9.3	87	0.028					0.15	0.5	SAG	9.3		-			
4/12	SAG RD PIT	204873.8	7237747	141	141	ROAD 01	813.67	-9.15	1P	15	129	0.75	0.0531	0.0398	0.1116	40	0.0133	0.085	44.6		44.6	139	0.077					0.15	0.5	SAG	44.6		-			
OUT/12	HW OUT	204878.8	7237747	140.04	140.6				1I	5	189	0.9	0.5774	0.5197			0.5197																	-		
1/14	RD PIT	204990.2	7238197	141	141				1P	15	129	0.75	0.3849	0.2887	0.8084	289.7	0.0962	0.6159	323.3		323.3													-		
2/14	TP	205028.2	7238193	141.16	141.42																														-	
3/14	SAG FI SQR	205030.3	7238192	140.83	140.83															250	250													-		
4/14	MH1800	205063	7238200	141.64	141.64																														-	
5/14	HW OUT	205103.2	7238169	140.21	140.21																														-	
1/16	RD PIT	205038.6	7238228	141.25	141.25	WALLOON STREET	16.22	4	1P	15	129	0.75	0.0556	0.0417	0.1168	41.9	0.0139	0.089	46.7		46.7	232.1	0.084	2.43	0.04	0.5	3		0.8	0.5G,3.3X	33.9	12.8	LOST			
2/16	SAG RD PIT	205068.2	7238207	141.38	141.38	WALLOON STREET	52.19	4.24	1P	15	129	0.75	0.0346	0.026	0.0727	26	0.0086	0.0554	29.1		29.1	139	0.058					0.15	0.5	SAG	29.1		-			
IN/20	HW IN	204596	7238304	140.56	140.56				1I	5	189	0.9	0.0519	0.0467			0.0467																		-	
OUT/20	HW OUT	204574.3	7238297	140.45	140.45																															-
IN/21	HW IN	205027.5	7238198	141.4	141.4																0														-	
OUT/21	HW OUT	205024.2	7238204	141.35	141.35																0														-	
1/EX03	HW inlet	204844.1	7238334	140.62	141.12																0														-	
1/EX05	RD PIT	204933.6	7238053	140.92	140.92																0														-	
2/EX05	RD PIT L	204936.6	7238076	140.92	140.92				1P	20	113	0.75	1.8139	1.3604	3.8092	1195.7	0.5442	2.993	1391.7		1391.7														-	
3/EX05	MH1200	204999.1	7238071	141.54	141.54				1I	8	167.4	0.9	2.7209	2.4488			2.4488																		-	
OUT/EX05	HW OUT	205034.1	7238042	138.79	138.79																															-
1/EX06	HW IN	204976.9	7238038	140.37	140.56				1P	15	129	0.75	0.0924	0.0693	0.194	69.5	0.0231	0.1478	77.6		77.6	78856.8	0.219	0.27	0.57										-	
1/EX07	SF1	204999.9	7238076	140.8	140.8				1P	15	129	0.75	0.1783	0.1337	0.3745	134.2	0.0446	0.2853	149.8		149.8	310	0.215													

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



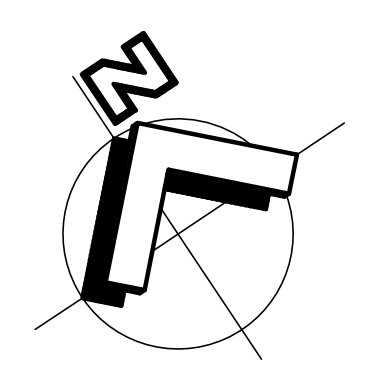
DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 7			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-401	78 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



ELEVENTH AVENUE

HOUSE No. 22
LOT 1
T77613

HOUSE No. 15
LOT 18
T77613

HOUSE No. 13
LOT 17
T77613

HOUSE No. 11
LOT 16
T77613

HOUSE No. 9
LOT 26
T77613

HOUSE No. 7
LOT 44
T77613

HOUSE No. 5
LOT 46
T77613

HOUSE No. 3
LOT 12
T77613

HOUSE No. 1
LOT 11
T77613

CT122.150

TC242.637

100

120

140

160

180

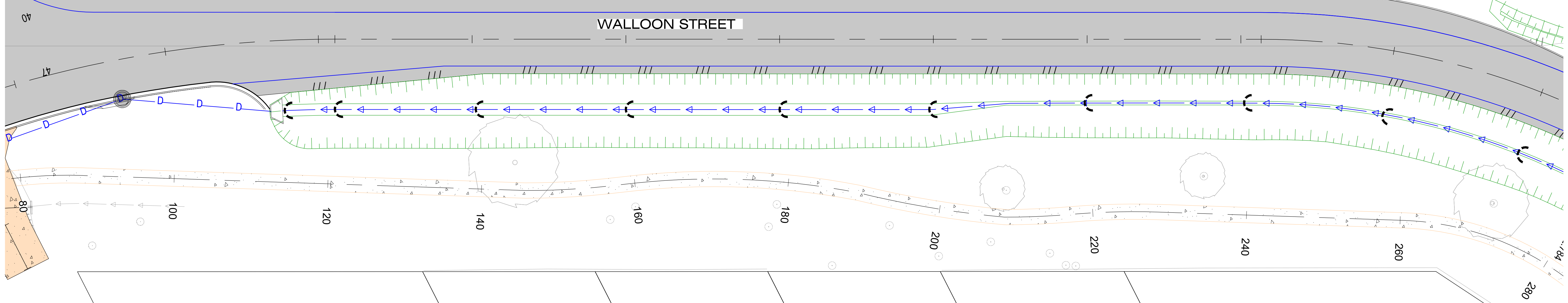
200

220

240

260

WALLOON STREET



HOUSE No. 1
LOT 1
SP197912

HOUSE No. 10
LOT 4
SP197912

HOUSE No. 8
LOT 5
SP197912

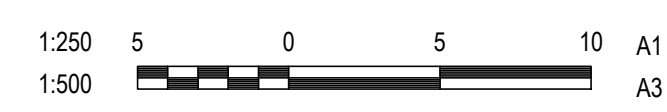
HOUSE No. 6
LOT 6
SP197912

HOUSE No. 4
LOT 7
SP197912

HOUSE No. 2
LOT 8
SP197912

EASTERN LANE

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



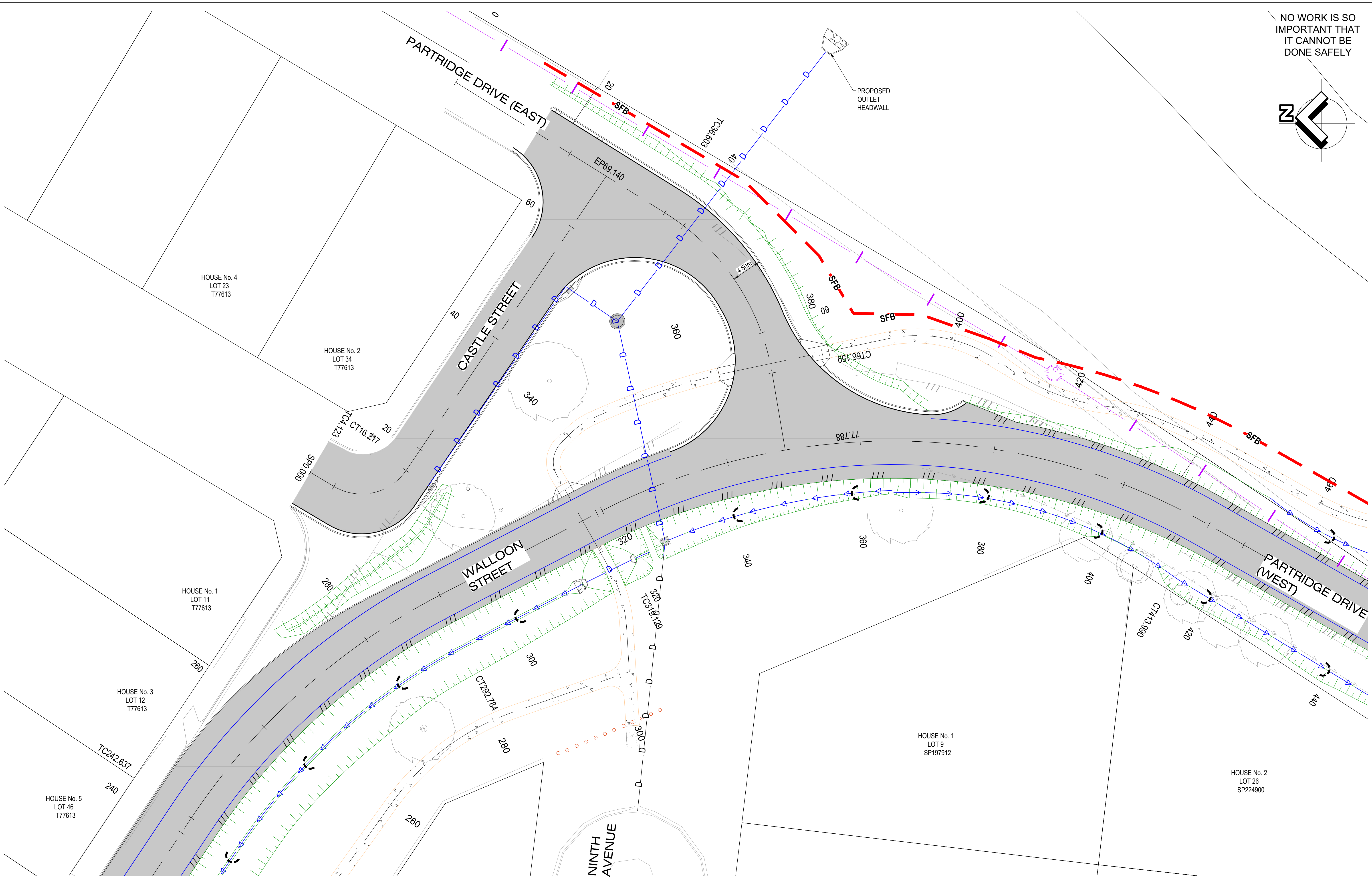
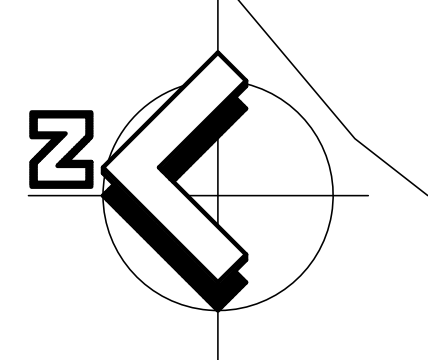
DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)



WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS EROSION AND SEDIMENT CONTROL PLAN SHEET 3 OF 7	
Scale AS SHOWN	Dwg. No. 2320-402
Sheet 79 OF 85	Issue 1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN CS
 DRAWN CS
 DESIGN CHECK SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

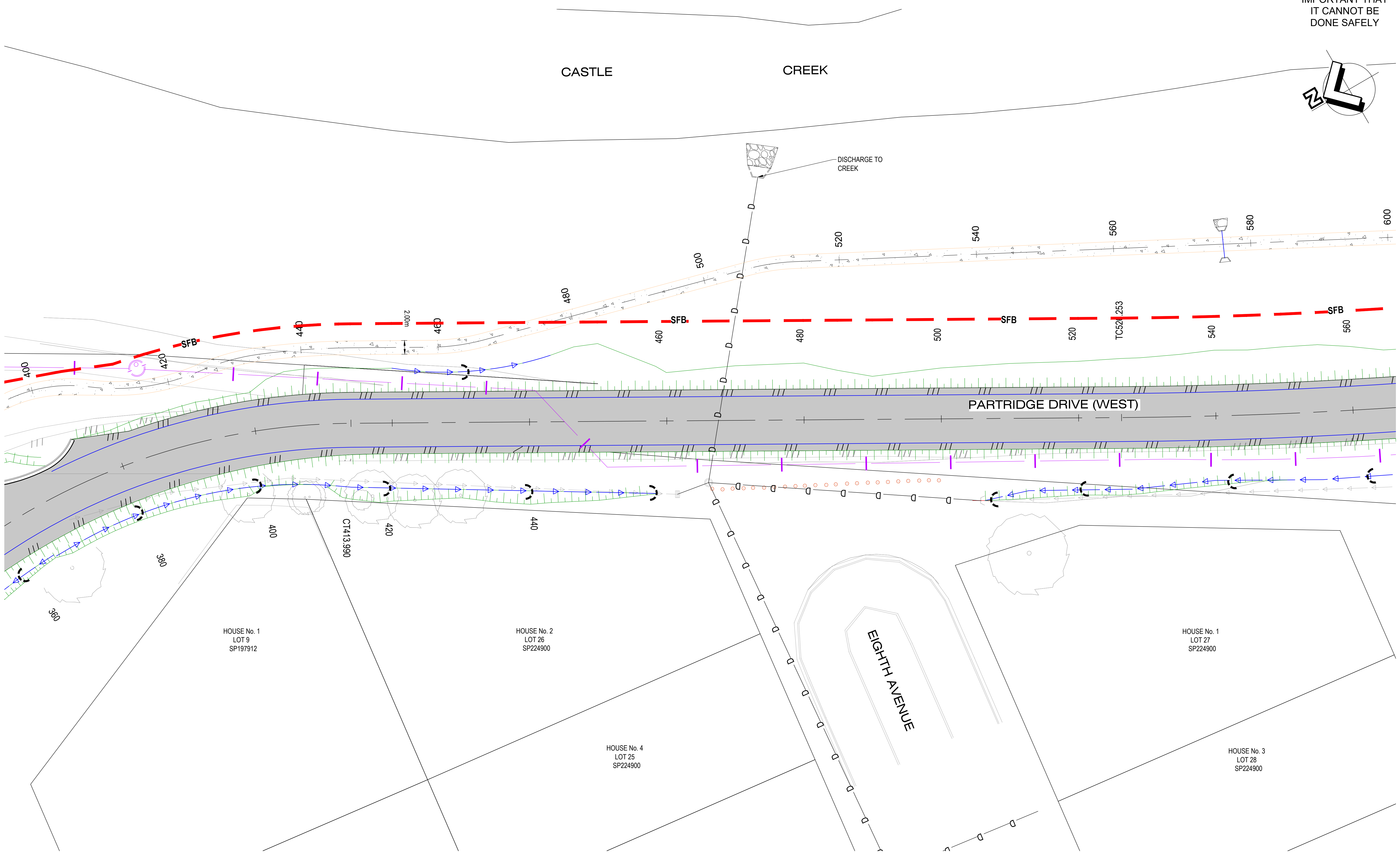
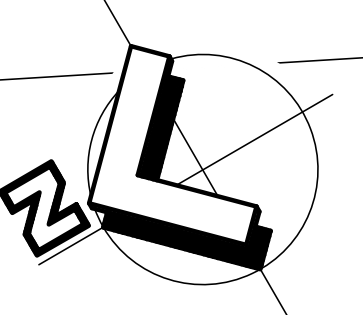
Barlow Shelley
 CONSULTING ENGINEERS

P 07 5443 8285
 E office@barlowshelley.com.au W www.barlowshelley.com.au
 PO Box 899 Maroochydore 4558 ABN 89 215 591 077

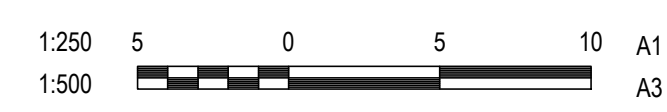
WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
 PAVEMENT WIDENING AND REHABILITATION WORKS
 EROSION AND SEDIMENT CONTROL PLAN SHEET 4 OF 7

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-403	80 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

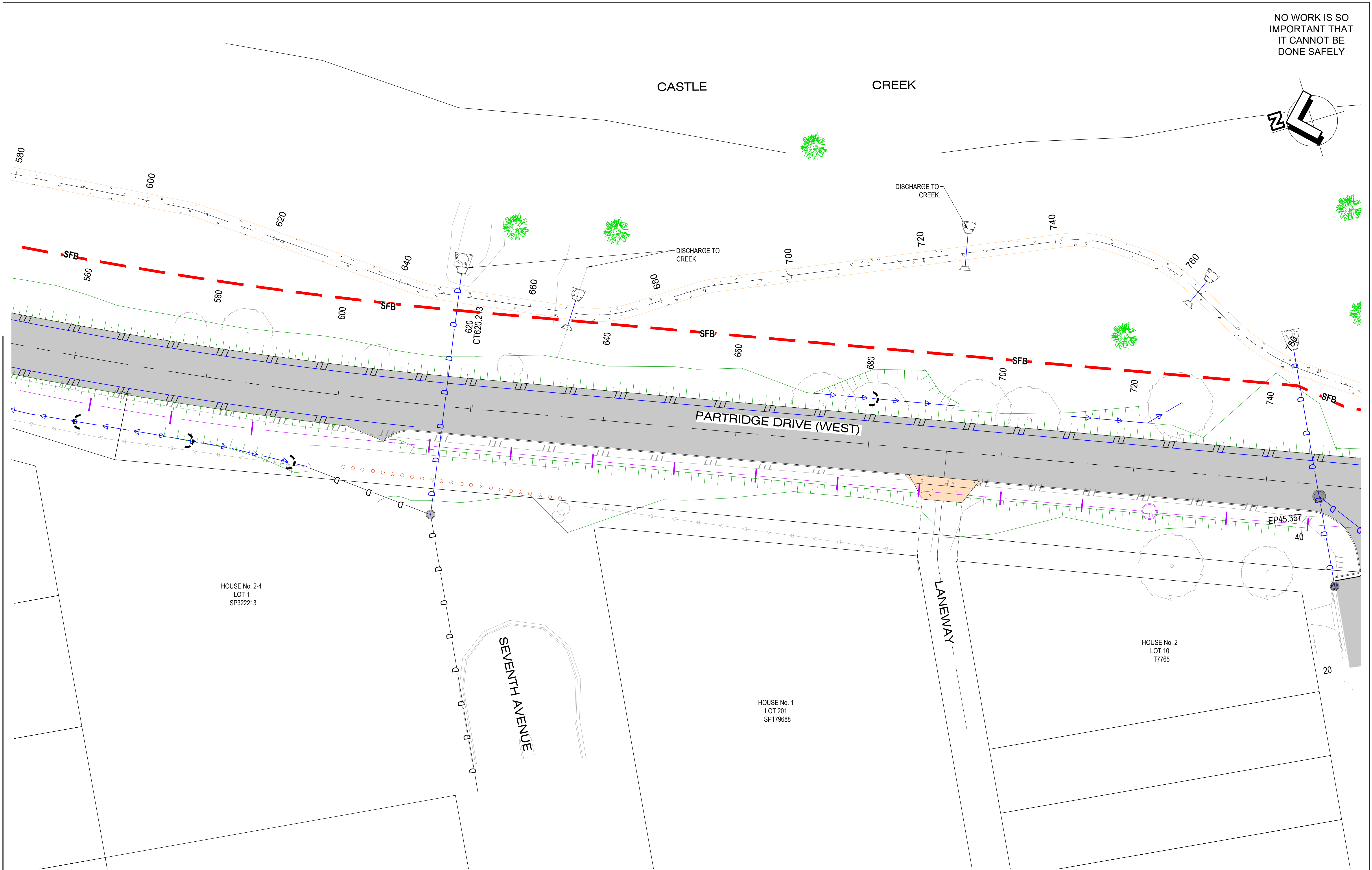
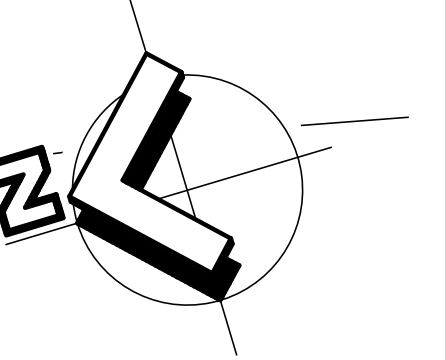
Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

Barlow Shelley
CONSULTING ENGINEERS

p 07 5443 8285
 e office@barlowshelley.com.au w www.barlowshelley.com.au
 a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS EROSION AND SEDIMENT CONTROL PLAN SHEET 5 OF 7			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-404	81 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

Tony Shelley
Director: TONY SHELLEY
(RPEQ 7736)

Banana SHIRE
SHIRE OF OPPORTUNITY

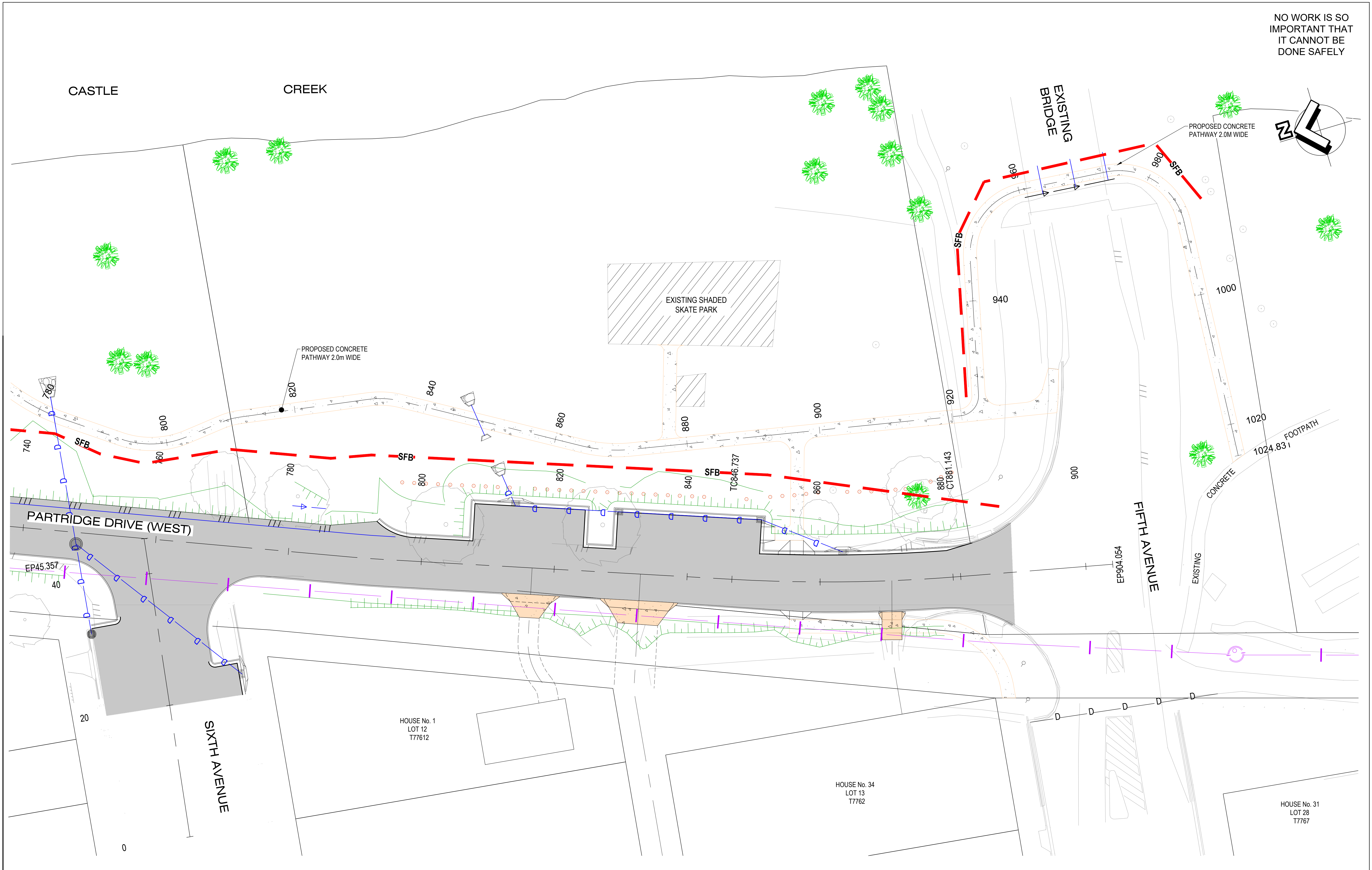
Barlow Shelley
CONSULTING ENGINEERS

p 07 5443 8285
e office@barlowshelley.com.au w www.barlowshelley.com.au
a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

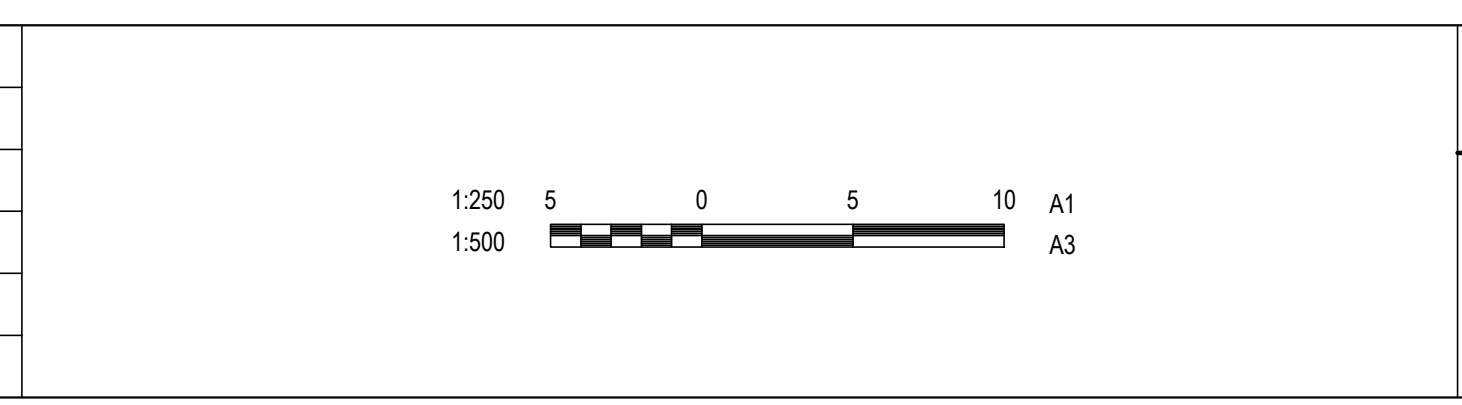
WALLOON STREET AND PARTRIDGE DRIVE, THEODORE
PAVEMENT WIDENING AND REHABILITATION WORKS
EROSION AND SEDIMENT CONTROL PLAN SHEET 6 OF 7

Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-405	82 OF 85	1

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY



No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023



DESIGN	CS
DRAWN	CS
DESIGN CHECK	SS

Tony Shelley
 Director: TONY SHELLEY
 (RPEQ 7736)

Banana SHIRE
 SHIRE OF OPPORTUNITY

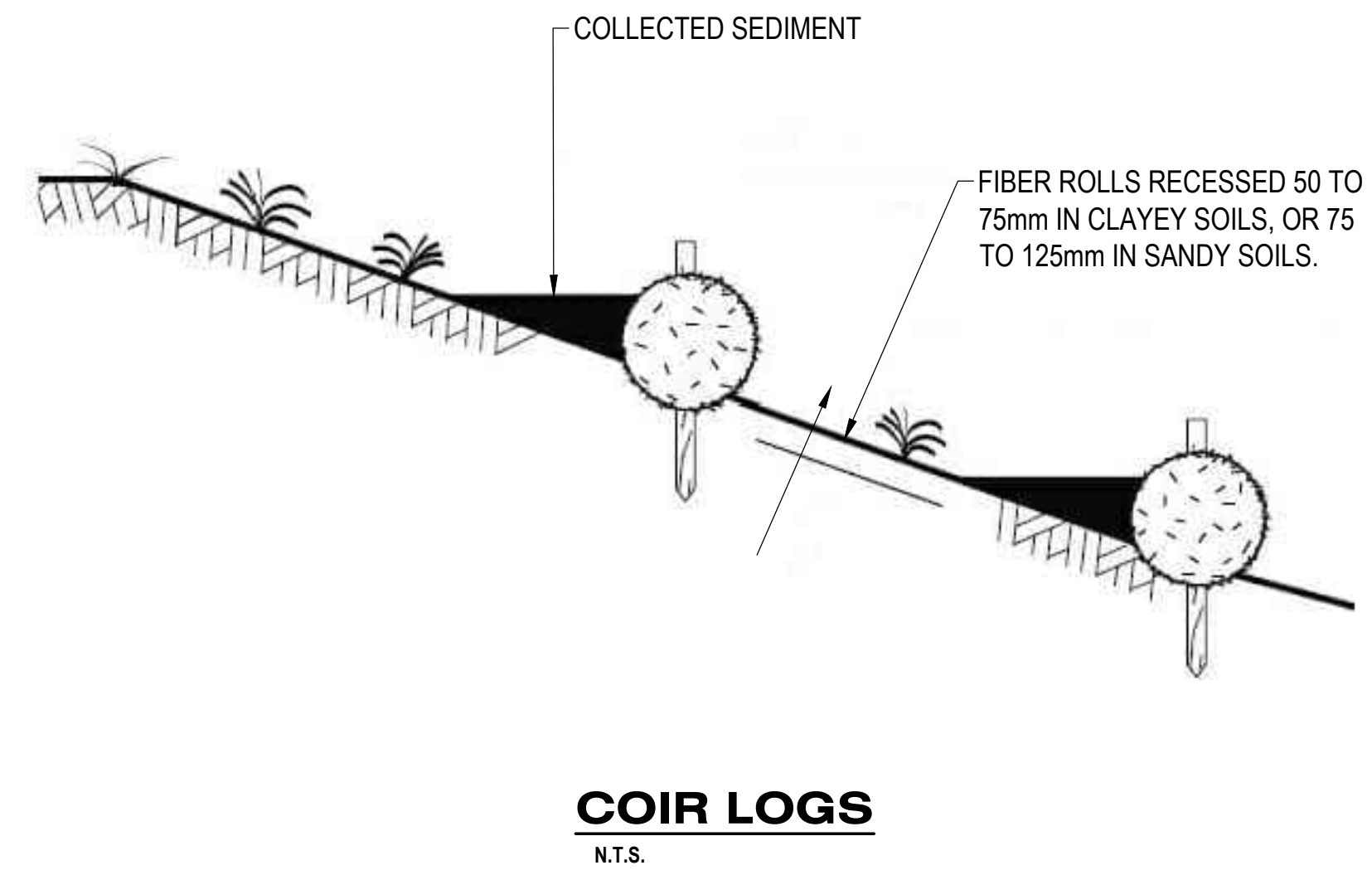
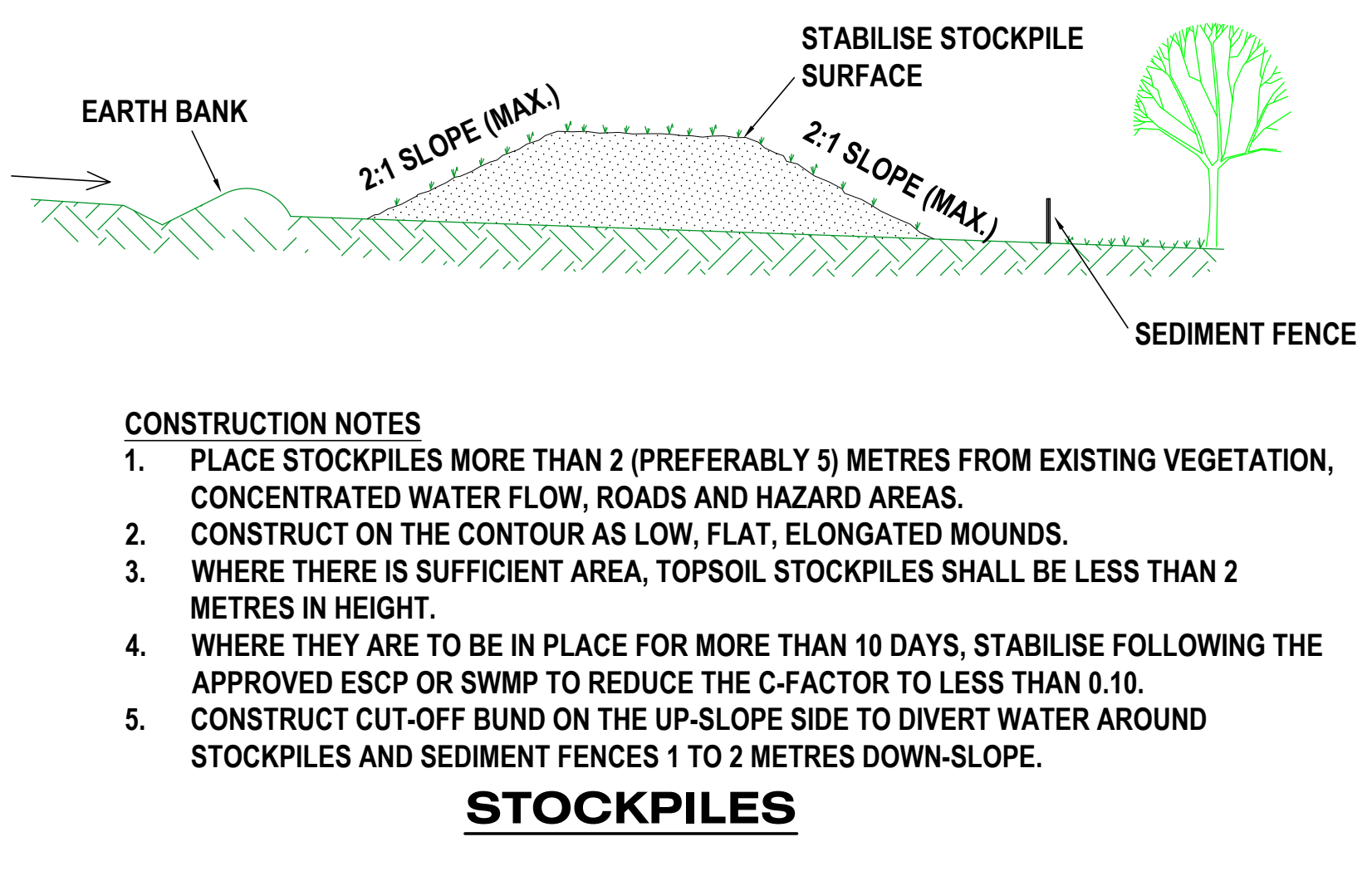
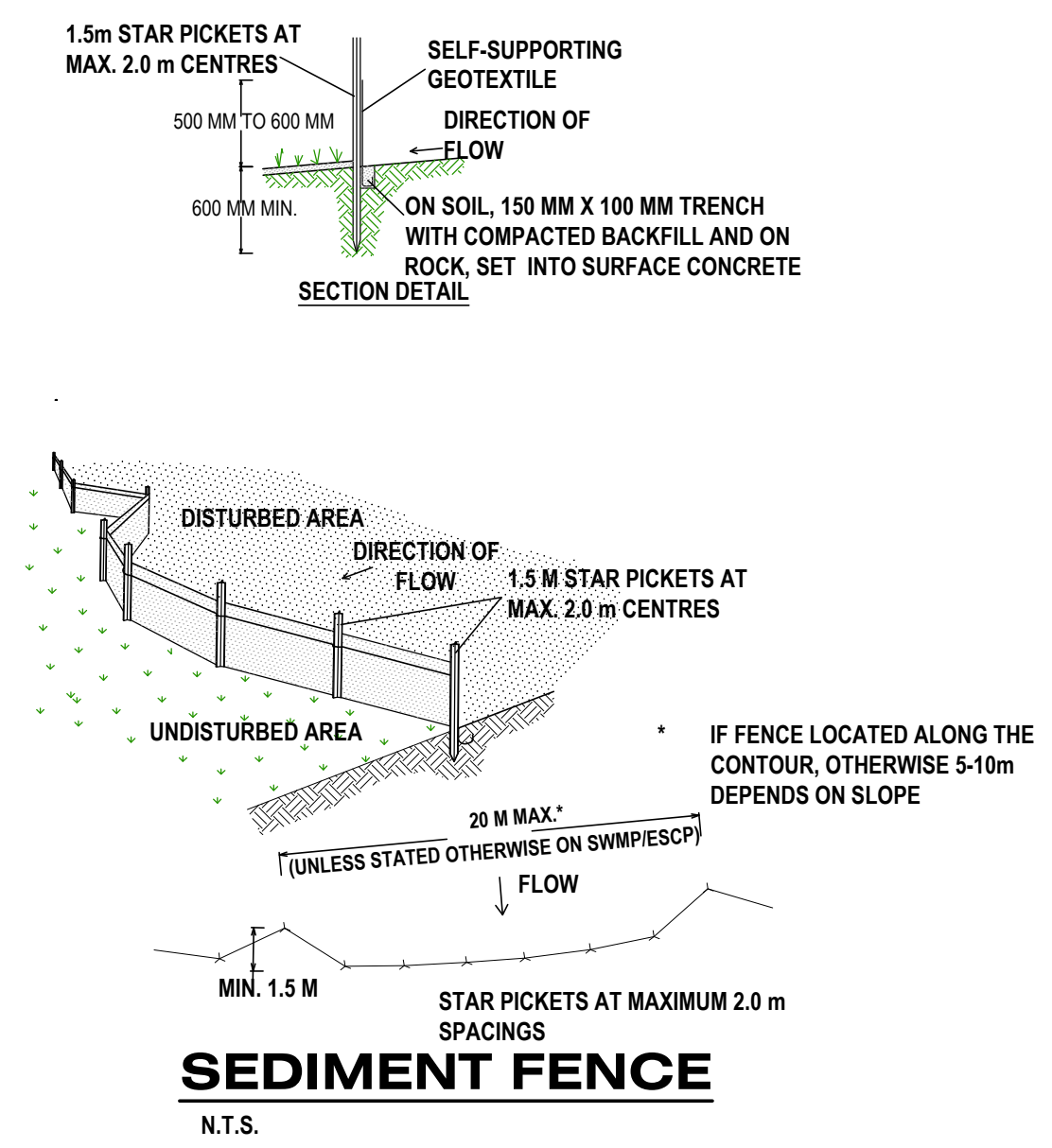
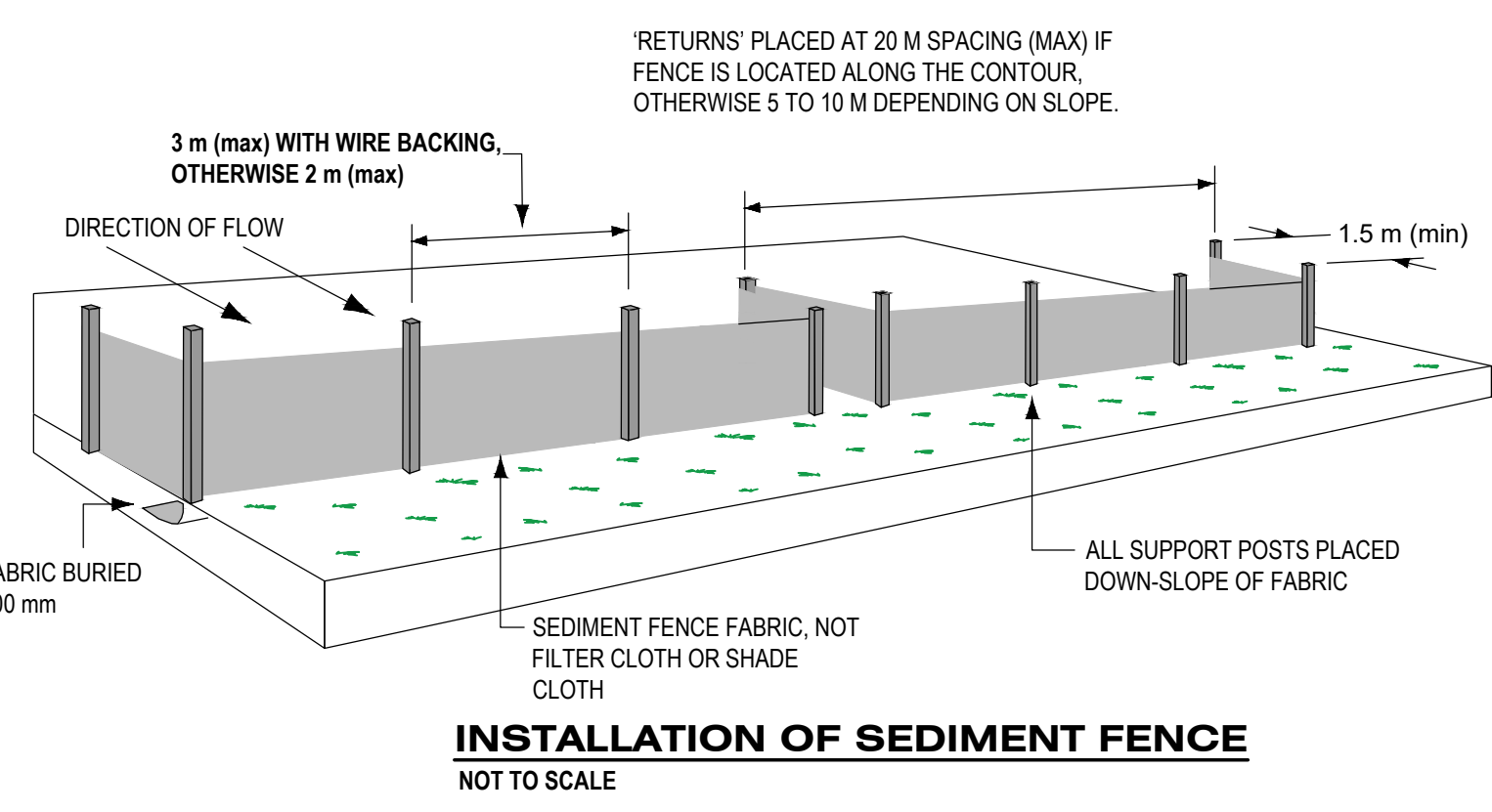
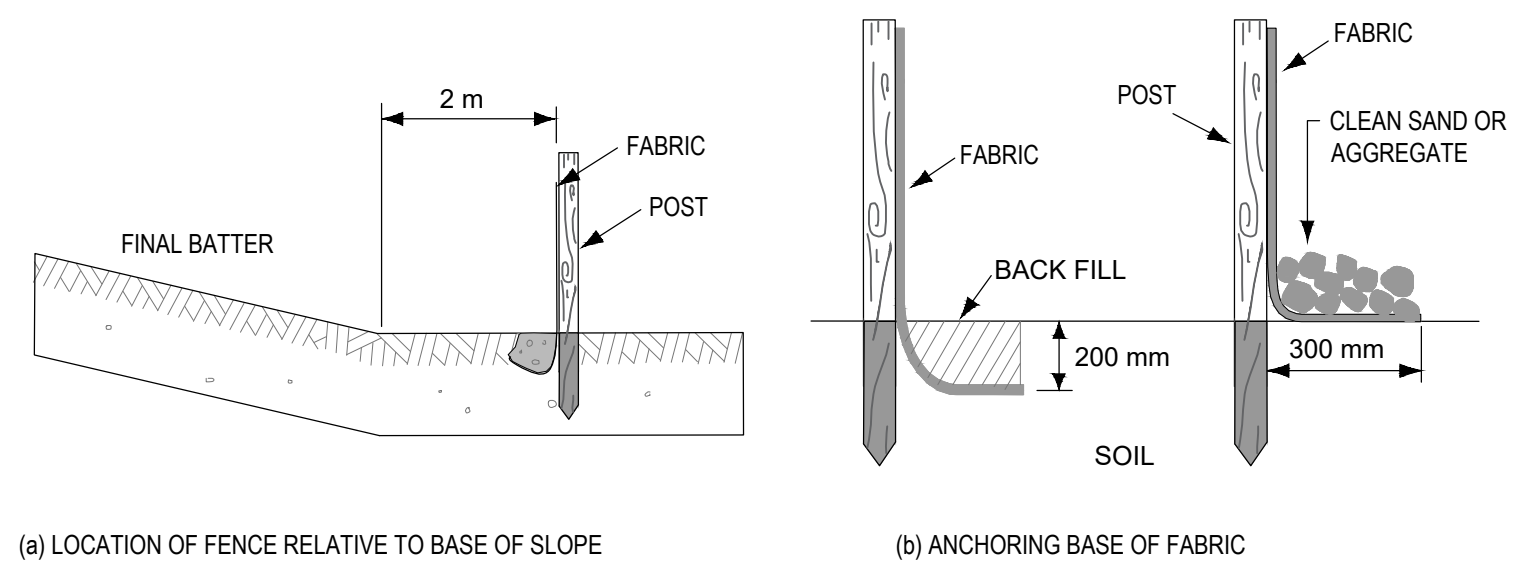
Barlow Shelley
 CONSULTING ENGINEERS

P 07 5443 8285
 E office@barlowshelley.com.au W www.barlowshelley.com.au
 PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS EROSION AND SEDIMENT CONTROL PLAN SHEET 7 OF 7	
Scale	AS SHOWN
Dwg. No.	2320-406
Sheet	83 OF 85
Issue	1

SEDIMENT & EROSION CONTROL NOTES

- SE1. GENERAL:
- TEMPORARY DRAINAGE CONTROL. FLOW SHOULD BE DIVERTED AROUND THE WORK SITE WHERE POSSIBLE.
 - ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND BE OPERATIONAL BEFORE COMMENCING UP-SLOPE EARTHWORKS.
 - ALL SEDIMENT & EROSION CONTROL DEVICES MUST BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR. INSPECTIONS SHOULD OCCUR ON A WEEKLY BASIS (MINIMUM), ALONG WITH BEFORE AND AFTER SIGNIFICANT RUNOFF PRODUCING STORMS.
 - ALL DISTURBED LAND MUST BE RENDERED EROSION-PROOF BY THE ESTABLISHMENT OF 80% EFFECTIVE GROUND COVER WITHIN 28 DAYS OF FINAL EARTHWORKS TRIM.
 - IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
 - STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.
- SE2. SEDIMENT CONTROL FENCE:
- NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
 - NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100m LENGTH OF FENCE.
 - WOVEN FABRICS ARE PREFERRED, NON-WOVEN FABRICS MAY BE USED ON SMALL WORK SITES, I.E. OPERATIONAL PERIOD LESS THAN 6 MONTHS OR ON SITES WHERE SIGNIFICANT SEDIMENT RUNOFF IS NOT EXPECTED.
 - WHERE FENCES NEED TO BE LOCATED ACROSS THE CONTOUR - REFER IPEAW STANDARD DRAWING D-0040 FOR DETAILS.
 - FENCES ARE REQUIRED 2m MIN FROM TOE OF CUT OR FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.
- SE3. TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP:
- ADJACENT STORMWATER RUNOFF TO BE DIVERTED AWAY FROM ENTRY/EXIT.
 - WHEEL - WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.
- SE4. SAFETY ISSUES MUST BE CONSIDERED AT ALL TIMES, INCORPORATE TRAFFIC CONTROL DEVICES .
- SE5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN ADDRESSED AS STIPULATED IN THE ENVIRONMENTAL MANAGEMENT PLAN. ADDITIONAL OR DIFFERENT SEDIMENT & EROSION CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION PHASE TO COMPLY WITH THE ABOVE.
- SE6. TEMPORARY STOCKPILES TO HAVE 1:6 SIDE BATTERS (MAXIMUM) AND BE SHAPED TO ENSURE RUN-OFF IS TREATED AND MANAGED TO THE SATISFACTION OF THE SUPERINTENDENT. ALL EXPOSED STOCKPILE SURFACES TO BE GRASS SEEDDED. SEDIMENT FENCES AND CUT-OFF DRAINS MAY BE REQUIRED.



COIR LOGS

MATERIALS

FIBRE ROLLS: TYPICALLY 200 TO 250mm JUTE, COIR OR STRAW ROLL TIED WITH SYNTHETIC OR BIODEGRADABLE MESH.

STAKES: MINIMUM 25 x 25mm TIMBER STAKES.

INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- WHEN PLACED ACROSS NON-VEGETATED OR NEWLY SEEDDED SLOPES, THE ROLLS MUST BE PLACED ALONG THE CONTOUR.
- IF PLACED ON OPEN OR LOOSE SOIL, ENSURE THE FIBRE ROLLS ARE TRENCHED 75 TO 125mm IN SANDY SOILS AND 50 TO 75mm IN CLAYEY SOILS.
- ENSURE THE OUTER MOST ENDS OF THE FIBRE ROLL ARE TURNED UP THE SLOPE TO ALLOW WATER TO ADEQUATELY POND UP-SLOPE OF THE ROLL, AND THE MINIMISE FLOW BYPASSING.
- WHEN PLACED ACROSS THE INVERT OF MINOR DRAINS, ENSURE THE SOCKS ARE PLACED SUCH THAT:
 - (i) THE CREST OF THE DOWNSTREAM ROLLS IS LEVEL WITH THE CHANNEL INVERT AT THE IMMEDIATE UPSTREAM SOCK (IF ANY);
 - (ii) EACH ROLL EXTENDS UP THE CHANNEL BANKS SUCH THAT THE CREST OF THE FIBRE ROLL AT ITS LOWEST POINT IS LOWER THAN THE GROUND LEVEL AT EITHER END OF THE ROLL.
- ENSURE THE ANCHORING STAKES ARE DRIVEN INTO THE END OF EACH ROLL AND ALONG THE LENGTH OF EACH ROLL AT A SPACING NOT EXCEEDING 1.2M OR SIX TIMES THE ROLL DIAMETER, WHICHEVER IS THE LESSER. A MAXIMUM STAKE SPACING OF 0.3M APPLIES WHEN USED TO FORM CHECK DAMS.
- ADJOINING ROLL MUST BE OVERLAP AT LEAST 450MM, NOT ABUTTED.

MAINTENANCE

- INSPECT ALL FIBRE ROLLS PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED PERIODS OF RAINFALL, AFTER SIGNIFICANT RUNOFF PRODUCING STORMS OR OTHERWISE AT WEEKLY INTERVALS.
- REPAIR OR REPLACE DAMAGED FIBRE ROLLS.
- REMOVE COLLECTED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

REMOVAL

- ALL EXCESSIVE SEDIMENT TRAPPED BY THE ROLLS MUST BE REMOVED FROM THE DRAIN OR SLOPE IF SUCH SEDIMENT IS LIKELY TO BE WASHED AWAY BY EXPECTED FLOWS.
- DISPOSE OF COLLECTED SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.
- THE BIODEGRADABLE CONTENT OF THE STRAW ROLLS MAY NOT NECESSARILY NEED TO BE REMOVED FROM THE SITE.
- ALL SYNTHETIC (PLASTIC) MESH OR OTHER NON READILY BIODEGRADABLE MATERIAL MUST BE REMOVED FROM THE SITE ONCE THE SLOPE OR DRAIN IS STABILISED, OR THE ROLLS HAVE DETERIORATED TO A POINT WHERE THEY ARE NO LONGER PROVIDING THEIR INTENDED DRAINAGE OR SEDIMENT CONTROL FUNCTION.

SEDIMENT & EROSION CONTROL PROGRAM

OBJECTIVE/TARGET	THE CONTRACTOR MUST COMPLY WITH ALL STATUTORY REGULATIONS AND MAINTAIN THEM DURING EARTHWORKS/CONSTRUCTION. ALL PROVISIONS AND SPECIFICATIONS OUTLINED WITH THE APPROVED ENVIRONMENTAL MANAGEMENT PLAN MUST BE ADHERED TO, ALONG WITH ALL EROSION AND SEDIMENT CONTROL MEASURES PRESCRIBED WITHIN THESE DRAWINGS BY THE SITE ENGINEER.
MANAGEMENT STRATEGY	THE SITE FOREMAN IS TO IDENTIFY AND CHECK THE DIRECTION OF STORMWATER FLOWS AS SHOWN ON PLAN. PROVIDE BARRIERS AND OTHER MEASURES SHOWN ON PLAN TO PREVENT STORMWATER FLOWS OVER EMBANKMENTS, AND SEDIMENT INTO GULLY PITS.
TASKS/ACTIONS	ERECT SEDIMENTATION BARRIERS AS DETAILED. STRATEGICALLY PLACE CHECK DAMS AROUND GULLY PITS.
PERFORMANCE INDICATORS	THE SITE FOREMAN IS TO CHECK FOR EROSION AND SEDIMENT FLOW AT THE BASE OF EMBANKMENTS AFTER SIGNIFICANT RAINFALL AND SHOULD ASCERTAIN THE WORKING EFFECTIVENESS OF CHECK DAMS DURING THIS WEATHER.
FREQUENCY/DEADLINE	SITE FOREMAN TO MONITOR PERFORMANCE AFTER EVERY HEAVY DOWNFALL.
RESPONSIBILITY	THE SITE FOREMAN IS RESPONSIBLE FOR ALL INSPECTIONS.
REPORTING REVIEW	SITE WORKMEN ARE TO ADVISE THE FOREMAN IF ANY SEDIMENT & EROSION CONTROL DEVICES ARE FAILING.
CORRECTIVE ACTIONS	THE SITE FOREMAN IS TO REPORT AND ORDER THROUGH SUPERVISOR, EXTRA BARRIER OR CHECK DAMS AS REQUIRED.

NOTE:
EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE DESIGNED AND PROVIDED IN ACCORDANCE WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIA) 2018's "BEST PRACTICE EROSION AND SEDIMENT CONTROL FOR BUILDING AND CONSTRUCTION SITE."

NO WORK IS SO IMPORTANT THAT IT CANNOT BE DONE SAFELY

No.	Revision	Date
1	ISSUE FOR CONSTRUCTION	20.11.2023

DESIGN CS
DRAWN CS
DESIGN CHECK SS

Tony Shelley
Director: TONY SHELLEY (RPEQ 7736)

Banana SHIRE
SHIRE OF OPPORTUNITY

Barlow Shelley
CONSULTING ENGINEERS

p 07 5443 8285
e office@barlowshelley.com.au w www.barlowshelley.com.au
a PO Box 899 Maroochydore 4558 ABN 89 215 591 077

WALLOON STREET AND PARTRIDGE DRIVE, THEODORE PAVEMENT WIDENING AND REHABILITATION WORKS CONTROL LINE SETOUT TABLES			
Scale	Dwg. No.	Sheet	Issue
AS SHOWN	2320-407	84 OF 85	1