BREAKLINE - REFER TO DRAWING C013362.00-DA413

DRAINAGE CONNECTION POINT
PROVIDE 1200⌀ STUB
FOOTPATH 1.2m WIDE
BAKERS LANE
PROVIDE GRASSED SWALE FOR DRAINAGE FROM MAMRE ROAD
Q100 PEAK FLOW FROM UPSTREAM CATCHMENT = 1.08m3/s
CHANNEL CAPACITY =1.25m3/S
CHANNEL SLOPE = 1%
mANNINGS n = 0.04
SIDE BATTER = 1:4 MAX
MAX DEPTH = 0.55m
EXISTING 450⌀ PIPE
UNDER MAMRE ROAD
LOT 4
RL 41.00
LOT 6
RL 41.50
DRAINAGE CONNECTION POINT
PROVIDE 825⌀ STUB
PROVIDE GRASSED SWALE FOR DRAINAGE FROM MAMRE ROAD
Q100 PEAK FLOW FROM UPSTREAM CATCHMENT = 1.46m3/s
CHANNEL CAPACITY =1.58m3/S
CHANNEL SLOPE = 1%
mANNINGS n = 0.04
SIDE BATTER = 1:4 MAX
MAX DEPTH = 0.6m
EXISTING 450⌀ PIPE
UNDER MAMRE ROAD
ROAD
PIT SCHEDULE:
REFER TO DA411 FOR PIT SCHEDULE.
LEGEND:
LEVELS DATUM IS AHD.
EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS SURVEYORS DATED 20.03.17.
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- FIP, FIELD INLET PIT
- OVERLAND FLOW DIRECTION
- PROPOSED DRAINAGE LINE
- EXISTING DRAINAGE LINE
- SUBSOIL LINE
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- FINISHED PAVEMENT SPOT HEIGHT
CIVIL WORKS PLAN - SHEET 6
1:500 SCALE
FOR DEVELOPMENT APPLICATION
5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

BREAKLINE - REFER TO DRAWING C013362.00-DA415

BREAKLINE - REFER TO DRAWING C013362.00-DA419

AMENDMENTS	DATE	ISSUE
LOT NUMBERS REVISED	14.05.19	E
ISSUED FOR DEVELOPMENT APPLICATION	29.03.19	D
ISSUED FOR DEVELOPMENT APPLICATION	05.03.19	C
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	B
ISSUED FOR INFORMATION	03.07.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA416

CONSULT AUSTRALIA

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DRAWING TITLE: CIVIL WORKS PLAN SHEET 6

DRAWING No: C013362.00-DA416 ISSUE: E

BREAKLINE - REFER TO DRAWING C013362.00-DA414

PROVIDE 3m WIDE STORMWATER EASEMENT THROUGH LOT 44

DRAINAGE CONNECTION POINT
PROVIDE 825ø STUB

RE-GRADING ZONE FOR FLOOD STORAGE

20m RIPARIAN ZONE

40m RIPARIAN ZONE

SOUTH CREEK

SITE BOUNDARY

FOOTPATH 2.5m WIDE

PIT B30

PIT B31

PIT B29

PIT B28

PIT B27

PIT B26

PIT B24

PIT B25

2x1500ø

ACCESS RD 1

FOOTPATH 1.2m WIDE

DRAINAGE CONNECTION POINT
PROVIDE 750ø STUB

FOOTPATH 2.5m WIDE

LOT 27
RL 35.90

LOT 28
RL 36.70

BREAKLINE - REFER TO DRAWING 13362.00-DA418

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS SURVEYORS DATED 20.03.17.

- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- FIP, FIELD INLET PIT
- OVERLAND FLOW DIRECTION
- PROPOSED DRAINAGE LINE
- EXISTING DRAINAGE LINE
- SUBSOIL LINE
- 35.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 35.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- +35.10 – FINISHED PAVEMENT SPOT HEIGHT

PIT SCHEDULE:

REFER TO DA411 FOR PIT SCHEDULE.

CIVIL WORKS PLAN - SHEET 7
1:500 SCALE

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
LOT NUMBERS REVISED	14.05.19	D
ISSUED FOR DEVELOPMENT APPLICATION	05.03.19	C
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	B
ISSUED FOR INFORMATION	03.07.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA417

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DRAWING TITLE: CIVIL WORKS PLAN
SHEET 7

DRAWING No: C013362.00-DA417 ISSUE: D

BREAKLINE - REFER TO DRAWING C013362.00-DA415

BREAKLINE - REFER TO DRAWING 13362.00-DA417

BREAKLINE - REFER TO DRAWING 13362.00-DA419

LOT 26
RL 36.20

LOT 14
RL 37.90

LOT 9
RL 38.50

LOT 29
RL 37.30

LOT 15
RL 37.80

LOT 16
RL 38.50

DP 258414

No. 757-769

ACCESS RD 1

ACCESS RD 3

PIT B22
PIT B23
PIT B20
PIT B21
PIT B18
PIT B19
PIT B16
PIT B17
PIT B15
PIT B54
PIT B53
PIT B56
PIT B55
PIT B13
PIT B14
PIT B11
PIT B12
PIT B9
PIT B10

DRAINAGE CONNECTION POINT
PROVIDE 750ø STUB

DRAINAGE CONNECTION POINT
PROVIDE 825ø STUB

FOOTPATH 1.2m WIDE

FOOTPATH 2.5m WIDE

SITE BOUNDARY

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS SURVEYORS DATED 20.03.17.

- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- FIP, FIELD INLET PIT
- OVERLAND FLOW DIRECTION
- PROPOSED DRAINAGE LINE
- EXISTING DRAINAGE LINE
- SUBSOIL LINE
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- FINISHED PAVEMENT SPOT HEIGHT

PIT SCHEDULE:

REFER TO DA411 FOR PIT SCHEDULE.

CIVIL WORKS PLAN - SHEET 8

1:500 SCALE

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
LOT NUMBERS REVISED	14.05.19	D
ISSUED FOR DEVELOPMENT APPLICATION	05.03.18	C
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	B
ISSUED FOR INFORMATION	03.07.18	A

CLIENT: ALTIS PROPERTY PARTNERS / FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	HC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA418

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DRAWING TITLE: CIVIL WORKS PLAN SHEET 8

DRAWING No: C013362.00-DA418 ISSUE: D

BREAKLINE - REFER TO DRAWING C013362.00-DA416

BREAKLINE - REFER TO DRAWING 13362.00-DA418

LOT 5
RL 40.50

LOT 17
RL 39.90

LOT 18
RL 40.00

ACCESS RD 2

ACCESS RD 1

MAMRE ROAD

DRAINAGE CONNECTION POINT
PROVIDE 750ø STUB

750ø
375ø
PIT B42

900ø

375ø
PIT B43

FOOTPATH 1.2m WIDE

1650ø

DRAINAGE CONNECTION POINT
PROVIDE 1200ø STUB

1200ø
1200ø
PIT B46

PIT B7

PIT B8

2x1200ø

1500ø

PIT B6

825ø

PIT B4

PIT B5

DRAINAGE CONNECTION POINT
PROVIDE 750ø STUB

PROVIDE GRASSED SWALE FOR DRAINAGE FROM MAMRE ROAD.
Q100 PEAK FLOW FROM UPSTREAM CATCHMENT = 1.46m3/s
CHANNEL CAPACITY =1.58m3/S
CHANNEL SLOPE = 1%
mANNINGS n = 0.04
SIDE BATTER = 1:4 MAX
MAX DEPTH = 0.6m

EXISTING 450ø PIPE
UNDER MAMRE ROAD

FOOTPATH 1.2m WIDE

PROVIDE 1500sq FIELD INLET PIT IN ACCORDANCE
WITH PENRITH CITY COUNCIL SD2002 & PROVIDE
CONNECTION INTO ROAD DRAINAGE SYSTEM

SITE BOUNDARY

PIT B1

600ø

PIT B2

600ø

PIT B3

DRAINAGE CONNECTION POINT
PROVIDE 750ø STUB

FOOTPATH 2.5m WIDE

SITE BOUNDARY

SITE BOUNDARY

CIVIL WORKS PLAN - SHEET 9
1:500 SCALE

PIT SCHEDULE:
REFER TO DA411 FOR PIT SCHEDULE.

LEGEND:
LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS SURVEYORS DATED 20.03.17.

- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- FIP, FIELD INLET PIT
- OVERLAND FLOW DIRECTION
- PROPOSED DRAINAGE LINE
- EXISTING DRAINAGE LINE
- SUBSOIL LINE
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- FINISHED PAVEMENT SPOT HEIGHT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
LOT NUMBERS REVISED	14.05.19	E
ISSUED FOR DEVELOPMENT APPLICATION	29.03.19	D
ISSUED FOR DEVELOPMENT APPLICATION	05.03.19	C
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	B
ISSUED FOR INFORMATION	03.07.18	A

AMENDMENTS DATE ISSUE | AMENDMENTS DATE ISSUE | AMENDMENTS DATE ISSUE

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA419

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DRAWING TITLE: CIVIL WORKS PLAN
SHEET 9

DRAWING No: C013362.00-DA419 ISSUE: E

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.03.17.

30.00 - FLOOD LEVEL CONTOUR (MAJOR) 1m INTERVALS

30.20 - FLOOD LEVEL CONTOUR (MINOR) 0.2m INTERVALS

DEPTH RANGE

No.	FROM DEPTH	TO DEPTH	COLOUR
1	0.000	0.500	
2	0.500	1.000	
3	1.000	1.500	
4	1.500	2.000	
5	2.000	2.500	
6	2.500	3.000	
7	3.000	3.500	
8	3.500	4.000	
9	4.000	4.500	
10	4.500	5.000	
11	5.000	5.500	
12	5.500	6.000	
13	6.000	6.500	
14	6.500	7.000	
15	7.000	7.500	
16	7.500	8.000	
17	8.000	8.500	

OSD/STORMWATER TREATMENT BASIN
BASIN TO TREAT STAGE 2/3 CATCHMENT AND TO BE CONSTRUCTED AS PART OF STAGE 2/3 WORKS. LOTS WITHIN STAGE 2/3 TO BE ATTENUATED AND TREATED OFF-SITE VIA THE ESTATE BASIN, REFER TO DRAWING DA414

TREATMENT BASIN TO DISCHARGE TO SOUTH CREEK. REFER TO DRAWING DA414

TEMPORARY DRAINAGE SWALE FROM STAGE 1 DEVELOPMENT. REFER TO DRAWING DA401

TEMPORARY DRAINAGE SWALE FROM STAGE 1 DEVELOPMENT. REFER TO DRAWING DA401

NOTE:
EACH LOT WITHIN STAGE 1 TO PROVIDE ON-SITE DETENTION AND WATER QUALITY DEVICE IN ACCORDANCE WITHI PENRITH CITY COUNCIL REQUIREMENTS

RUNOFF FROM UPSTREAM CATCHMENTS TO BE CONVEYED THROUGH SITE VIA OPEN SWALE. REFER TO DRAWING DA416

RUNOFF FROM UPSTREAM CATCHMENTS TO BE CONVEYED THROUGH SITE VIA OPEN SWALE. REFER TO DRAWING DA419

EXISTING 450Φ PIPE UNDER MAMRE ROAD

EXISTING 450Φ PIPE UNDER MAMRE ROAD

EXISTING 450Φ PIPE UNDER MAMRE ROAD

CATCHMENT TO PASS THROUGH EXISTING BOX CULVERTS UNDER MAMRE ROAD AND BYPASS DEVELOPMENT SITE

STAGE 2/3 CATCHMENT BOUNDARY

STAGE 1 CATCHMENT BOUNDARY

MAMRE ROAD

SOUTH CREEK

DP 154739

RESERVE

OFFICE 31 550 SQM
WAREHOUSE 31 11 375 SQM
WAREHOUSE 33 21 995 SQM
OFFICE 1150 SQM
WAREHOUSE 32 11 375 SQM
OFFICE 32 550 SQM
OFFICE 35 550 SQM
WAREHOUSE 35 9 020 SQM
OFFICE 36 550 SQM
WAREHOUSE 36 9 020 SQM
OFFICE 08 1 200 SQM
WAREHOUSE 11 24 093 SQM
OFFICE 09 710 SQM
WAREHOUSE 09 13 020 SQM
OFFICE 10 710 SQM
WAREHOUSE 12 24 243

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SHEET SIZE

OVERALL STORMWATER MANAGEMENT PLAN
SCALE 1:1500

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	12.03.19	B
ISSUED FOR DEVELOPMENT APPLICATION	07.12.18	A

CLIENT: ALTIS PROPERTY PARTNERS / FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA420

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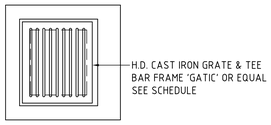
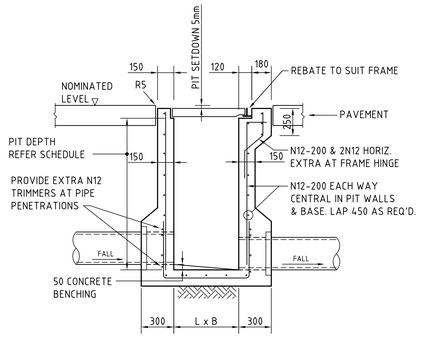
DRAWING TITLE: OVERALL STORMWATER MANAGEMENT PLAN

DRAWING No: C013362.00-DA420 ISSUE: B



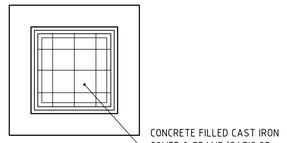
PLAN
SCALE 1:20



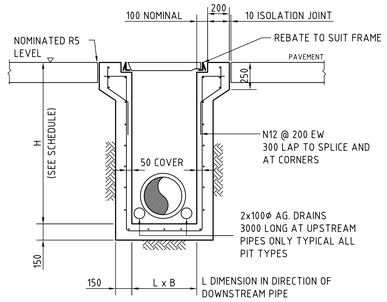
SEE SCHEDULE
L DIMENSION IN DIRECTION OF DOWNSTREAM PIPE

SECTION
SCALE 1:20

SINGLE GRATED GULLY PIT - SGGP

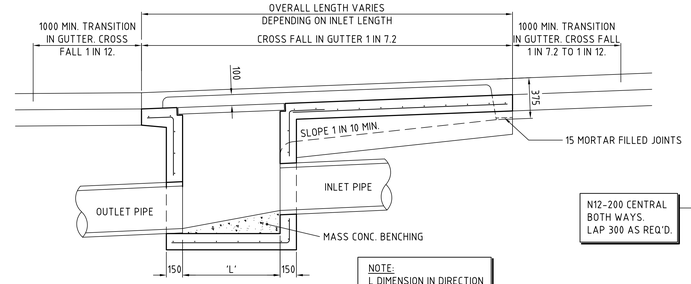


PLAN
1:20



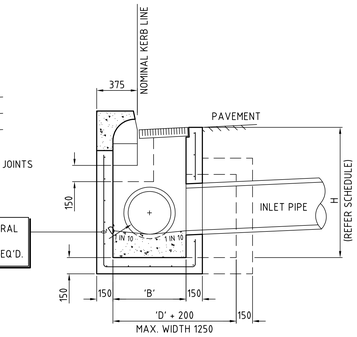
SECTION
SCALE 1:20

SEALED JUNCTION PIT - SJP

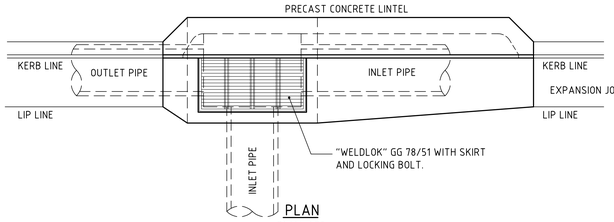


NOTE:
L DIMENSION IN DIRECTION OF DOWNSTREAM PIPE

LONG SECTION.
SCALE 1:20



CROSS SECTION.
SCALE 1:20



PLAN
SCALE 1:20

KERB INLET PIT - KIP

NOTE:
DETAIL SHOWN FOR INFORMATION ONLY. CONTRACTOR TO ADOPT DETAIL AS PER PCC STANDARD DRAWING SD2001 FOR ALL STANDARD KERB INLET PITS

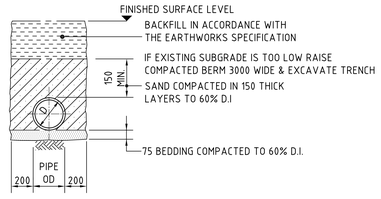
CONCRETE QUALITY					
ELEMENT	SLUMP	AGGREGATE (MAX. SIZE)	CEMENT TYPE	ADMIXTURE	F'c (MPa)
PIT	80	20	GP	NIL	32

NOTES:

1. WHERE GULLY PIT IS LOCATED ON KERB RETURNS OR BULB OF CUL-DE-SACS PROVIDE CURVED PRECAST CONCRETE LINTELS.
2. SAG PITS SHALL HAVE LINTEL PLACED CENTRALLY ABOUT THE GRATE.
3. ALL REINFORCING TO HAVE 30 MIN. CLAER CONCRETE COVER.
4. FOR PITS DEEPER THAN 1200mm CLIMB RAILS SHALL BE PROVIDED.

TYPE HS2 SUPPORT TO CONCRETE PIPES UNDER PAVEMENT

SCALE 1:20
D ≤1350, MAX FILL = 4.0m
D >1350, MAX FILL = 3.0m



SUPPORT TO uPVC PIPES

SCALE 1:20

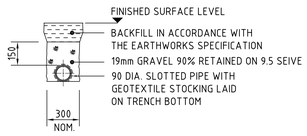
BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 50
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0

SIDE ZONE WIDTH	
PIPE SIZE (mm)	l_c (mm)
≤ 900ø	150
1050ø	175
1200ø	200
1350ø	225
1500ø	250
1650ø	275
1800ø	300

ENGINEER TO SPECIFY TRENCH WIDTHS FOR PIPE SIZES GREATER THAN 1800ø

SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
75.0	100
9.5	100 TO 50
2.36	100 TO 50
0.60	50 TO 15
0.075	25 TO 0

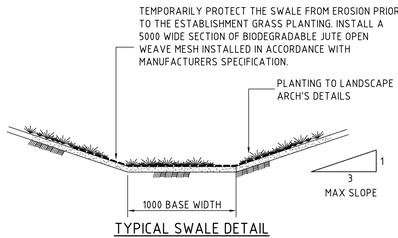
SELECT FILL MATERIAL IN ACCORDANCE WITH TABLE 1 AS 3725



SUPPORT TO AGRICULTURAL DRAIN

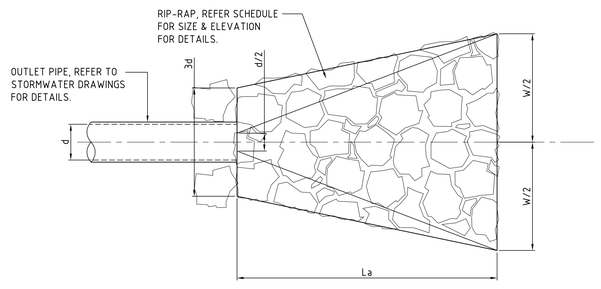
SCALE 1:20

SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
9.5	100 TO 50
2.6	100 TO 30
0.60	50 TO 15
0.075	25 TO 0

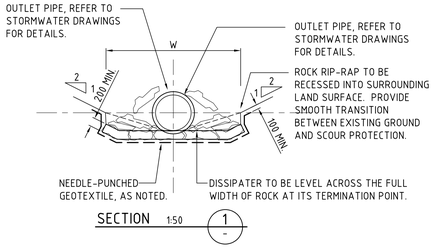


TYPICAL SWALE DETAIL

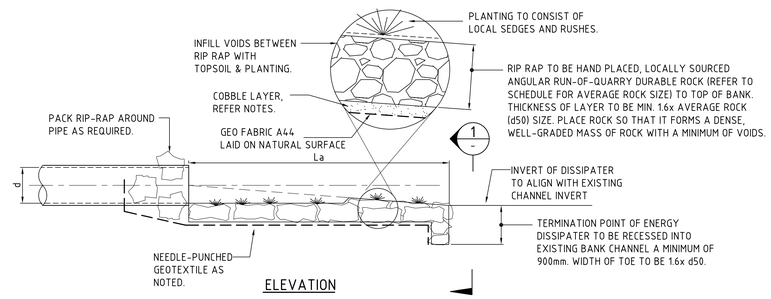
1:20
ADOPT AS REQUIRED



PLAN VIEW



SECTION 1-50 (1)



ELEVATION

STORMWATER OUTLET DISSIPATER

SCALE 1:50

DISSIPATER NOTES:

1. ALIGN STRUCTURE EVENLY WITH BANK.
2. LOCATE STRUCTURE AT INVERT LEVEL OF STREAM AND POINT IN A DOWNSTREAM DIRECTION.
3. PIPE TO REST ON, AND BE PACKED IN, BY RIP-RAP (SIZE AS NOTED).
4. DISCHARGE INTO STREAM WHERE BEDROCK IS PRESENT, OTHERWISE SCOUR PROTECT AS REQUIRED.
5. SCOUR PROTECT THE OPPOSITE BANK AS REQUIRED. SCOUR PROTECTION TO BE PROVIDED WHERE OPPOSITE BANK IS WITHIN 12-14 TIMES THE PIPE DIAMETER.
6. RIP-RAP TO CONSIST OF ANGULAR RUN-OF-QUARRY ROCK (d50= 300mm MINIMUM) AS NOTED IN THE SCHEDULE. RIP-RAP TO BE MINIMUM THICKNESS OF RIP-RAP LAYER TO BE 1.6x AVERAGE ROCK SIZE (d50).
7. RIP-RAP IS TO BE PLACED OVER A 200mm LAYER OF 140mm COBBLES OVER NEEDLE-PUNCHED GEOFAB A44.
8. PLACE ROCK SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS. THE FINISHED RIP-RAP SURFACE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS.
9. GAPS IN RIP-RAP TO BE HAND PACKED WITH TOPSOIL & PLANTED WITH NATIVE SEDGES & RUSHES TO PROVIDE. THE INTENT IS FOR THERE TO BE NO VOIDS BETWEEN RIP-RAP BOULDERS.
10. ENSURE THE FINISHED ROCK SURFACE BLENDS WITH THE SURROUNDING GROUND LEVELS. NO OVERFALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.
11. ENSURE THAT STORMWATER FROM SURROUNDING GROUND IS FREE TO ENTER THE STRUCTURE WITHOUT CAUSING UNDESIRABLE PONDING OR SCOUR.

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SIZE SHEET

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT A0 SIZE SHEET

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA450

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Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: STORMWATER DRAINAGE DETAILS - SHEET 1

DRAWING No: C013362.00-DA450 ISSUE: A

BIO-RETENTION NOTES:

FILTER MEDIA TO BE LOAMY SAND WITH A PERMEABILITY NOT LESS THAN 200mm/hr. FILTER MEDIA TO BE FREE OF RUBBISH, DELETERIOUS MATERIAL, TOXICANTS, DECLARED PLANTS AND LOCAL WEEDS, AND IS TO NOT BE HYDROPHOBIC.

FILTER MEDIA TO HAVE THE FOLLOWING COMPOSITION RANGE:

CLAY & SILT (<0.05mm)	<3%
VERY FINE SAND (0.05-0.15mm)	5-30%
FINE SAND (0.15-0.25mm)	10-30%
MEDIUM TO COARSE SAND (0.25-1.00mm)	40-60%
COARSE SAND (1.0-2.0mm)	7-10%
FINE GRAVEL (2.0-3.4mm)	<3%

FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING CRITERIA SHALL BE REJECTED:

a. ORGANIC MATTER CONTENT TO BE IDEALLY WITHIN 1% TO 3% (W/W) AND TO BE NO GREATER THAN 5%(W/W).
b. PH TO BE BETWEEN 5.5 AND 7.5
c. PHOSPHOROUS CONTENT TO BE NO GREATER THAN 35mg/kg

FILTER MEDIA TO BE ASSESSED BY QUALIFIED HORTICULTURALIST TO ENSURE CAPABILITY OF SUPPORTING PLANT LIFE.

DRAINAGE LAYER TO BE CLEAN GRAVEL 5-7mm.

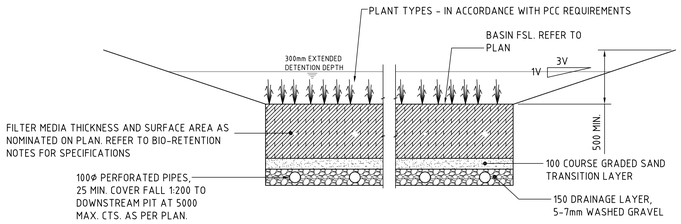
PROVIDE 100mm TOPSOIL AND TEMPORARY EROSION PROTECTION (JUTEMASTER OR EQUIV) TO SWALE BATTER SLOPES AND ADJACENT LANDSCAPED AREAS. NOTE THAT NO TOPSOIL IS TO BE PLACED OVER FILTRATION MEDIA. PROVIDE SILT FENCE TO TOP OF BANK UNTIL SUCH TIME AS THIS STABILISING AND VEGETATION HAS BEEN COMPLETED.

BIO-RETENTION TO BE PARTIALLY INSTALLED, FOLLOWING COMPLETION OF THE ROAD, WITH THE TOP 75-100mm OF FILTER MEDIA REPLACED WITH A FINE TO COARSE SAND UNDERLAIN WITH A GEOTEXTILE LAYER (REFER TO DETAIL). FOLLOWING COMPLETION OF THE UPSTREAM DEVELOPMENT AND SITE STABILISATION, THE SAND IS TO BE REMOVED, REPLACED WITH FILTER MATERIAL AND PLANTED OUT. REFER TO TEMPORARY BIO-BASIN DETAIL

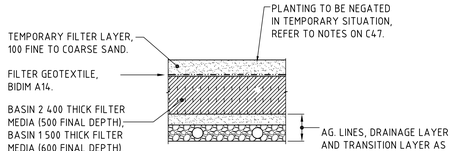
PRIOR TO PLANTING, THE TOP 100mm OF THE BIORETENTION FILTER MEDIA IS TO BE AMELIORATED WITH APPROPRIATE ORGANIC MATTER, FERTILISER AND TRACE ELEMENTS TO AID PLANT ESTABLISHMENT AS PER THE TABLE BELOW:

TABLE: RECIPE FOR AMELIORATING TOP 100mm OF BIORETENTION FILTER MEDIA

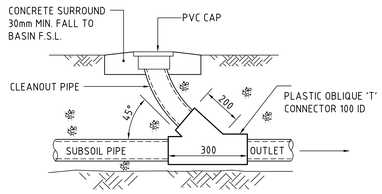
CONSTITUENT	QUANTITY (kg/m2 OF FILTER AREA)
GRANULATED POULTRY MANURE FINES	50
SUPERPHOSPHATE	2
MAGNESIUM SULPHATE	3
POTASSIUM SULPHATE	2
TRACE ELEMENT MIX	1
FERTILISER NPK (16.4.14)	4
LIME	20



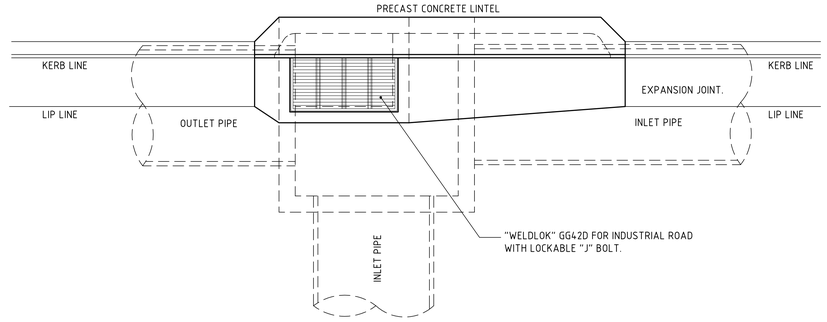
TYPICAL BIO-RETENTION DETAIL
1:20



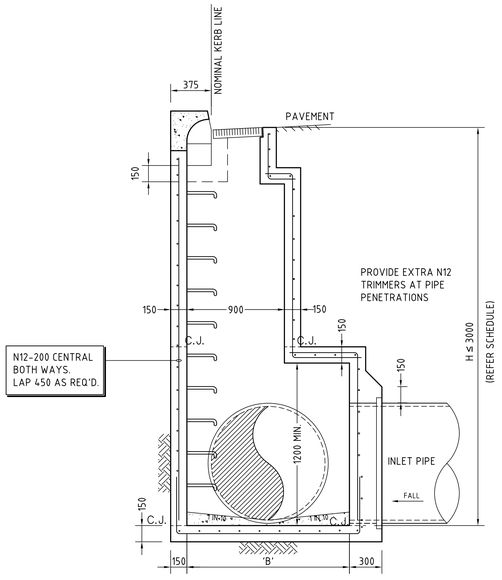
BIO-RETENTION CONSTRUCTION DETAIL
SCALE 1:20
TEMPORARY DETAIL FOR USE DURING CONSTRUCTION & SITE STABILISATION PERIOD - REFER TO NOTES FOR IMPLIMENTATION PERIODS.



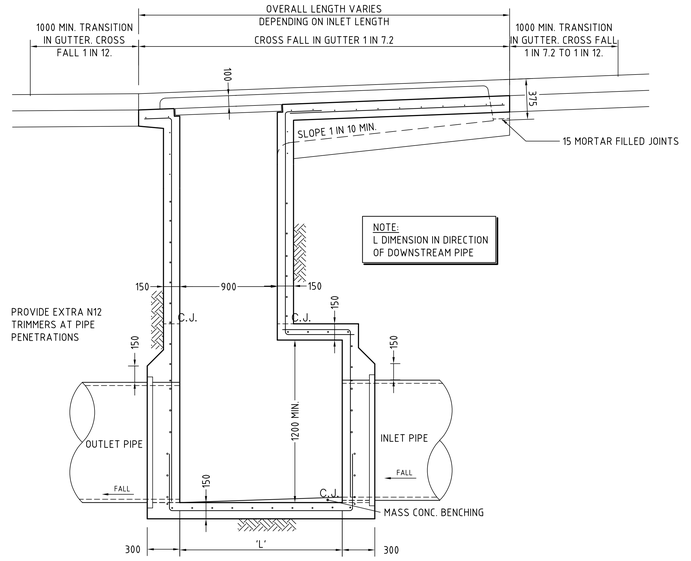
CLEANOUT EYE ELEVATION
SCALE 1:20
DENOTED C.E. ON PLAN



PLAN
SCALE 1:20



CROSS SECTION.
SCALE 1:20

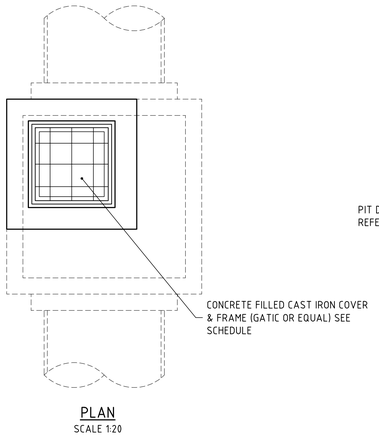


LONG SECTION.
SCALE 1:20

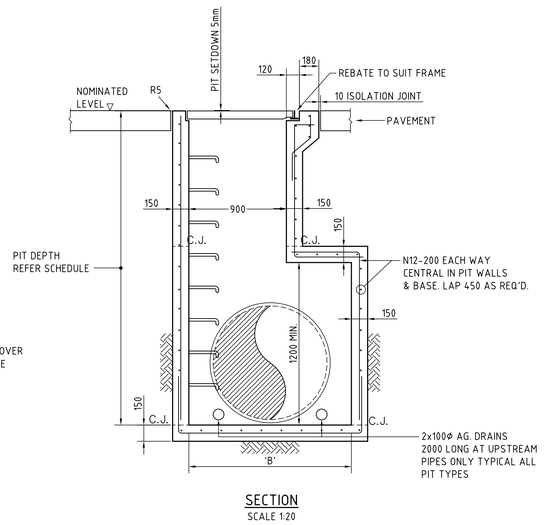
TAPERED KERB INLET PIT - KIP

SUBSOIL NOT SHOWN FOR CLARITY.
PIT DETAIL TO BE ADOPTED TO PIT SIZE GREATER THAN 1200x1200

NOTE:
DETAIL SHOWN FOR INFORMATION ONLY. FINAL DETAIL TO BE PROVIDED DURING DETAIL DESIGN STAGE



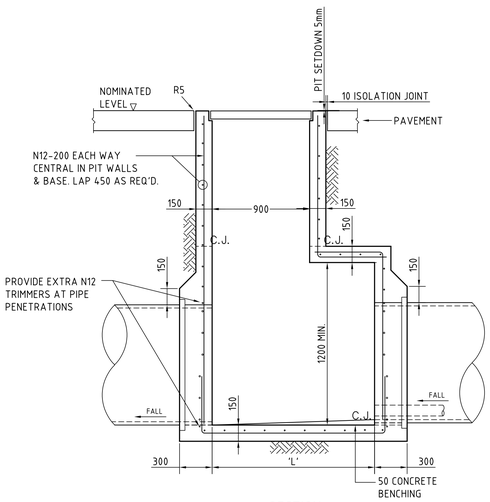
PLAN
SCALE 1:20



SECTION
SCALE 1:20

TAPERED SEALED JUNCTION PIT - SJP

PIT DETAIL TO BE ADOPTED TO PIT SIZE GREATER THAN 1200x1200



SECTION
SCALE 1:20

TAPERED SEALED JUNCTION PIT - SJP

PIT DETAIL TO BE ADOPTED TO PIT SIZE GREATER THAN 1200x1200

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT A0 SIZE SHEET

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

CLIENT: ALTIS PROPERTY PARTNERS / FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
HW	MC	APRIL '18	HW	A0	AS SHOWN	C013362.00-DA460

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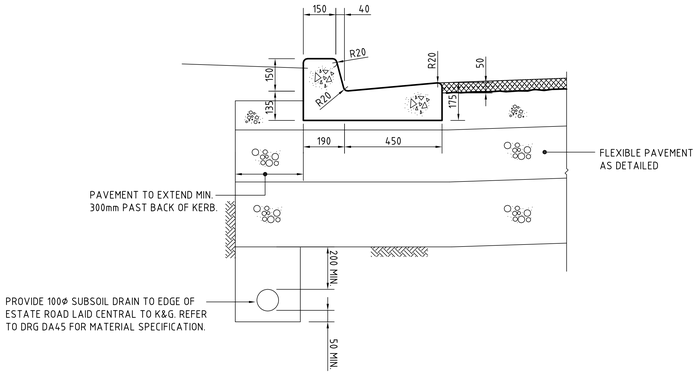
Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

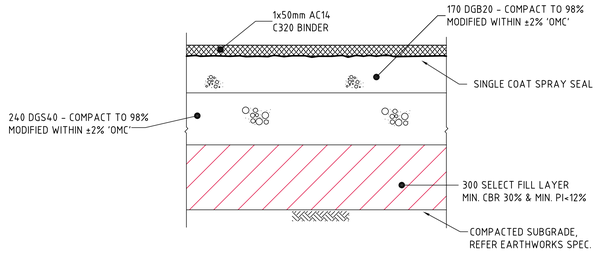
DRAWING TITLE: STORMWATER DRAINAGE DETAILS - SHEET 2

DRAWING No: C013362.00-DA460 ISSUE: A



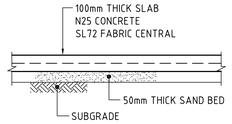
PENRITH CITY COUNCIL KERB & GUTTER

SCALE 1:10



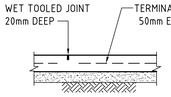
ACCESS ROAD PAVEMENT DETAIL

SCALE 1:10
DESIGN TRAFFIC $1x10^7$ ESA's
DESIGN CBR VALUE OF 2%
NOTE: FINAL DESIGN SUBJECT TO FURTHER TESTING TO CONFIRM CBR VALUE



PEDESTRIAN SLAB

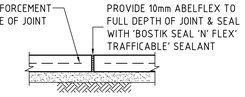
SCALE 1:10



WET TOOLED JOINT

SCALE 1:10

NOTE: PROVIDE SAWCUT JOINTS AT 2000 MAX. CTS.

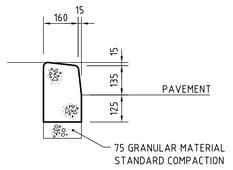


BUTT JOINT

SCALE 1:10

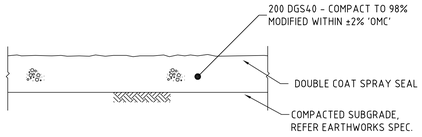
NOTE: PROVIDE EXPANSION JOINTS AT 6000 MAX. CTS.

PEDESTRIAN SLAB DETAILS



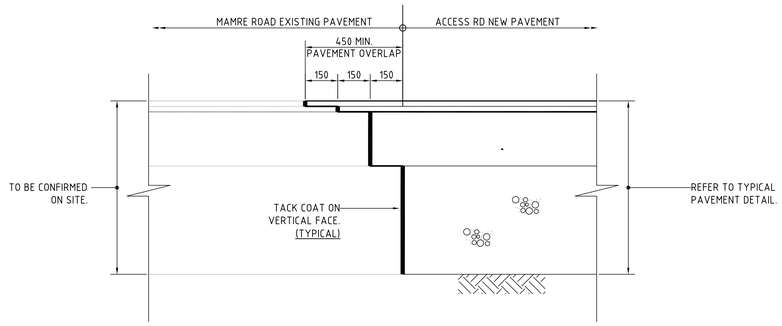
KERB ONLY - KO

SCALE 1:10
PROVIDE JOINTS IN KERB AT 5m CENTRES MAX.



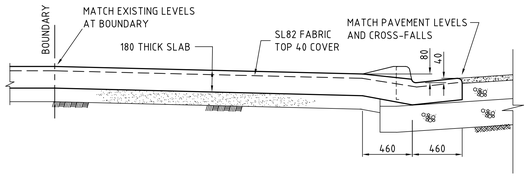
ACCESS TRAIL PAVEMENT DETAIL

SCALE 1:10
DESIGN TRAFFIC $1x10^7$ ESA's
DESIGN CBR VALUE OF 2%



TYPICAL NEW / EXISTING PAVEMENT INTERFACE DETAIL

SCALE 1:10



VEHICULAR CROSS OVER DETAIL - VC

SCALE 1:20

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SIZE SHEET

100mm 0 200 400 600 800 1000mm
SCALE 1:10 AT A0 SIZE SHEET

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT A0 SIZE SHEET

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA50

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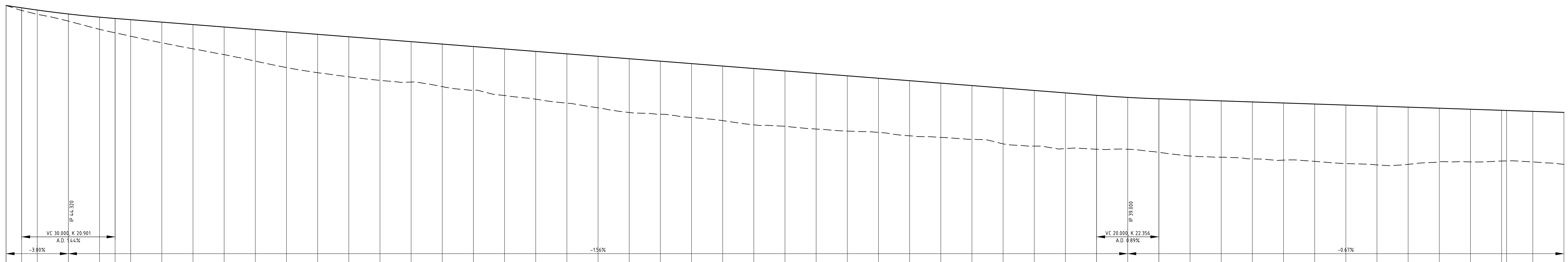
DRAWING TITLE: ROADWORKS DETAILS

DRAWING No: C013362.00-DA50 ISSUE: A

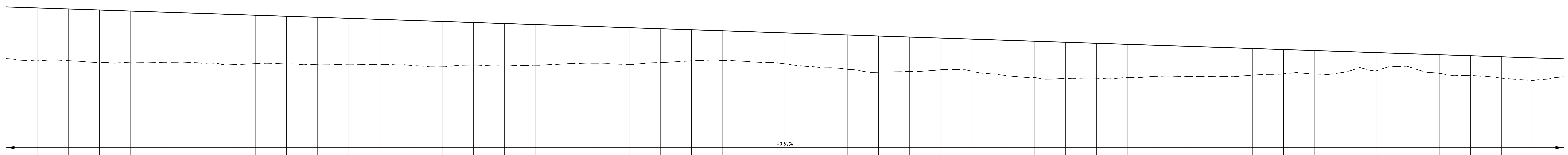


HORIZONTAL GEOMETRY: 481.590 / 277°54'34" (0.000 – 481.590); 93.547 / 278°38'34" (481.590 – 500.000)

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
0.000	0.000	44.920	44.92
5.000	0.170	44.770	44.60
10.000	0.270	44.626	44.36
20.000	0.456	44.374	43.92
30.000	0.781	44.169	43.39
35.000	0.921	44.085	43.16
40.000	1.061	44.007	42.95
50.000	1.328	43.850	42.52
60.000	1.555	43.694	42.14
70.000	1.773	43.537	41.76
80.000	2.029	43.381	41.35
90.000	2.290	43.224	40.93
100.000	2.461	43.068	40.61
110.000	2.570	42.912	40.34
120.000	2.640	42.755	40.11
130.000	2.591	42.599	40.01
140.000	2.727	42.442	39.72
150.000	2.823	42.286	39.46
160.000	2.984	42.129	39.15
170.000	3.065	41.973	38.91
180.000	3.162	41.816	38.65
190.000	3.303	41.660	38.36
200.000	3.448	41.503	38.06
210.000	3.404	41.347	37.94
220.000	3.454	41.190	37.74
230.000	3.501	41.034	37.53
240.000	3.614	40.878	37.26
250.000	3.550	40.721	37.17
260.000	3.571	40.565	36.99
270.000	3.545	40.408	36.86
280.000	3.474	40.252	36.78
290.000	3.535	40.095	36.56
300.000	3.478	39.939	36.46
310.000	3.452	39.782	36.33
320.000	3.584	39.626	36.04
330.000	3.570	39.469	35.90
340.000	3.573	39.313	35.74
350.000	3.456	39.156	35.70
360.000	3.325	39.022	35.70
370.000	3.434	38.933	35.50
380.000	3.601	38.866	35.27
390.000	3.610	38.799	35.19
400.000	3.653	38.732	35.08
410.000	3.664	38.665	35.00
420.000	3.677	38.598	34.92
430.000	3.750	38.531	34.78
440.000	3.771	38.464	34.69
450.000	3.668	38.397	34.73
460.000	3.445	38.330	34.89
470.000	3.377	38.263	34.89
480.000	3.253	38.196	34.94
481.590	3.236	38.185	34.95
490.000	3.246	38.129	34.88
500.000	3.332	38.062	34.73

LONGITUDINAL SECTION - CL BAKERS LANE

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

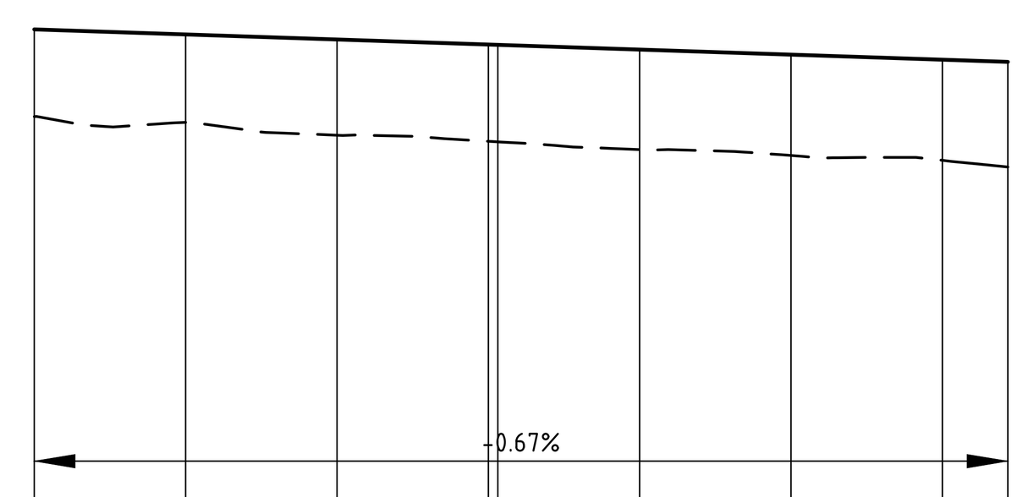


HORIZONTAL GEOMETRY: 93.547 / 278°38'34" (500.000 – 575.137); 455.489 / 278°38'31" (575.137 – 1000.000)

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
500.000	3.332	38.062	34.73
510.000	3.410	37.995	34.59
520.000	3.332	37.928	34.60
530.000	3.396	37.861	34.47
540.000	3.340	37.794	34.45
550.000	3.238	37.727	34.49
560.000	3.187	37.660	34.47
570.000	3.263	37.593	34.33
575.137	3.201	37.559	34.36
580.000	3.122	37.526	34.40
590.000	3.079	37.459	34.38
600.000	3.060	37.392	34.33
610.000	2.994	37.325	34.33
620.000	2.898	37.258	34.36
630.000	2.900	37.191	34.29
640.000	2.924	37.124	34.20
650.000	2.740	37.057	34.32
660.000	2.733	36.990	34.26
670.000	2.619	36.923	34.30
680.000	2.459	36.856	34.40
690.000	2.395	36.789	34.39
700.000	2.361	36.722	34.36
710.000	2.178	36.655	34.48
720.000	1.998	36.588	34.59
730.000	1.909	36.521	34.61
740.000	1.938	36.454	34.52
750.000	1.997	36.387	34.39
760.000	2.132	36.320	34.19
770.000	2.207	36.253	34.05
780.000	2.332	36.186	33.85
790.000	2.225	36.119	33.89
800.000	2.038	36.052	34.01
810.000	2.067	35.985	33.92
820.000	2.256	35.918	33.66
830.000	2.343	35.851	33.51
840.000	2.334	35.784	33.45
850.000	2.248	35.717	33.47
860.000	2.148	35.650	33.50
870.000	1.990	35.583	33.59
880.000	1.940	35.516	33.58
890.000	1.873	35.449	33.58
900.000	1.719	35.382	33.66
910.000	1.566	35.315	33.75
920.000	1.506	35.248	33.74
930.000	1.304	35.181	33.88
940.000	1.155	35.114	33.96
950.000	0.832	35.047	34.22
960.000	1.194	34.980	33.79
970.000	1.266	34.913	33.65
980.000	1.377	34.846	33.47
990.000	1.457	34.779	33.32
1000.000	1.154	34.712	33.56

LONGITUDINAL SECTION - CL BAKERS LANE

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

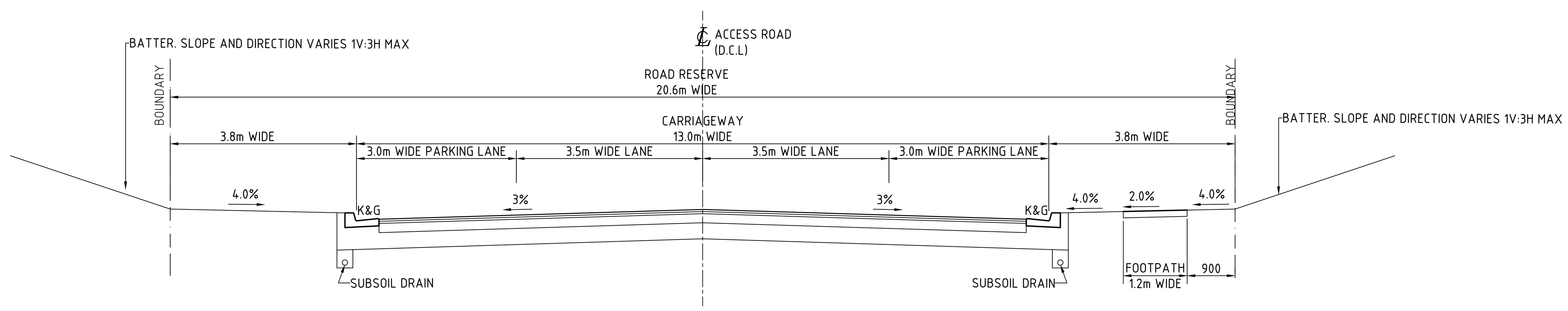


HORIZONTAL GEOMETRY: 455.489 / 278°38'31" (1000.000 – 1030.626); R49.000 A33.703 (1030.626 – 1064.329)

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
1000.000	1.154	34.712	33.56
1010.000	1.163	34.645	33.48
1020.000	1.266	34.578	33.31
1030.000	1.279	34.511	33.23
1030.626	1.283	34.507	33.22
1040.000	1.322	34.444	33.12
1050.000	1.333	34.377	33.04
1060.000	1.331	34.310	32.98
1064.329	1.389	34.281	32.89

LONGITUDINAL SECTION - CL BAKERS LANE

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



TYPICAL CROSS SECTION - BAKERS LANE

SCALE 1:50

500mm 0 1 2 3 4 5m
SCALE 1:50 AT A0 SHEET SIZE

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SHEET SIZE

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	29.03.19	B
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	CO13362.00-DA601

CONSULT AUSTRALIA

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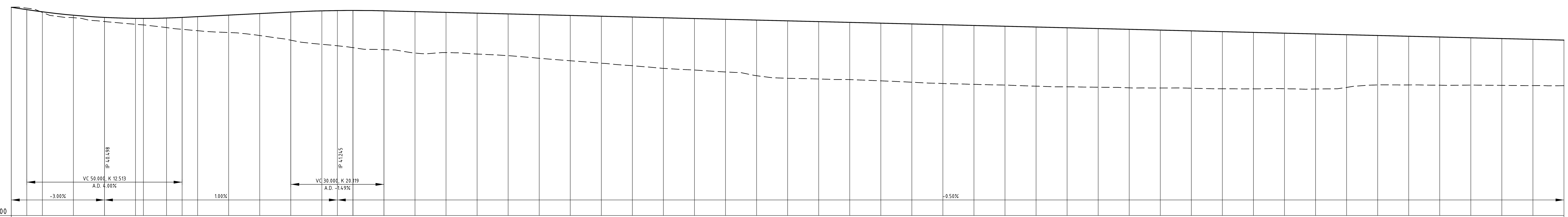
email: mail@costinroe.com.au ©

Costin Roe Consulting
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: ROAD LONG SECTIONS SHEET 1
DRAWING No: CO13362.00-DA601
ISSUE: B



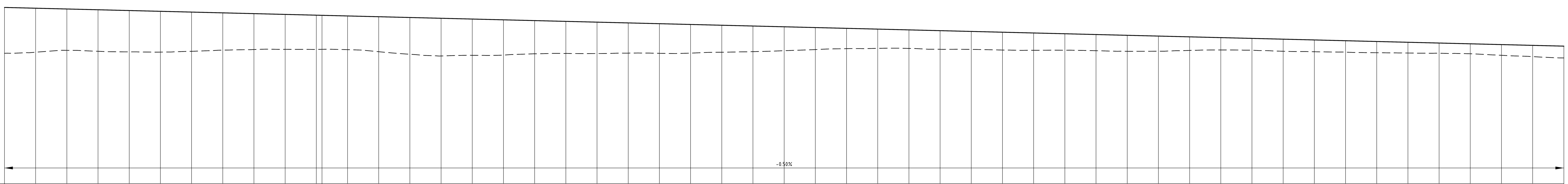
DATUM 28.000

HORIZONTAL GEOMETRY: 601.808 / 278°31'43"

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
0.000	-0.003	41.398	41.40
5.000	-0.093	41.248	41.34
10.000	0.038	41.108	41.07
20.000	0.159	40.888	40.73
30.000	0.267	40.748	40.48
40.000	0.383	40.688	40.30
42.540	0.422	40.685	40.26
50.000	0.617	40.707	40.09
55.000	0.766	40.747	39.98
60.000	0.905	40.797	39.89
70.000	1.121	40.896	39.78
80.000	1.414	40.996	39.58
90.000	1.812	41.096	39.28
100.000	2.153	41.170	39.02
105.000	2.267	41.189	38.92
110.000	2.393	41.195	38.80
110.034	2.394	41.195	38.80
120.000	2.500	41.171	38.67
130.000	2.665	41.121	38.46
140.000	2.590	41.072	38.48
150.000	2.633	41.022	38.39
160.000	2.687	40.973	38.29
170.000	2.805	40.923	38.12
180.000	2.916	40.873	37.96
190.000	3.024	40.824	37.80
200.000	3.135	40.774	37.64
210.000	3.257	40.725	37.47
220.000	3.316	40.675	37.36
230.000	3.387	40.626	37.24
240.000	3.581	40.576	37.00
250.000	3.697	40.527	36.83
260.000	3.693	40.477	36.78
270.000	3.681	40.428	36.75
280.000	3.710	40.378	36.67
290.000	3.752	40.329	36.58
300.000	3.784	40.279	36.49
310.000	3.790	40.230	36.44
320.000	3.785	40.180	36.39
330.000	3.807	40.130	36.32
340.000	3.799	40.081	36.28
350.000	3.776	40.031	36.25
360.000	3.767	39.982	36.22
370.000	3.726	39.932	36.21
380.000	3.693	39.883	36.19
390.000	3.678	39.833	36.16
400.000	3.634	39.784	36.15
410.000	3.576	39.734	36.16
420.000	3.546	39.685	36.14
430.000	3.394	39.635	36.24
440.000	3.183	39.586	36.40
450.000	3.134	39.536	36.40
460.000	3.101	39.486	36.39
470.000	3.047	39.437	36.39
480.000	3.013	39.387	36.37
490.000	2.980	39.338	36.36
500.000	2.935	39.288	36.35

LONGITUDINAL SECTION - CL ACCESS RD 1

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



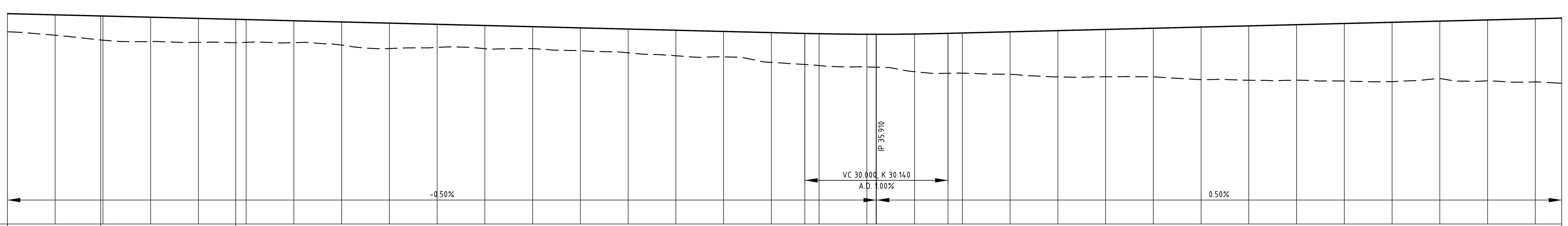
DATUM 28.000

HORIZONTAL GEOMETRY: 601.808 / 278°31'43" ; 417.734 / 278°31'43"

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
500.000	2.935	39.288	36.35
510.000	2.819	39.239	36.42
520.000	2.648	39.189	36.54
530.000	2.661	39.140	36.48
540.000	2.650	39.090	36.44
550.000	2.613	39.041	36.43
560.000	2.515	38.991	36.48
570.000	2.389	38.942	36.55
580.000	2.300	38.892	36.59
590.000	2.235	38.843	36.61
600.000	2.192	38.793	36.60
601.808	2.179	38.784	36.60
610.000	2.159	38.743	36.58
620.000	2.241	38.694	36.45
630.000	2.355	38.644	36.29
640.000	2.415	38.595	36.18
650.000	2.323	38.545	36.22
660.000	2.260	38.496	36.24
670.000	2.127	38.446	36.32
680.000	2.055	38.397	36.34
690.000	2.009	38.347	36.34
700.000	1.935	38.298	36.36
710.000	1.898	38.248	36.35
720.000	1.837	38.199	36.36
730.000	1.731	38.149	36.42
740.000	1.642	38.099	36.46
750.000	1.532	38.050	36.52
760.000	1.413	38.000	36.59
770.000	1.302	37.951	36.65
780.000	1.233	37.901	36.67
790.000	1.188	37.852	36.66
800.000	1.195	37.802	36.61
810.000	1.153	37.753	36.60
820.000	1.143	37.703	36.56
830.000	1.111	37.654	36.54
840.000	1.056	37.604	36.55
850.000	1.038	37.555	36.52
860.000	1.027	37.505	36.48
870.000	0.971	37.456	36.48
880.000	0.871	37.406	36.53
890.000	0.793	37.356	36.56
900.000	0.760	37.307	36.55
910.000	0.774	37.257	36.48
920.000	0.757	37.208	36.45
930.000	0.733	37.158	36.43
940.000	0.721	37.109	36.39
950.000	0.691	37.059	36.37
960.000	0.657	37.010	36.35
970.000	0.639	36.960	36.32
980.000	0.688	36.911	36.22
990.000	0.722	36.861	36.14
1000.000	0.761	36.812	36.05

LONGITUDINAL SECTION - CL ACCESS RD 1

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



DATUM 28.000

HORIZONTAL GEOMETRY: 417.734 / 278°31'43" ; R18.000 / A28.274 ; 277.700 / 8°31'42"

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
1000.000	0.761	36.812	36.05
1010.000	0.855	36.762	35.91
1019.542	1.006	36.715	35.71
1020.000	1.011	36.712	35.70
1030.000	1.020	36.663	35.64
1040.000	1.004	36.613	35.61
1047.816	0.979	36.575	35.60
1050.000	0.953	36.564	35.61
1060.000	0.918	36.514	35.60
1070.000	0.971	36.465	35.49
1080.000	1.064	36.415	35.35
1090.000	0.969	36.366	35.40
1100.000	0.971	36.316	35.34
1110.000	0.920	36.267	35.35
1120.000	0.960	36.217	35.26
1130.000	0.996	36.168	35.17
1140.000	1.070	36.118	35.05
1150.000	1.068	36.069	35.00
1160.000	1.248	36.019	34.77
1167.000	1.299	35.984	34.69
1170.000	1.333	35.971	34.64
1180.000	1.369	35.948	34.58
1181.930	1.379	35.947	34.57
1182.000	1.379	35.947	34.57
1190.000	1.580	35.958	34.38
1197.000	1.672	35.985	34.31
1200.000	1.683	36.000	34.32
1210.000	1.782	36.050	34.27
1220.000	1.935	36.100	34.17
1230.000	1.984	36.150	34.17
1240.000	2.034	36.200	34.17
1250.000	2.202	36.250	34.05
1260.000	2.279	36.300	34.02
1270.000	2.324	36.350	34.03
1280.000	2.409	36.400	33.99
1290.000	2.487	36.450	33.96
1300.000	2.411	36.500	34.09
1310.000	2.555	36.550	34.00
1320.000	2.651	36.600	33.95
1325.516	2.732	36.628	33.90

LONGITUDINAL SECTION - CL ACCESS RD 1

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

1m 0 1 2 3 4 5 6 7 8 9 10m
SCALE 1:100 AT A0 SHEET SIZE

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SHEET SIZE

FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA602

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Consulting Engineers ACN 003 696 446
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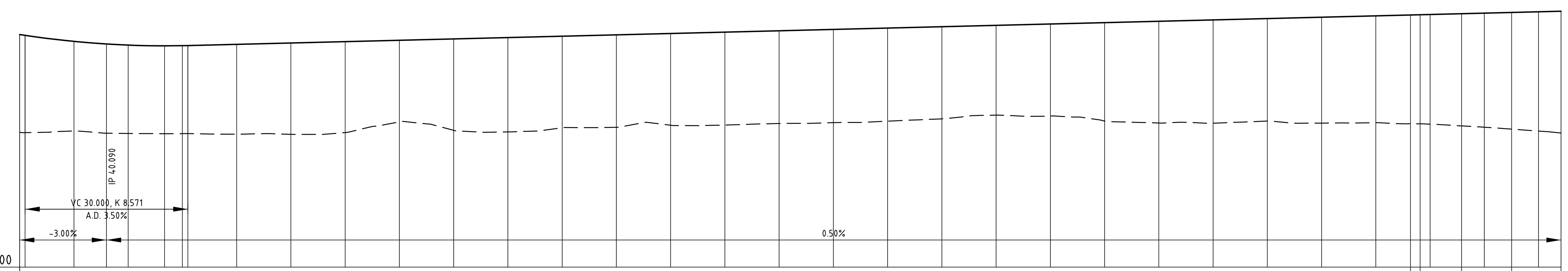
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: ROAD LONG SECTIONS SHEET 2

DRAWING No: C013362.00-DA602
ISSUE: A

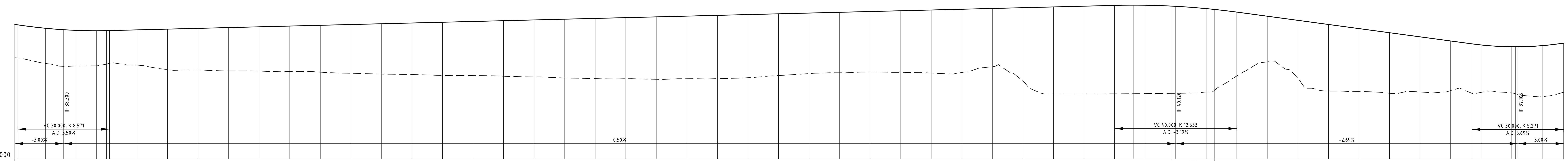


HORIZONTAL GEOMETRY: 256.382 0°42'33" | R10.000 A1.793 | 7.638 330°26'14" | R35.000 A9.224 | 9.103 335°20'12"

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
0.000	3.604	40.570	36.97
1.000	3.585	40.540	36.96
10.000	3.299	40.317	37.02
16.000	3.285	40.221	36.94
20.000	3.255	40.181	36.93
26.714	3.238	40.154	36.92
30.000	3.242	40.161	36.92
31.000	3.246	40.165	36.92
40.000	3.309	40.210	36.90
50.000	3.365	40.260	36.89
60.000	3.352	40.310	36.96
70.000	3.007	40.360	37.35
80.000	3.369	40.410	37.04
90.000	3.478	40.460	36.98
100.000	3.378	40.510	37.13
110.000	3.408	40.560	37.15
120.000	3.383	40.610	37.23
130.000	3.427	40.660	37.23
140.000	3.418	40.710	37.29
150.000	3.435	40.760	37.33
160.000	3.431	40.810	37.38
170.000	3.396	40.860	37.46
180.000	3.308	40.910	37.60
190.000	3.392	40.960	37.57
200.000	3.627	41.010	37.38
210.000	3.749	41.060	37.31
220.000	3.805	41.110	37.30
230.000	3.780	41.160	37.38
240.000	3.903	41.210	37.31
250.000	3.939	41.260	37.32
256.382	4.009	41.292	37.28
258.175	4.021	41.301	37.28
260.000	4.040	41.310	37.27
265.813	4.136	41.339	37.20
270.000	4.205	41.360	37.16
275.038	4.300	41.385	37.09
280.000	4.395	41.410	37.01
284.141	4.491	41.431	36.94

LONGITUDINAL SECTION - CL ACCESS RD 2

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100

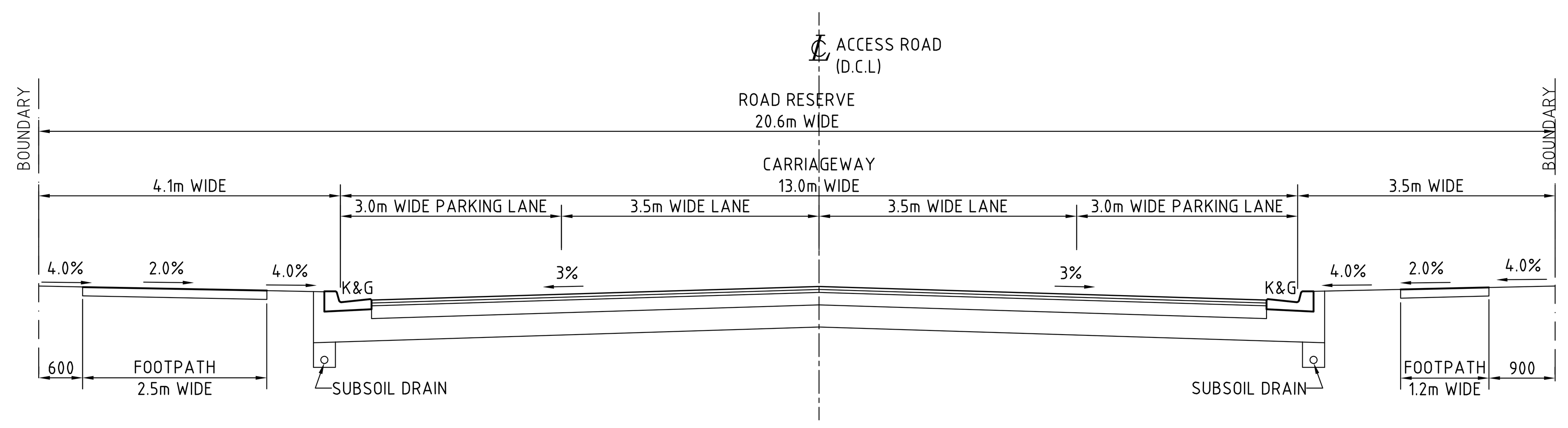


HORIZONTAL GEOMETRY: 378.779 0°42'36" | R100.000 A13.858 | 114.446 8°39'00"

CHAINAGE	CUT/FILL DEPTH	DESIGN LEVEL	EXISTING LEVEL
0.000	2.175	38.780	36.60
1.000	2.164	38.750	36.59
10.000	2.299	38.527	36.23
16.000	2.389	38.431	36.04
20.000	2.326	38.391	36.07
26.714	2.289	38.364	36.07
30.000	2.183	38.371	36.19
31.000	2.141	38.375	36.23
40.000	2.296	38.420	36.12
50.000	2.640	38.470	35.83
60.000	2.721	38.520	35.80
70.000	2.826	38.570	35.74
80.000	2.890	38.620	35.73
90.000	2.967	38.670	35.70
100.000	3.059	38.720	35.66
110.000	3.182	38.770	35.59
120.000	3.284	38.820	35.54
130.000	3.364	38.870	35.51
140.000	3.471	38.920	35.45
150.000	3.535	38.970	35.43
160.000	3.623	39.020	35.40
170.000	3.715	39.070	35.35
180.000	3.836	39.120	35.28
190.000	3.930	39.170	35.24
200.000	3.990	39.220	35.23
210.000	4.074	39.270	35.20
220.000	4.087	39.320	35.23
230.000	4.133	39.370	35.24
240.000	4.122	39.420	35.30
250.000	4.029	39.470	35.44
260.000	3.951	39.520	35.57
270.000	3.951	39.570	35.62
280.000	3.948	39.620	35.67
290.000	4.021	39.670	35.65
300.000	4.113	39.720	35.61
310.000	4.129	39.770	35.64
320.000	3.800	39.820	36.02
330.000	4.800	39.870	35.07
340.000	5.689	39.920	34.23
350.000	5.736	39.970	34.23
360.000	5.775	40.020	34.24
366.267	5.780	40.036	34.26
370.000	5.769	40.030	34.26
378.779	5.694	39.973	34.28
380.000	5.679	39.960	34.28
390.000	5.448	39.811	34.36
392.638	5.291	39.758	34.47
400.000	4.169	39.582	35.41
410.000	2.981	39.313	36.33
420.000	3.783	39.043	35.26
430.000	4.345	38.774	34.43
440.000	4.112	38.505	34.39
450.000	3.952	38.236	34.28
460.000	3.600	37.967	34.37
470.000	3.242	37.698	34.46
477.000	3.232	37.509	34.28
480.000	3.094	37.437	34.34
490.000	3.014	37.320	34.31
491.187	3.063	37.318	34.26
492.000	3.109	37.319	34.21
500.000	3.328	37.392	34.06
507.000	3.203	37.555	34.35
507.084	3.200	37.558	34.36

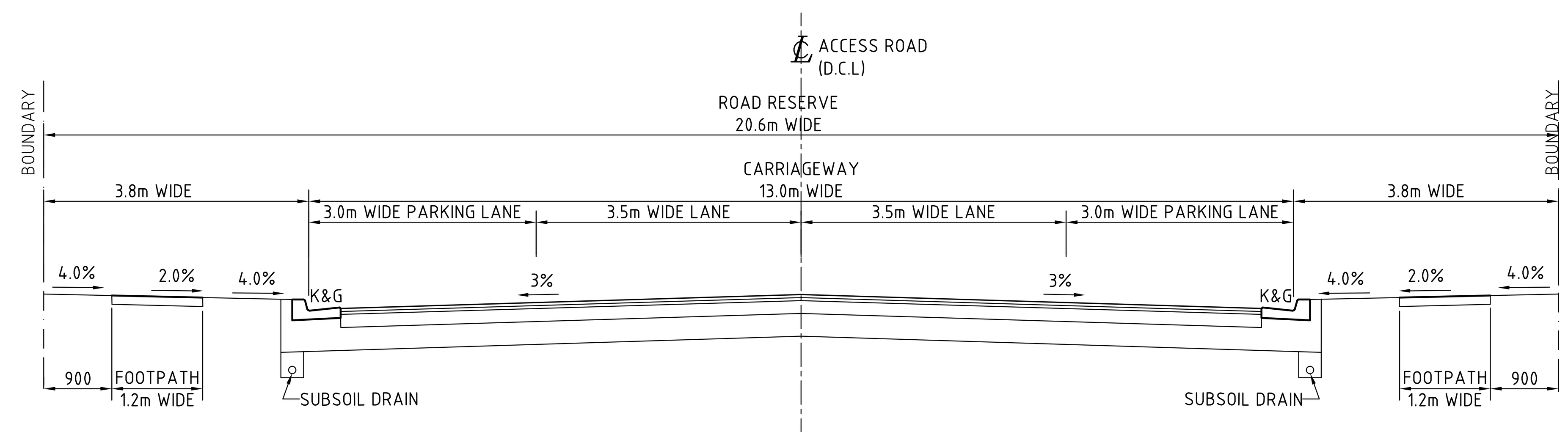
LONGITUDINAL SECTION - CL ACCESS RD 3

HORIZONAL SCALE 1:500
VERTICAL SCALE 1:100



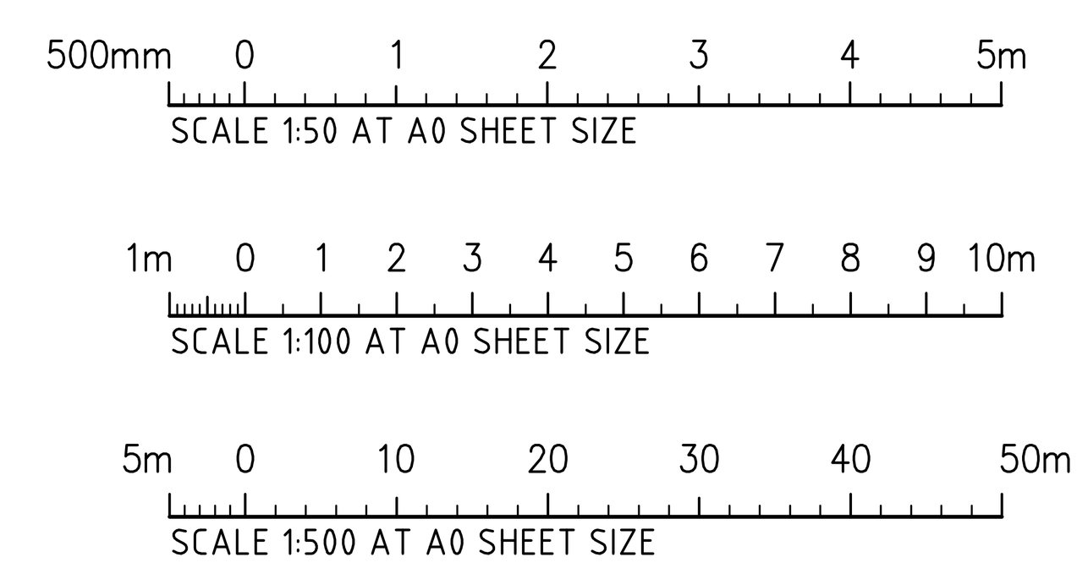
TYPICAL CROSS SECTION - ACCESS ROAD 1

SCALE 1:50



TYPICAL CROSS SECTION - ACCESS ROAD 2/3

SCALE 1:50



FOR DEVELOPMENT APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR DEVELOPMENT APPLICATION	15.10.18	A

ALTIS PROPERTY PARTNERS

CLIENT: FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA603

CONSULT AUSTRALIA

Costin Roe Consulting Pty Ltd.
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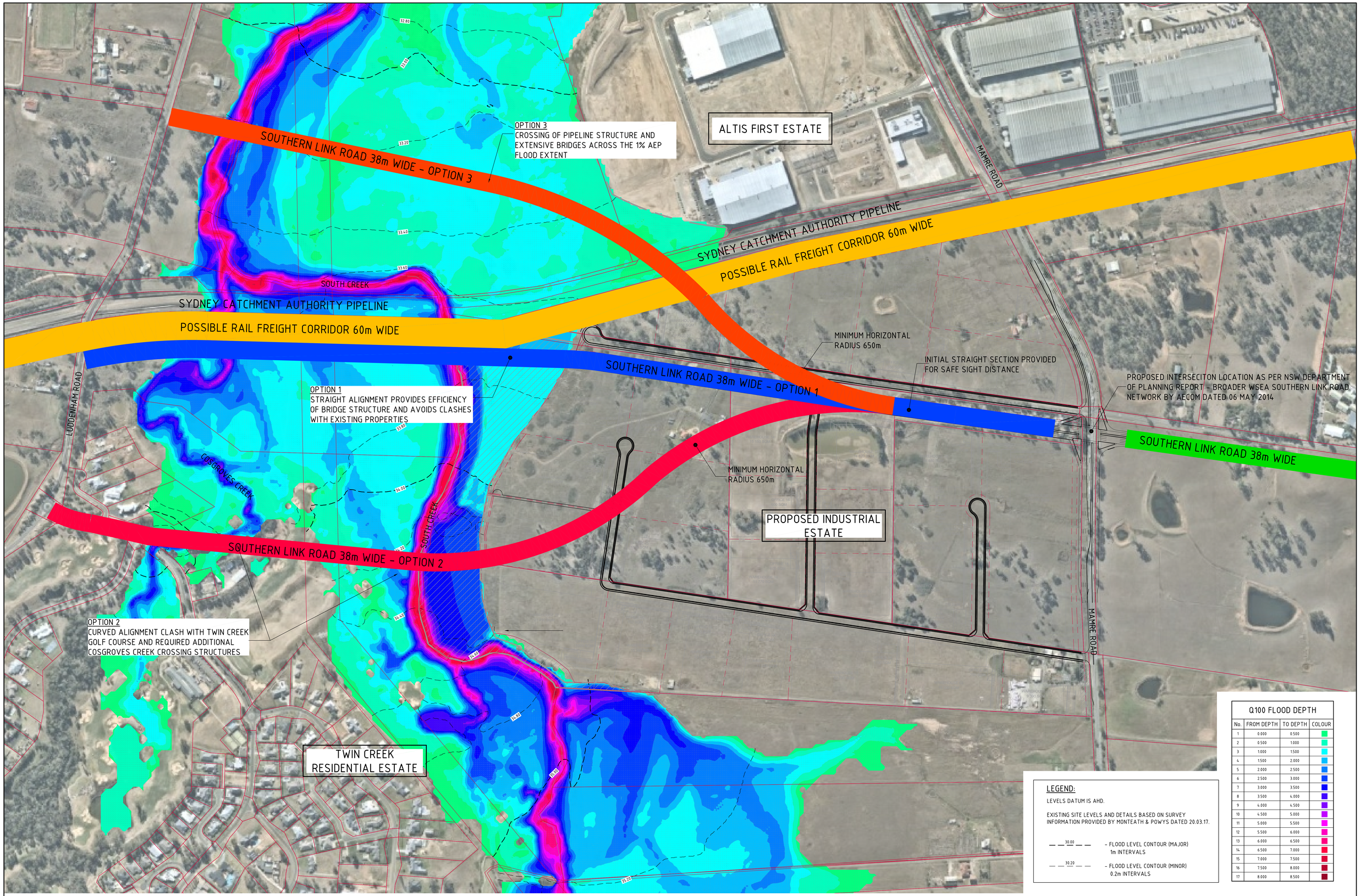
DRAWING TITLE: ROAD LONG SECTIONS SHEET 3
DRAWING No: C013362.00-DA603
ISSUE: A



Q100 FLOOD DEPTH			
No.	FROM DEPTH	TO DEPTH	COLOUR
1	0.000	0.500	
2	0.500	1.000	
3	1.000	1.500	
4	1.500	2.000	
5	2.000	2.500	
6	2.500	3.000	
7	3.000	3.500	
8	3.500	4.000	
9	4.000	4.500	
10	4.500	5.000	
11	5.000	5.500	
12	5.500	6.000	
13	6.000	6.500	
14	6.500	7.000	
15	7.000	7.500	
16	7.500	8.000	
17	8.000	8.500	

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY MONTEATH & POWYS DATED 20.03.17.

30.00 - FLOOD LEVEL CONTOUR (MAJOR) 1m INTERVALS

30.20 - FLOOD LEVEL CONTOUR (MINOR) 0.2m INTERVALS

FOR INFORMAITON ONLY

SOUTHERN LINK ROAD - ALIGNMENT PLAN
SCALE 1:2500

20m 0 50 100 150 200 250m
SCALE 1:2500 AT A0 SHEET SIZE

AMENDMENTS	DATE	ISSUE
ISSUED FOR INFORMATION	06.12.18	A

CLIENT: ALTIS PROPERTY PARTNERS / FRASERS PROPERTY

PROJECT: MAMRE SOUTH PRECINCT
657 - 708 MAMRE ROAD
KEMPS CREEK, 2178, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
MW	MC	APRIL '18	MW	A0	AS SHOWN	C013362.00-DA700

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Costin Roe Consulting
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DRAWING TITLE: SOUTHERN LINK ROAD ALIGNMENT PLAN

DRAWING No: C013362.00-DA700 ISSUE: A