

634-652 HIGH STREET & 87-91 UNION ROAD PENRITH

CIVIL ENGINEERING DRAWING SET ISSUED FOR DEVELOPMENT APPLICATION

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LOCALITY PLAN
SCALE NTS

ISSUED FOR DEVELOPMENT APPLICATION

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Client

TOGA

Title
**COVER SHEET, LOCALITY PLAN
AND SHEET LIST**

Project
HIGH STREET PENRITH

Scale: at A1
AS SHOWN
Date: 18.06.18

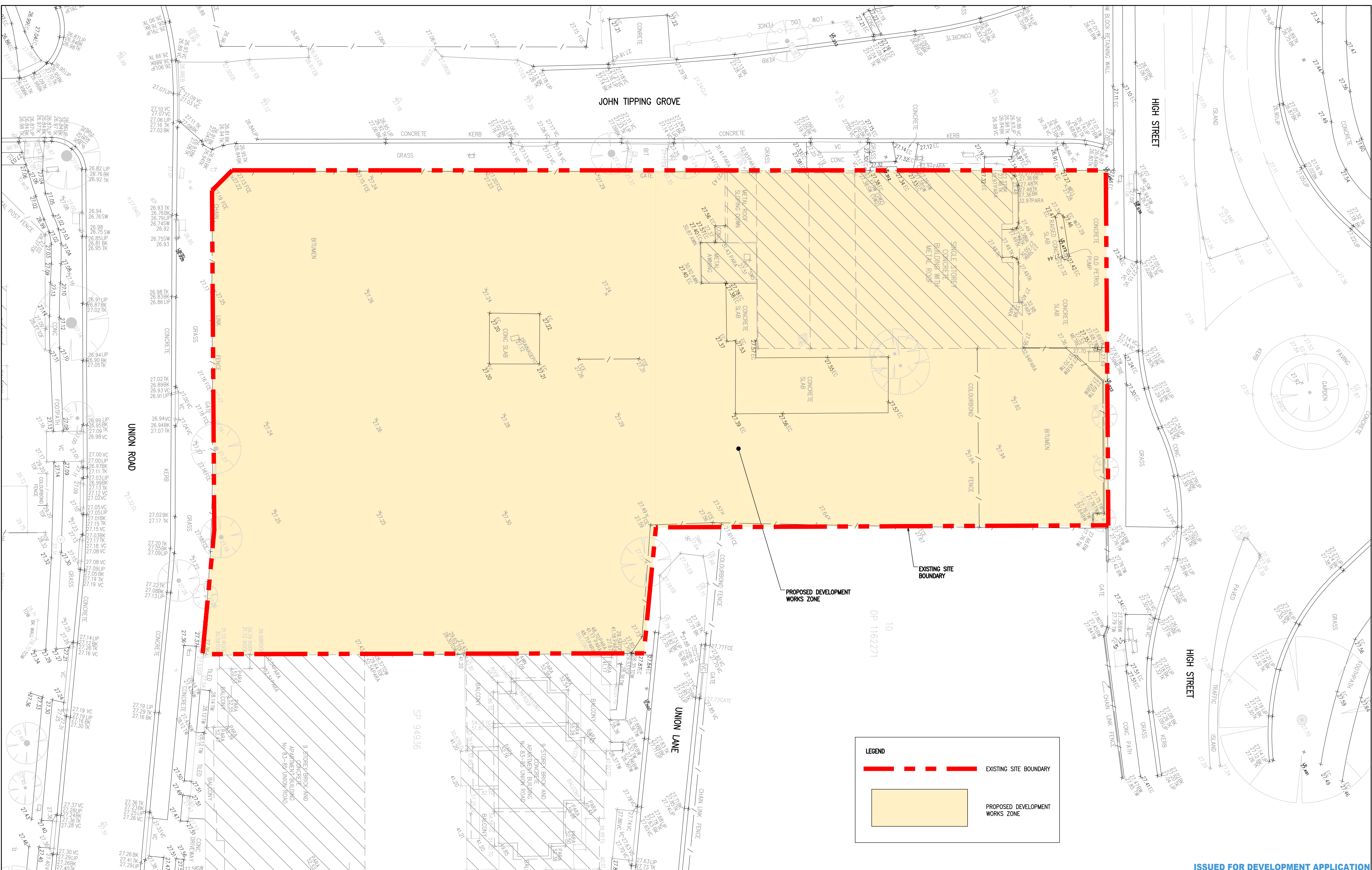
Drawn
S.MANANDHAR
Designer

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C0-00

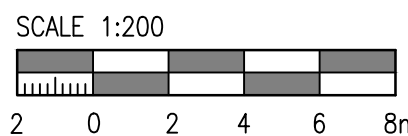
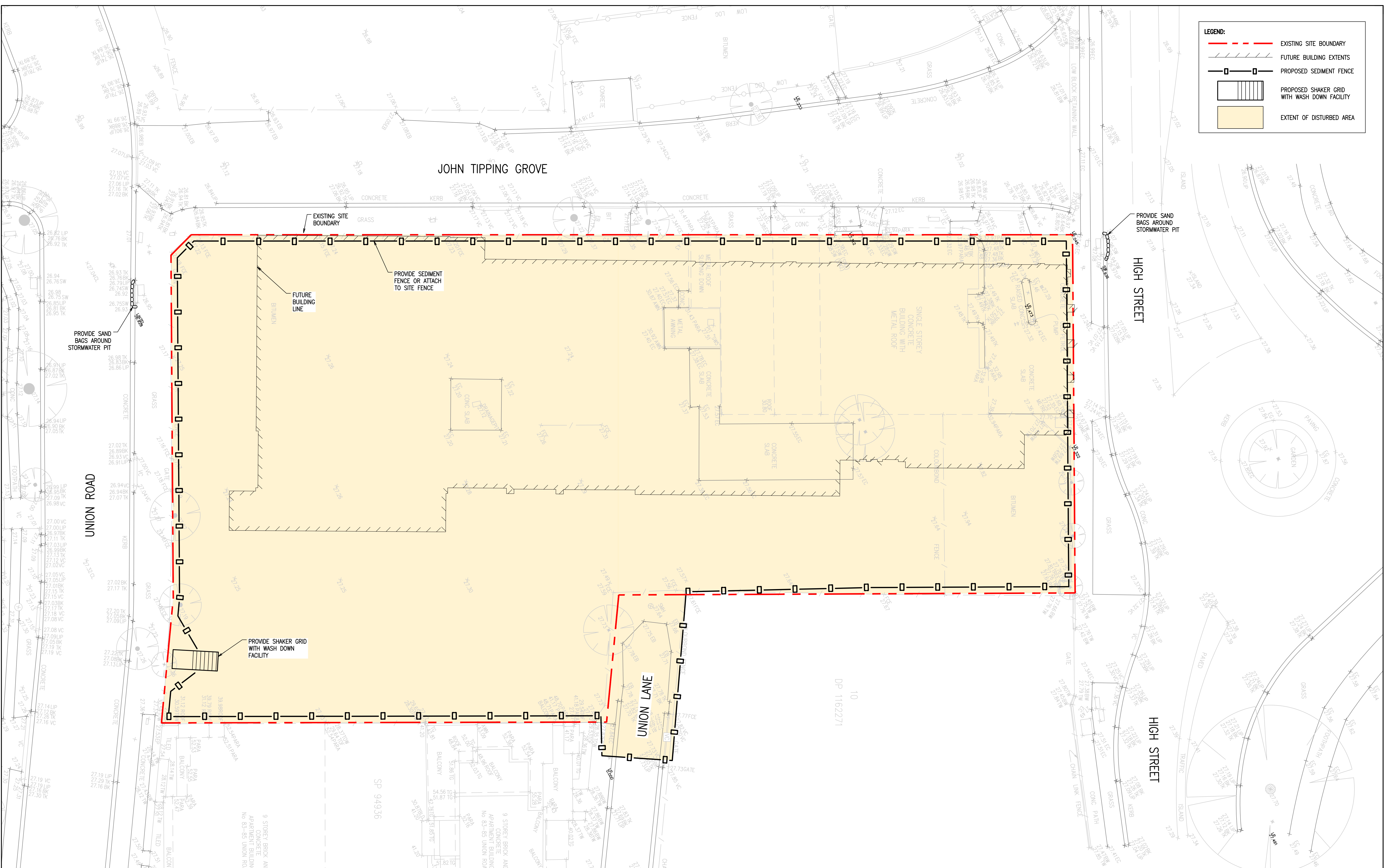
Revision
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LEGEND:

- EXISTING SITE BOUNDARY
- FUTURE BUILDING EXTENTS
- PROPOSED SEDIMENT FENCE
- PROPOSED SHAKER GRID WITH WASH DOWN FACILITY
- EXTENT OF DISTURBED AREA



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Client

Title
EROSION AND SEDIMENT CONTROL PLAN

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
13.02.20

Drawn
S.MANANDHAR
Designer
R.ATHERTON

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C1-01

Revision
6

ISSUED FOR DEVELOPMENT APPLICATION

GENERAL NOTES:

- A1. THIS SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS RELATING TO THIS DEVELOPMENT.
- A2. CONTRACTORS WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS INSTRUCTED IN THIS SPECIFICATION AND CONSTRUCTED FOLLOWING THE PENRITH CITY COUNCIL REQUIREMENTS AND TO LANDCOM – MANAGING URBAN STORMWATER: SOIL AND CONSTRUCTION, 4th EDITION, MAR 2004.
- A3. REFER GEOTECHNICAL REPORT FOR EARTHWORKS AND PARAMETERS.
- A10. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE APPROVED CONSTRUCTION ENTRY/EXIT ROUTE.
- A11. ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED AND INSPECTED BEFORE LEAVING.
- A12. MAINTAIN ALL STORMWATER PIPES AND PITS CLEAR OF DEBRIS AND SEDIMENT. INSPECT STORMWATER SYSTEM AND CLEAN OUT AFTER EACH STORM EVENT.
- A13. CLEAN OUT ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT.
- A14. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS HAVE BEEN COMPLETED.
- A15. KERB INLET SOCKS TO BE PROVIDED ON DOWNSTREAM PITS.

SITE MAINTENANCE NOTES:

- SM1. THE CONTRACTOR WILL INSPECT THE SITE AT LEAST WEEKLY AND AT THE CONCLUSION OF EVERY STORM EVENT TO:
- A) ENSURE THAT DRAINS OPERATE PROPERLY AND TO EFFECT AND NECESSARY REPAIRS.
- B) REMOVED SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5 METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS AND PAVED AREAS.
- C) REMOVED TRAPPED SEDIMENT WHENEVER THE DESIGN CAPACITY OF THAT STRUCTURES HAS BEEN EXCEEDED.
- D) ENSURE REHABILITATION LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD TO INITIATE UPGRADING OR REPAIR AS NECESSARY.
- E) CONSTRUCT ADDITIONAL EROSION AND OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS. MAKE ONGOING CHANGES TO THE PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECT TO CHANGES IN CONDITIONS ON THE WORK-SITE OR ELSEWHERE IN THE CATCHMENT.
- F) MAINTAIN EROSION AND SEDIMENT CONTROL STRUCTURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
- G) FILL IN AND COMPACT ALL TRENCHES IMMEDIATELY AFTER SERVICES HAVE BEEN LAID.
- SM2. THE CONTRACTOR WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL. ENTRIES WILL INCLUDE:
- A) THE VOLUME AND INTENSITY OF ANY RAINFALL EVENTS.
- B) THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS.
- C) THE CONDITION OF VEGETATION AND ANY NEED TO IRRIGATE.
- D) THE NEED FOR DUST PREVENTION STRATEGIES
- THE LOGBOOK WILL BE KEPT ON-SITE AND MADE AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF THE WORKS.

SEDIMENT CONTROL NOTES:

- SC1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN ON THE PLAN AND ELSEWHERE AT THE DISCRETION OF THE SITE CONTRACTOR TO CONTAIN SOIL AS NEAR AS POSSIBLE TO THEIR SOURCE.
- SC2. SEDIMENT FENCES WILL NOT HAVE CATCHMENT AREAS EXCEEDING 900 SQUARE METRES AND HAVE A STORAGE DEPTH OF AT LEAST 0.6 METRES.
- SC3. SEDIMENT FENCES SHOULD LAST FOR UP TO SIX MONTHS BUT REQUIRE REGULAR MAINTENANCE AND WEEKLY CHECKS. IT MUST REMAIN VERTICAL AND KEYED INTO THE SOIL. DAMAGED FENCES MUST BE REPAIRED PROMPTLY.
- SC4. SEDIMENT FENCES NEED TO BE TRENCHED IN AT LEAST 150mm AND BURIED SO THE WATER FLOWS THROUGH AND NOT UNDERNEATH.
- SC5. SEDIMENT REMOVED FROM ANY TRAPPING DEVICES WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS CANNOT OCCUR.
- SC6. STOCKPILES ARE NOT TO BE LOCATED WITHIN 5 METERS OF HAZARD AREAS INCLUDING AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS AND DRIVEWAYS.
- SC7. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR WATER HAS BEEN TREATED BY AN APPROVED DEVICE.
- SC8. TEMPORARY SEDIMENT TRAPS WILL REMAIN IN PLACE UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
- SC9. ACCESS TO SITES SHOULD BE STABILIZED TO REDUCE THE LIKELIHOOD OF VEHICLES TRACKING SOIL MATERIALS ONTO PUBLIC ROADS AND ENSURE ALL-WEATHER ENTRY/EXIT.

LAND DISTURBANCE NOTES:

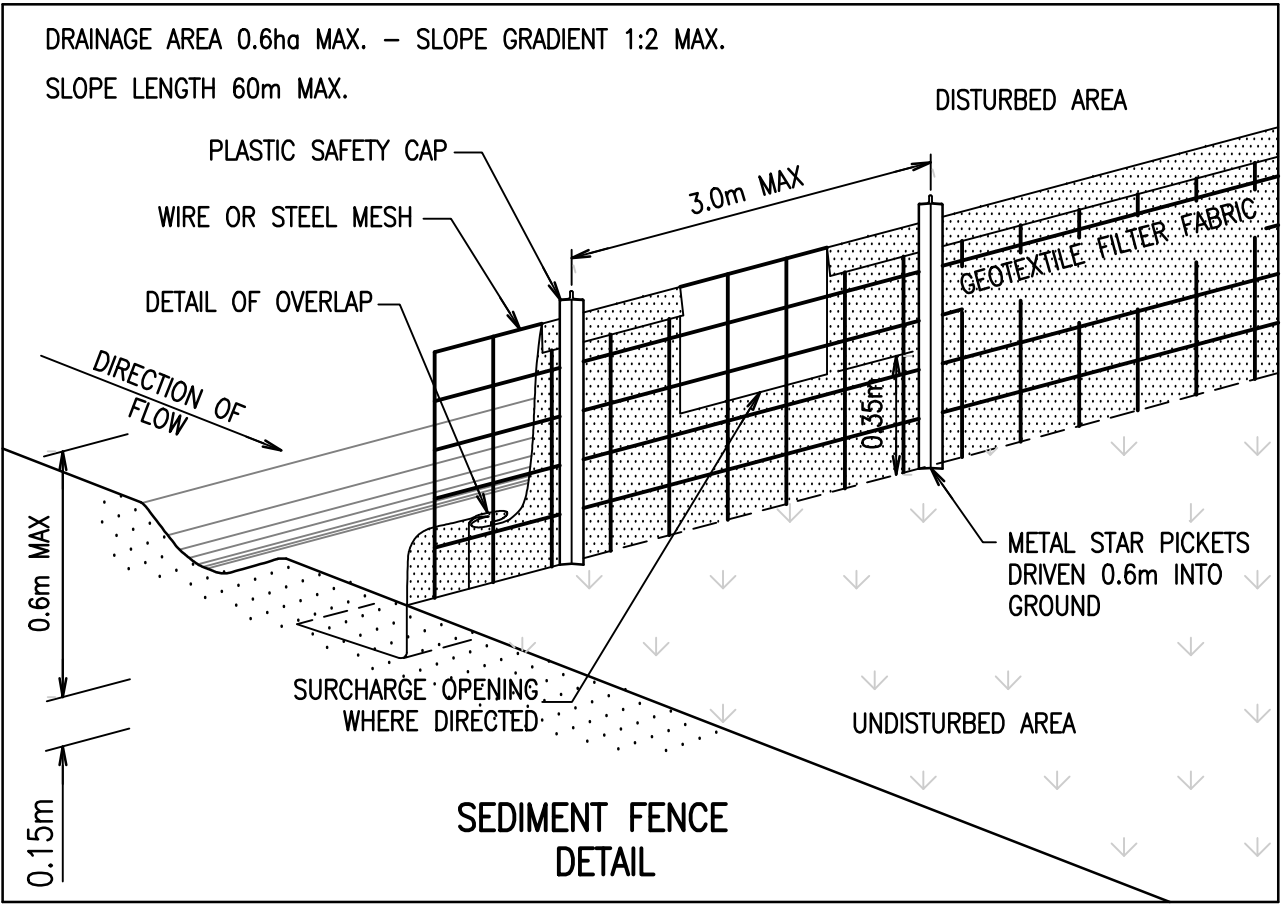
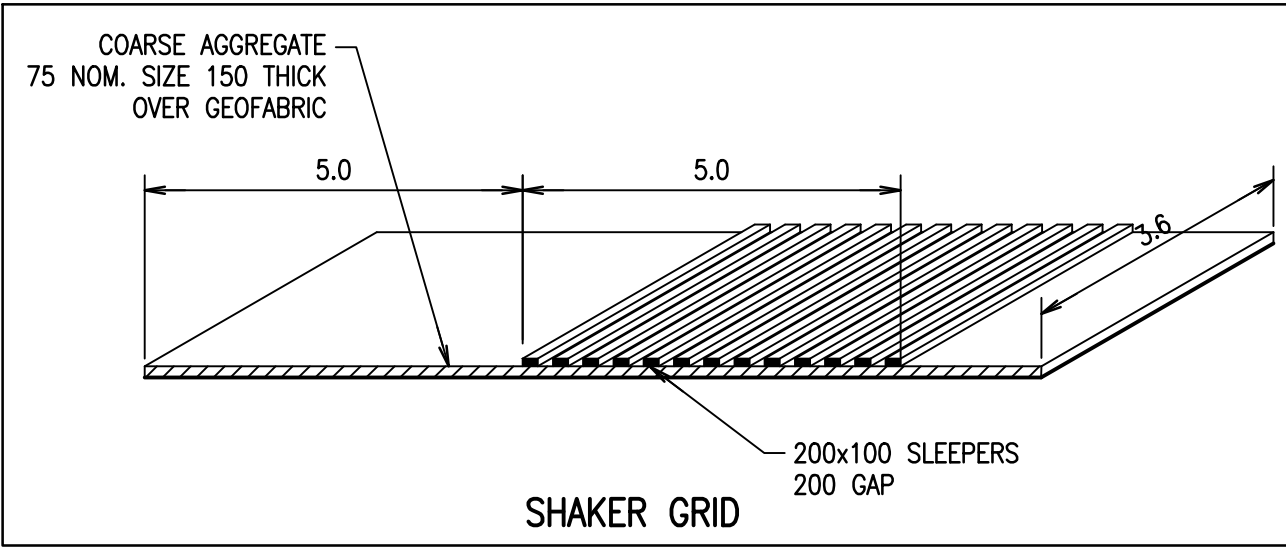
- LD1. ACCESS AREAS ARE TO BE LIMITED TO A MAXIMUM WIDTH OF 10 METERS THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON-SITE. ALL SITE WORKERS WILL CLEARLY RECOGNIZE THOSE BOUNDARIES THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH A BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS.
- LD2. ENTRY TO LANDS NOT REQUIRED FOR CONSTRUCTION OR ACCESS IS PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH.
- LD3. WORKS ARE TO PROCEED IN THE FOLLOWING SEQUENCE:
- A) INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN.
- B) CONSTRUCT THE STABILISED SITE ACCESS.
- C) CONSTRUCT DIVERSION DRAINS AS REQUIRED.
- D) INSTALL MESH AND GRAVEL INLETS FOR ANY ADJACENT KERB INLETS.
- E) INSTALL GEOTEXTILE INLET FILTERS AROUND ANY ON-SITE DROP INLET PITS.
- F) CLEAR SITE AND STRIP AND STOCKPILE TOPSOIL IN LOCATIONS SHOWN ON THE PLAN.
- G) UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS ENSURING THAT ROOF AND/OR PAVED AREA STORMWATER SYSTEMS ARE CONNECTED TO PERMANENT DRAINAGE AS SOON AS PRACTICABLE.
- H) GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 20 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
- I) REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
- LD4. ENSURE THAT SLOPE LENGTHS DO NOT EXCEED 80 METRES WHERE PRACTICABLE. SLOPE LENGTHS ARE DETERMINED BY SILTATION FENCING AND CATCH DRAIN SPACING.

SOIL EROSION CONTROL NOTES:

- SE1. EARTH BATTERS WILL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER, UNLESS OTHERWISE NOTES, THAN THAT RECOMMENDED BY GEOTECHNICAL REPORT.
- SE2. ALL WATERWAYS, DRAINS, SPILLWAYS AND THEIR OUTLETS WILL BE CONSTRUCTED TO BE STABLE IN AT LEAST THE 1:20 YEAR ARI, TIME OF CONCENTRATION STORM EVENT.
- SE3. WATERWAYS AND OTHER AREAS SUBJECT TO CONCENTRATED FLOWS AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND COVER C-FACTOR OF 0.05 (70% GROUND COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION. FOOT AND VEHICULAR TRAFFIC WILL BE PROHIBITED IN THESE AREAS.
- SE4. STOCKPILES AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.1% (60% GROUND-COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION.
- SE5. ALL LANDS, INCLUDING WATERWAYS AND STOCKPILES DURING CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND COVER C-FACTOR OF 0.15 (50% GROUND COVER) WITHIN 20 WORKING DAYS FROM INACTIVITY EVEN THOUGH WORKS MAY CONTINUE LATER.
- SE6. PERMANENT REHABILITATION OF LANDS AFTER CONSTRUCTION WILL ACHIEVE A GROUND-COVER C-FACTOR OF LESS THAN 0.1 AND LESS THAN 0.05 WITHIN 60 DAYS. NEWLY PLANTED LANDS WILL BE WATERED REGULARLY UNTIL AN EFFECTIVE COVER IS ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. FOLLOW-UP SEED AND FERTILISER WILL BE APPLIED AS NECESSARY.

WASTE CONTROL NOTES:

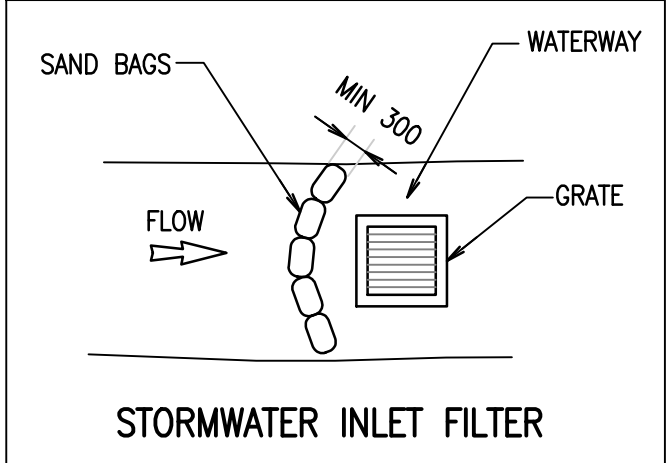
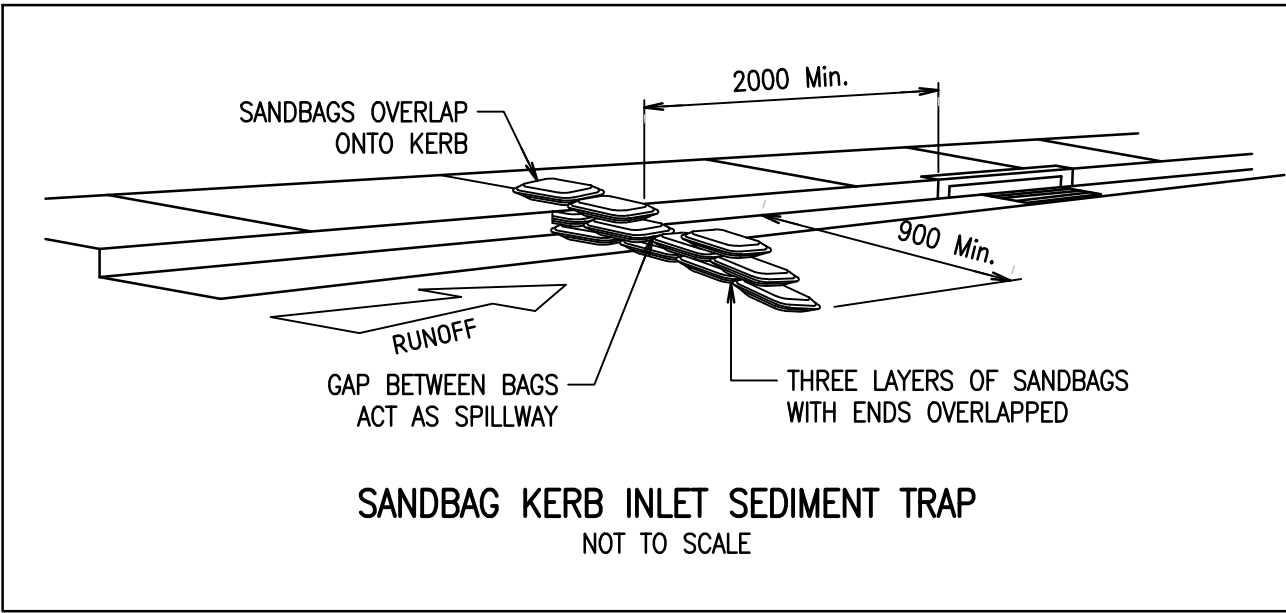
- WC1. ACCEPTABLE BINS WILL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED AT LEAST WEEKLY. DISPOSAL OF WASTE WILL BE IN A MANNER APPROVED BY THE SITE CONTRACTOR.
- WC2. ALL POSSIBLE POLLUTANT MATERIALS ARE TO BE STORED WELL CLEAR OF ANY POORLY DRAINED AREAS, FLOW PRONE AREAS, STREAMBANKS, CHANNELS AND STORMWATER DRAINAGE AREAS. STORE SUCH MATERIALS IN A DESIGNATED AREA UNDER COVER WHERE POSSIBLE AND WITHIN CONTAINMENT BUNDS.
- WC3. ALL SITE STAFF AD SUBCONTRACTORS ARE TO BE INFORMED OF THEIR OBLIGATION TO USE WASTE CONTROL FACILITIES PROVIDED.
- WC4. ANY DE-WATERING ACTIVITIES ARE TO BE CLOSELY MONITORED TO ENSURE THAT WATER IS NOT POLLUTED BY SEDIMENT, TOXIC MATERIALS OR PETROLEUM PRODUCTS.
- WC5. PROVIDE DESIGNATED VEHICULAR WASHDOWN AND MAINTENANCE AREAS WHICH ARE TO HAVE CONTAINMENT BUNDS.



INSTALLATION

1. EXCAVATE A TRENCH AT LEAST 150mm DEEP.
2. DRIVE POSTS 500–600mm INTO GROUND AT A MAXIMUM SPACING OF 3.0m CENTRES.
3. PLACE AND FIX SUPPORT MESH (F52) TO POST.
4. LAY BIDIM GEOTEXTILE (SF 2000) AGAINST THE SUPPORT MESH AND FIX BY TIE WIRE, STAPLES OR HOG RINGS.
5. PLACE BIDIM IN TRENCH AND BACKFILL WITH SOIL.
6. SOIL ON BOTH SIDES OF THE FENCE MUST BE COMPACTED TO AVOID SEEPAGE UNDER THE BARRIER.

NOTE:
POSITION OF SEDIMENT FENCE AS DIRECTED BY MANAGING CONTRACTOR. FENCE TO REMAIN IN PLACE UNTIL EXCAVATION IS BELOW FOOTPATH LEVEL. PROVIDE 2mx2m TURFED AREA ON DOWNSTREAM SIDE OF FENCE AT SURCHARGE OPENINGS.



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NOTES:

1. TEMPORARY BATTERS FOR BASEMENT AND ROADS NOT ACCOUNTED FOR
2. TOTAL CUT = 11,800m³
3. TOTAL FILL = 50m³
4. BALANCE = 11,750m³ OF CUT
5. TOTAL DEPTH OF BASEMENT EXCAVATION BELOW FFL ASSUMED TO BE 250mm.
6. COMPACTION, SHRINK/SWELL RATIO'S, AND SEPARATION OF TOPSOIL/EXISTING PAVEMENTS NOT INCORPORATED IN ASSESSMENT.

CARPARK DEPTH RANGE		Upper_value	metres	Colour
Lower_value				
-999	to	-3.5	metres	
-3.5	to	-3	metres	
-3	to	-2.5	metres	
-2.5	to	-2	metres	
-2	to	-1.75	metres	
-1.75	to	-1.5	metres	
-1.5	to	-1.25	metres	
-1.25	to	-1	metres	
-1	to	-0.75	metres	
-0.75	to	-0.5	metres	
-0.5	to	-0.25	metres	
-0.25	to	0	metres	
0	to	0.25	metres	
0.25	to	0.5	metres	
0.5	to	1	metres	
1	to	999	metres	

ISSUED FOR DEVELOPMENT APPLICATION

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	RA	CR	06.06.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
4	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	02.03.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	RA	CR	06.06.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
4	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	02.03.20

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Client

TOGA

Title
BULK EARTHWORKS PLAN

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
18.06.18

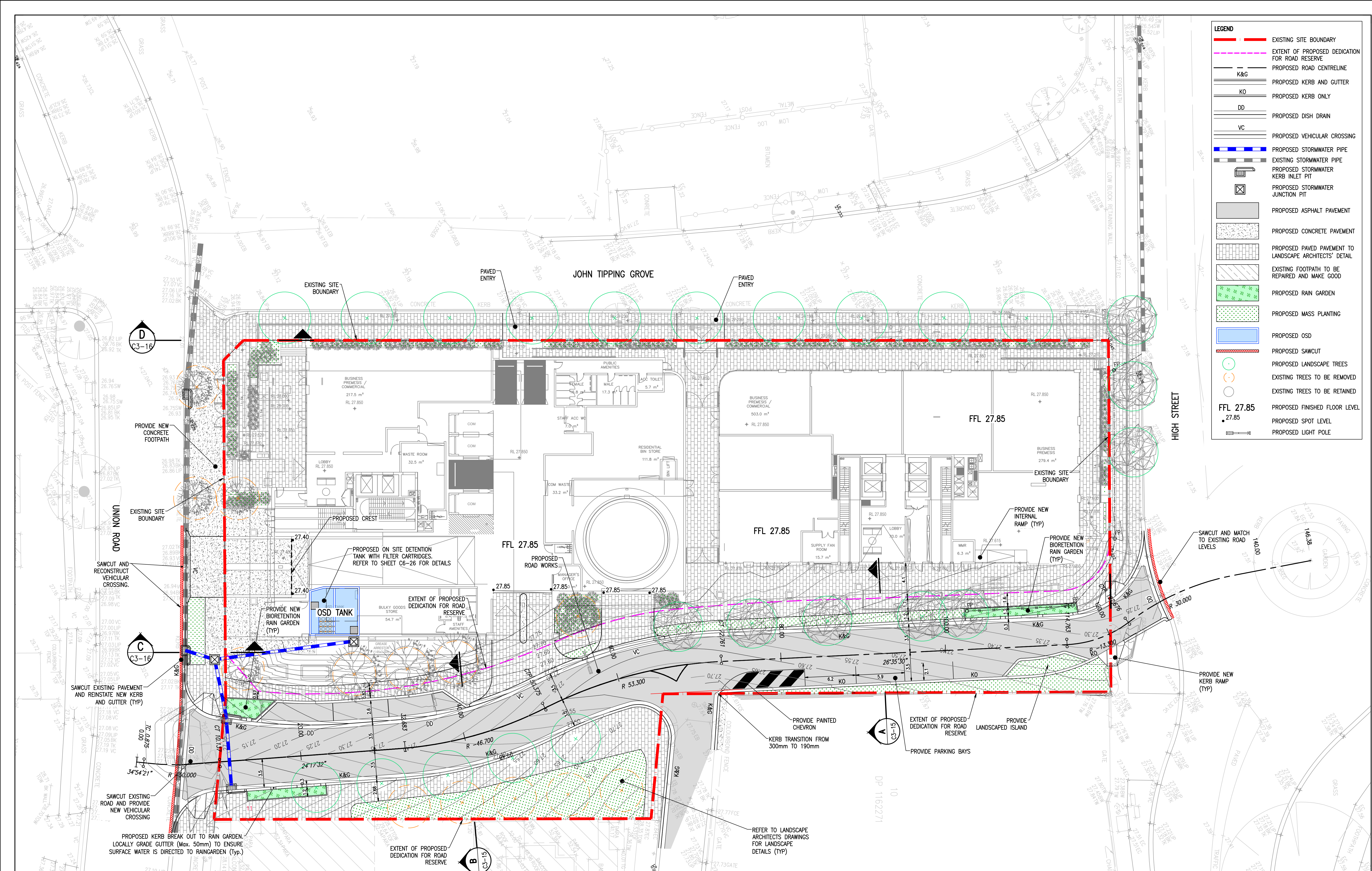
Drawn
R.ATHERTON
Designer
R.ATHERTON

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C2-01

Revision
4



Rev	Revision Description	By	App	Date	Rev	Revision Description	By	App	Date
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.05.18	12	ISSUED FOR REVIEW	RG	CW	26.03.19
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18	13	RAIN GARDEN REINSTATED	RG	CW	29.03.19
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18	14	ISSUED FOR APPROVAL	RG	CW	24.04.19
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18	15	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18	16	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	05.06.18					
8	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18					
9	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18					
10	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	07.12.18					
11	ISSUED FOR APPROVAL	SM	CR	03.01.19					

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ACN 010 580 248

Client

TOGA

Title
GENERAL ARRANGEMENT PLAN

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

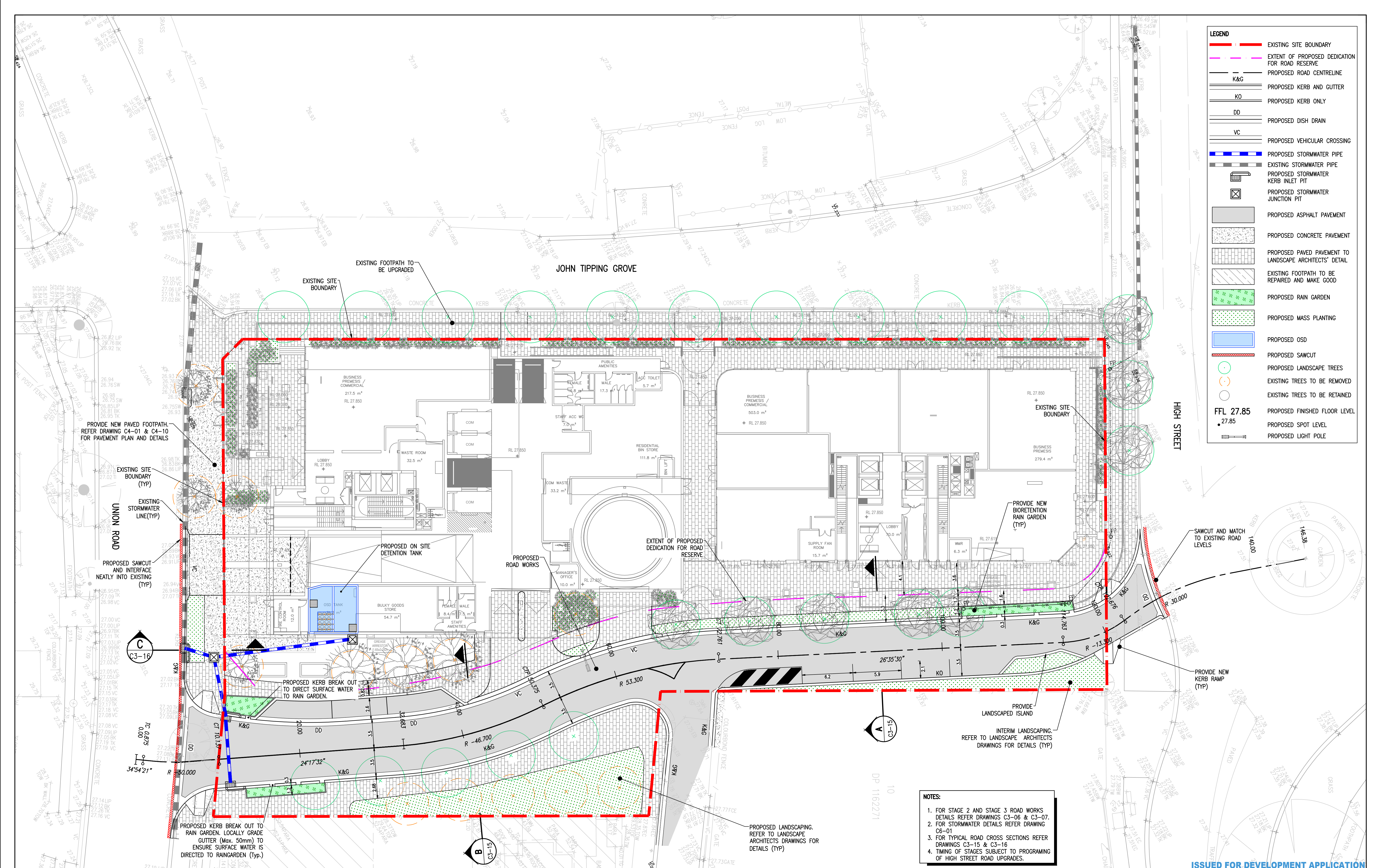
Drawn
M.CLAVEL
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

FOR APPROVAL NOT FOR CONSTRUCTION

Drawing Number
C3-00

Revision
16

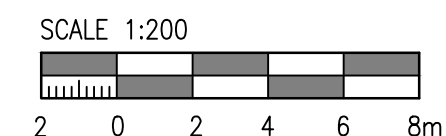


LEGEND

- EXISTING SITE BOUNDARY
- EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE
- PROPOSED ROAD CENTRELINE
- K&G
- PROPOSED KERB AND GUTTER
- KO
- PROPOSED KERB ONLY
- DD
- PROPOSED DISH DRAIN
- VC
- PROPOSED VEHICULAR CROSSING
- PROPOSED STORMWATER PIPE
- EXISTING STORMWATER PIPE
- PROPOSED STORMWATER KERB INLET PIT
- PROPOSED STORMWATER JUNCTION PIT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED PAVED PAVEMENT TO LANDSCAPE ARCHITECTS' DETAIL
- EXISTING FOOTPATH TO BE REPAIRED AND MAKE GOOD
- PROPOSED RAIN GARDEN
- PROPOSED MASS PLANTING
- PROPOSED OSD
- PROPOSED SAWCUT
- PROPOSED LANDSCAPE TREES
- EXISTING TREES TO BE REMOVED
- EXISTING TREES TO BE RETAINED
- FFL 27.85
- 27.85
- PROPOSED FINISHED FLOOR LEVEL
- PROPOSED SPOT LEVEL
- PROPOSED LIGHT POLE

- NOTES:**
1. FOR STAGE 2 AND STAGE 3 ROAD WORKS DETAILS REFER DRAWINGS C3-06 & C3-07.
 2. FOR STORMWATER DETAILS REFER DRAWING C6-01
 3. FOR TYPICAL ROAD CROSS SECTIONS REFER DRAWINGS C3-15 & C3-16
 4. TIMING OF STAGES SUBJECT TO PROGRAMING OF HIGH STREET ROAD UPGRADES.

ISSUED FOR DEVELOPMENT APPLICATION



Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
7	ISSUED FOR REVIEW	CW	CW	17.10.18
8	ISSUED FOR REVIEW	RG	CW	26.03.19
9	RAIN GARDEN REINSTATED	RG	CW	29.03.19
10	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19

Rev	Revision Description	By	App	Date
11	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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Client

TOGA

Title

**STAGING PLAN – STAGE 1 –
CONNECTING TO EXISTING ROUND
ABOUT**

Project

HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
24.02.20

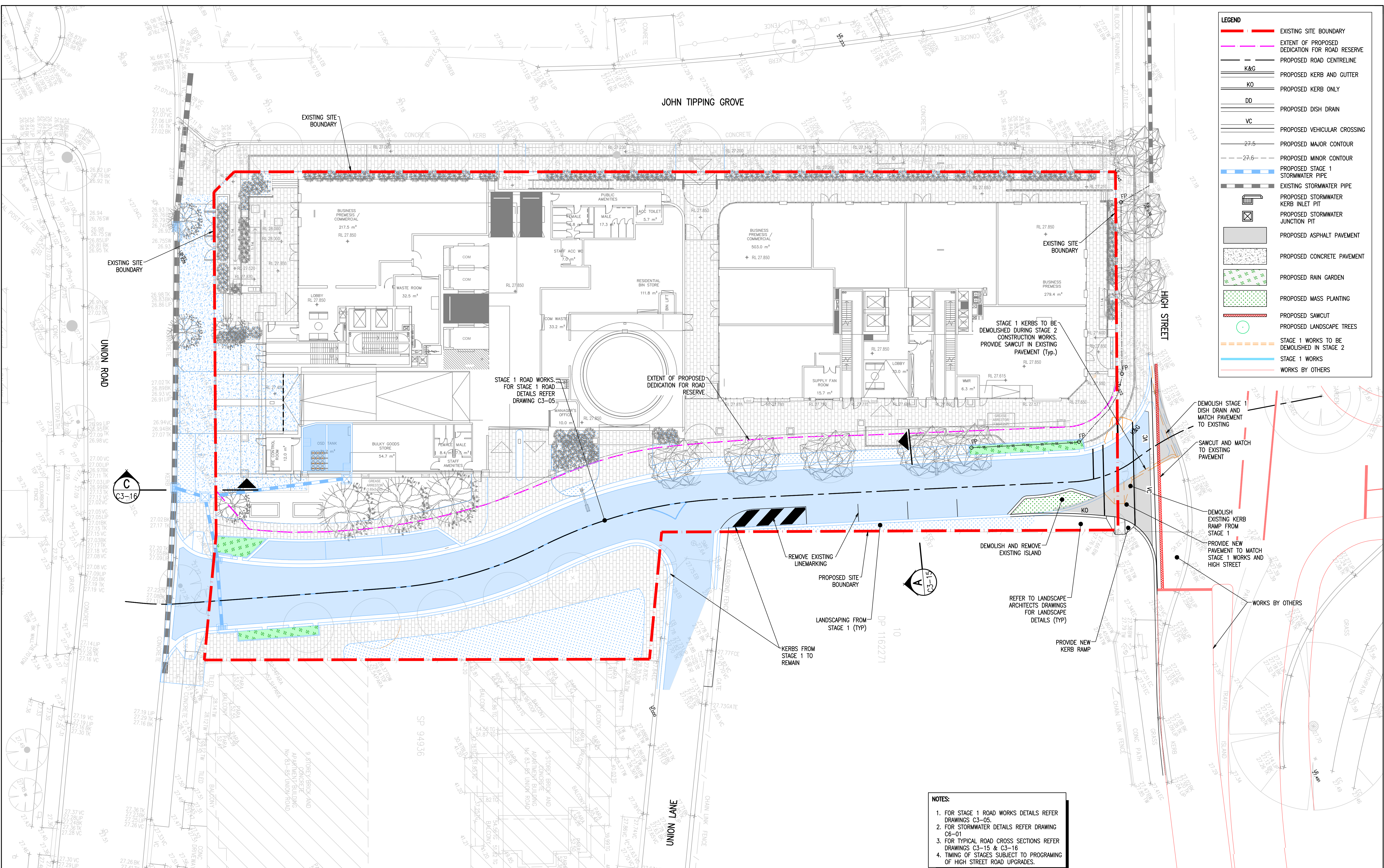
Drawn
S.MANANDHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
1766SC

NOT FOR CONSTRUCTION

Drawing Number
C3-05

Revision
11



LEGEND

EXISTING SITE BOUNDARY

EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE

PROPOSED ROAD CENTRELINE

K&G

PROPOSED KERB AND GUTTER

KO

PROPOSED KERB ONLY

DD

PROPOSED DISH DRAIN

VC

PROPOSED VEHICULAR CROSSING

27.5

PROPOSED MAJOR CONTOUR

27.6

PROPOSED MINOR CONTOUR

PROPOSED STAGE 1 STORMWATER PIPE

EXISTING STORMWATER PIPE

PROPOSED STORMWATER KERB INLET PIT

PROPOSED STORMWATER JUNCTION PIT

PROPOSED ASPHALT PAVEMENT

PROPOSED CONCRETE PAVEMENT

PROPOSED RAIN GARDEN

PROPOSED MASS PLANTING

PROPOSED SAWCUT

PROPOSED LANDSCAPE TREES

STAGE 1 WORKS TO BE DEMOLISHED IN STAGE 2

STAGE 1 WORKS

WORKS BY OTHERS

- NOTES:
1. FOR STAGE 1 ROAD WORKS DETAILS REFER DRAWINGS C3-05.

2. FOR STORMWATER DETAILS REFER DRAWING C6-01

3. FOR TYPICAL ROAD CROSS SECTIONS REFER DRAWINGS C3-15 & C3-16

4. TIMING OF STAGES SUBJECT TO PROGRAMMING OF HIGH STREET ROAD UPGRADES.

ISSUED FOR DEVELOPMENT APPLICATION

SCALE 1:200

20m

Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
7	ISSUED FOR REVIEW	CW	CW	17.10.18
8	ISSUE FOR REVIEW	RG	CW	26.03.19
9	RAIN GARDEN REINSTATED	RG	CW	29.03.19
10	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19

Rev	Revision Description	By	App	Date
11	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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TOGA

Title

STAGING PLAN – STAGE 2 –
CONNECTING TO SIGNALISED
INTERSECTION

Project

HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
24.02.20

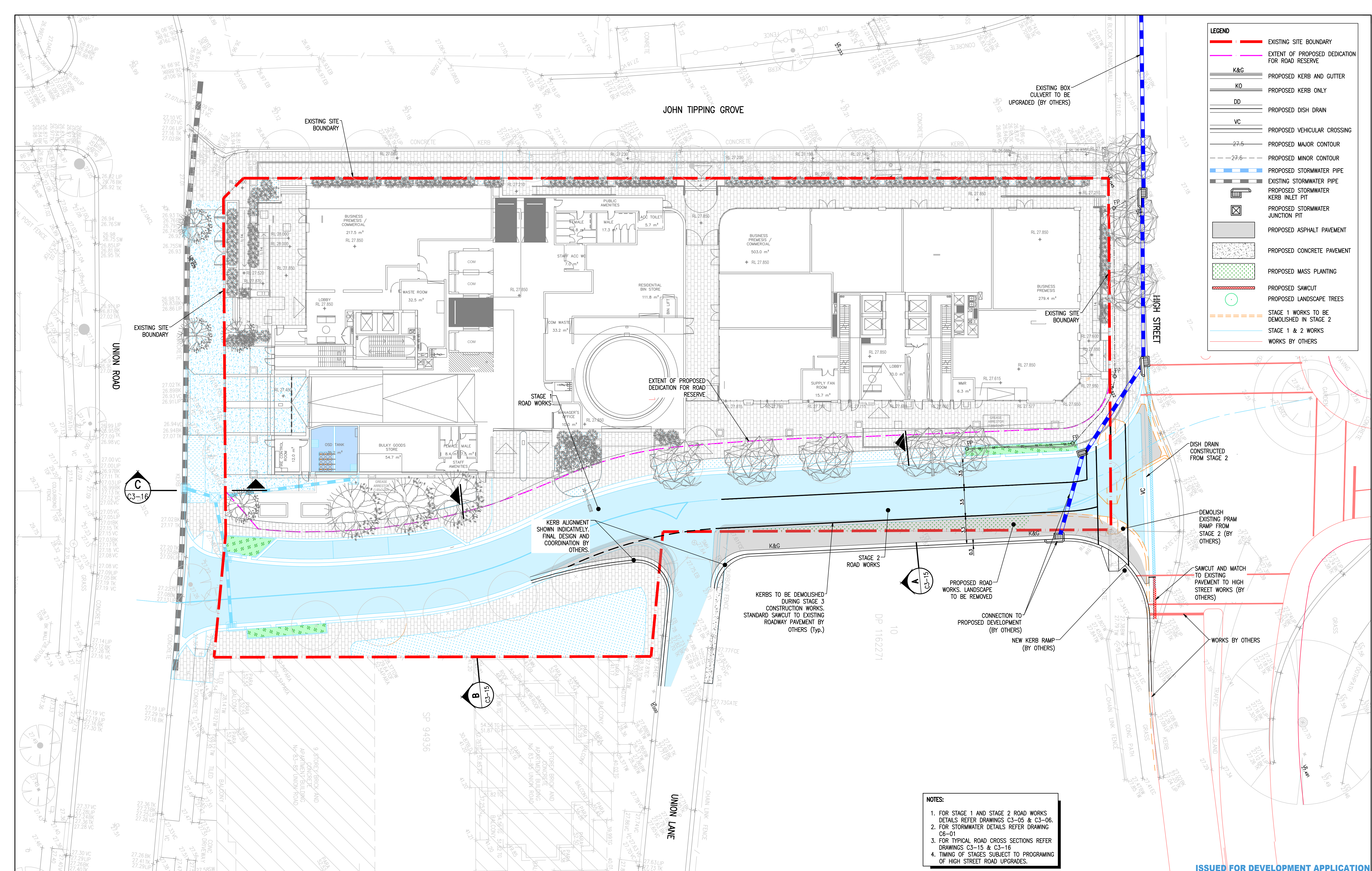
Drawn
S.MANDHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C3-06

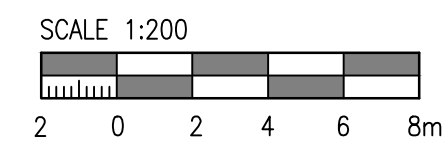
Revision
11



- LEGEND**
- EXISTING SITE BOUNDARY
 - EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE
 - PROPOSED KERB AND GUTTER
 - PROPOSED KERB ONLY
 - PROPOSED DISH DRAIN
 - PROPOSED VEHICULAR CROSSING
 - PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED STORMWATER PIPE
 - EXISTING STORMWATER PIPE
 - PROPOSED STORMWATER KERB INLET PIT
 - PROPOSED STORMWATER JUNCTION PIT
 - PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE PAVEMENT
 - PROPOSED MASS PLANTING
 - PROPOSED SAWCUT
 - PROPOSED LANDSCAPE TREES
 - STAGE 1 WORKS TO BE DEMOLISHED IN STAGE 2
 - STAGE 1 & 2 WORKS
 - WORKS BY OTHERS

- NOTES:**
- FOR STAGE 1 AND STAGE 2 ROAD WORKS DETAILS REFER DRAWINGS C3-05 & C3-06.
 - FOR STORMWATER DETAILS REFER DRAWING C6-01
 - FOR TYPICAL ROAD CROSS SECTIONS REFER DRAWINGS C3-15 & C3-16
 - TIMING OF STAGES SUBJECT TO PROGRAMING OF HIGH STREET ROAD UPGRADES.

ISSUED FOR DEVELOPMENT APPLICATION



Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
7	ISSUED FOR REVIEW	CW	CW	17.10.18
8	ISSUED FOR REVIEW	RG	CW	26.03.19
9	RAIN GARDEN REINSTATED	RG	CW	29.03.19
10	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19

Rev	Revision Description	By	App	Date
11	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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Client

TOGA

Title

**STAGING PLAN – STAGE 3
ULTIMATE ROAD DESIGN**

Project

HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
24.02.20

Drawn
S.MANANDHAR
Designer
Z.JONES

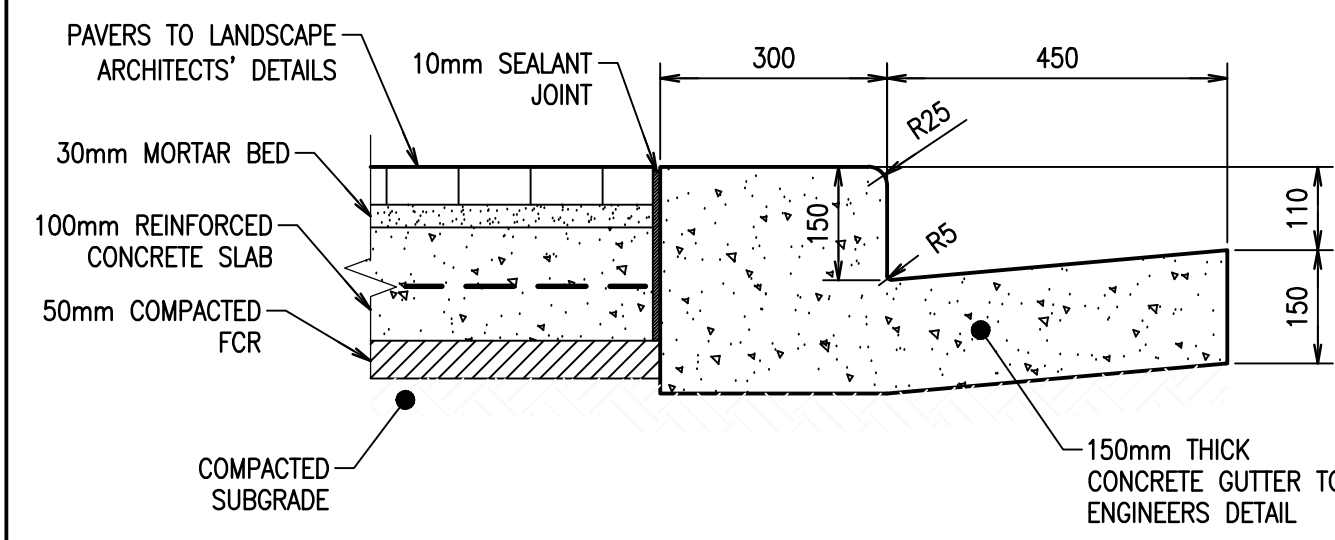
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C.ROPE
Approved
C.WAITE
Job Number
17665C

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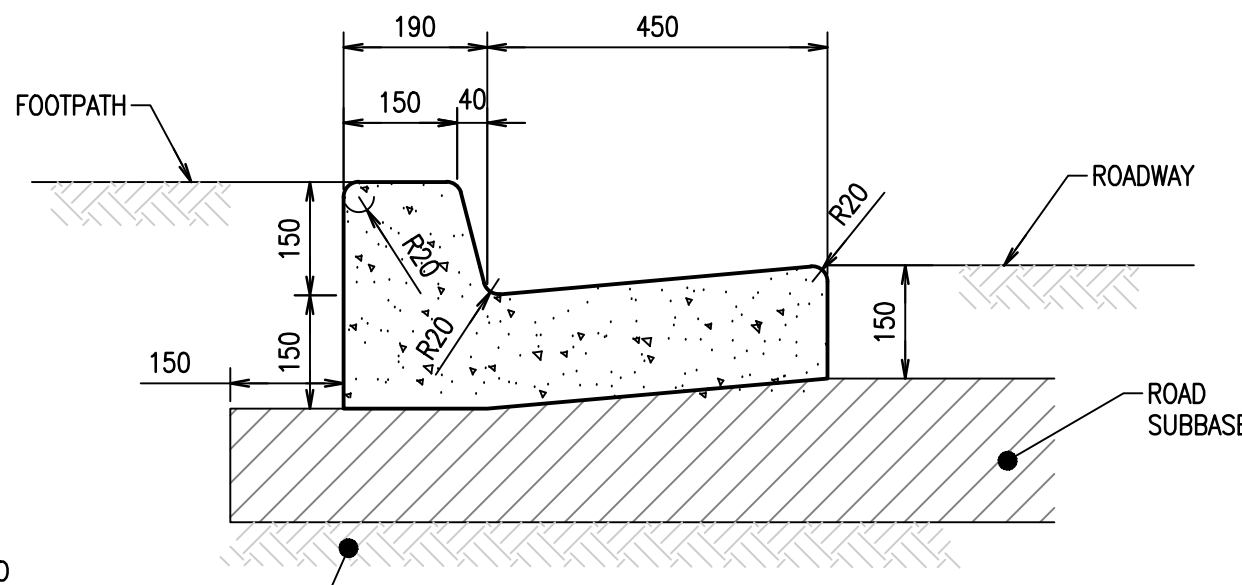
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Revision
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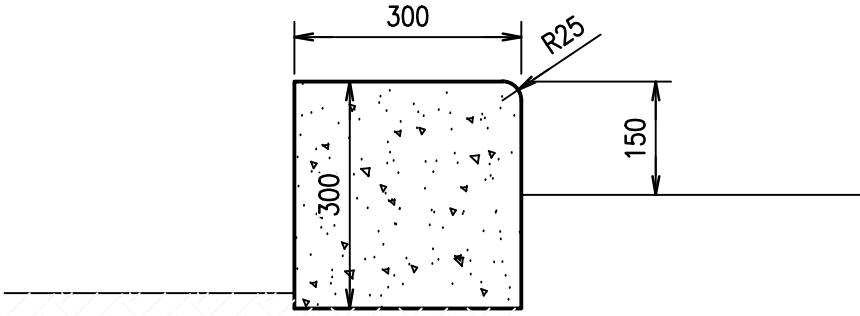
- NOTES:
1. CONCRETE COMPRESSIVE STRENGTH (F_c) AT 28 DAYS, TO BE 20MPa FOR KERB AND GUTTER
 2. LAYBACKS TO BE 20MPa, REINFORCED WITH SL72 MESH.
 3. ROAD SUB-BASE SHALL BE EXTENDED 150mm BEHIND REAR OF KERB AND GUTTER WITH THE THICKNESS TO BE NOT LESS THAN THE ROAD PAVEMENT SUB-BASE THICKNESS.
 4. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE STATED.
 5. ALL EXPOSED EDGES TO BE ROUNDED TO 20mm RADIUS.



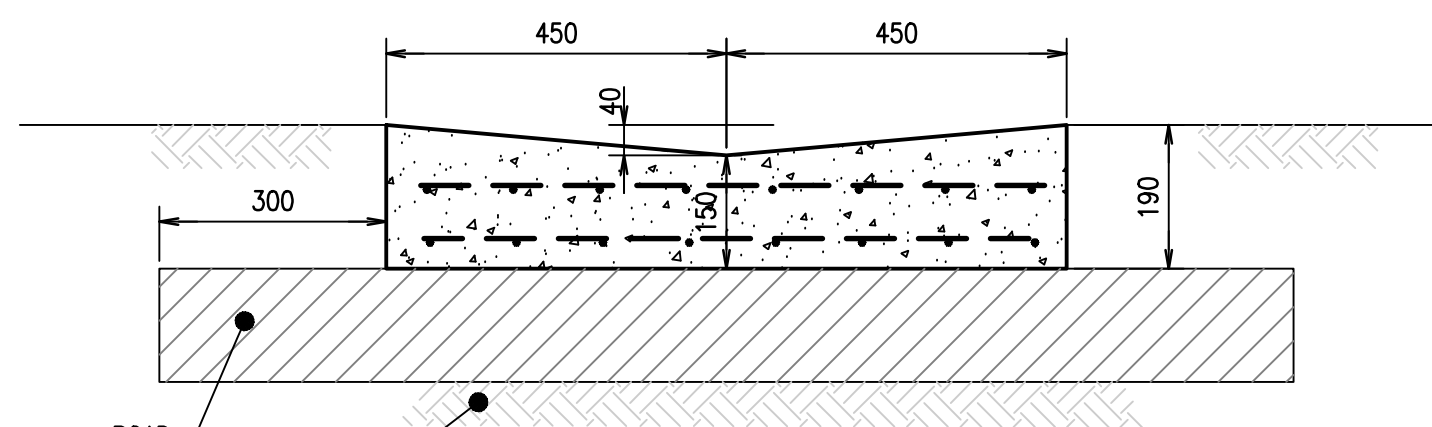
TYPICAL WIDE CONCRETE KERB AND GUTTER (K&G)
SCALE 1:10



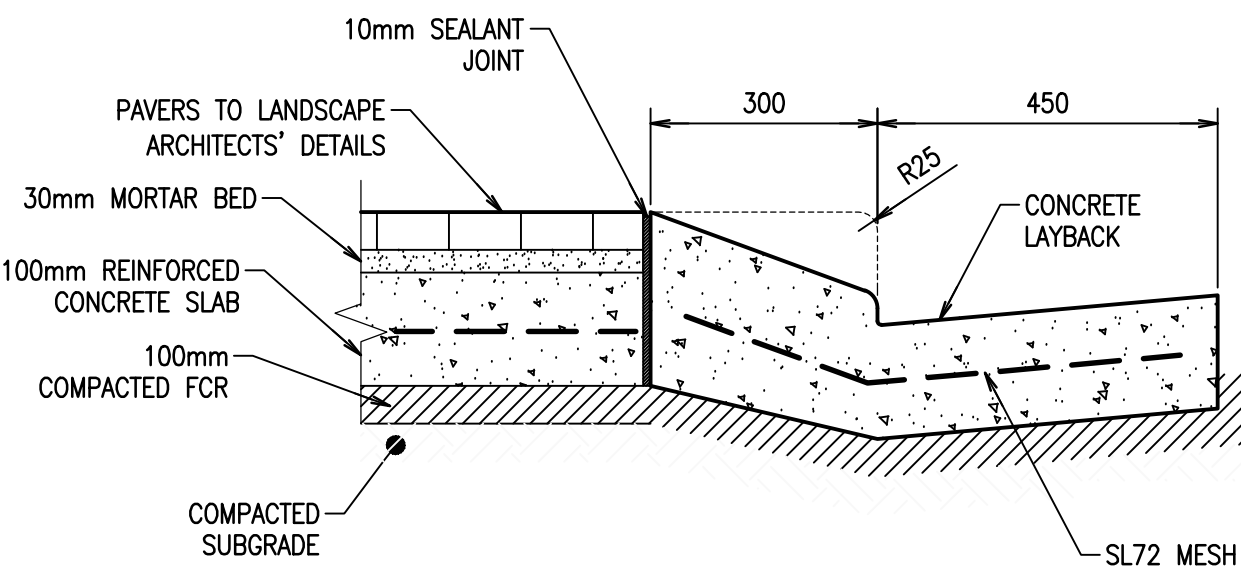
KERB AND GUTTER (K&G)
SCALE 1:10



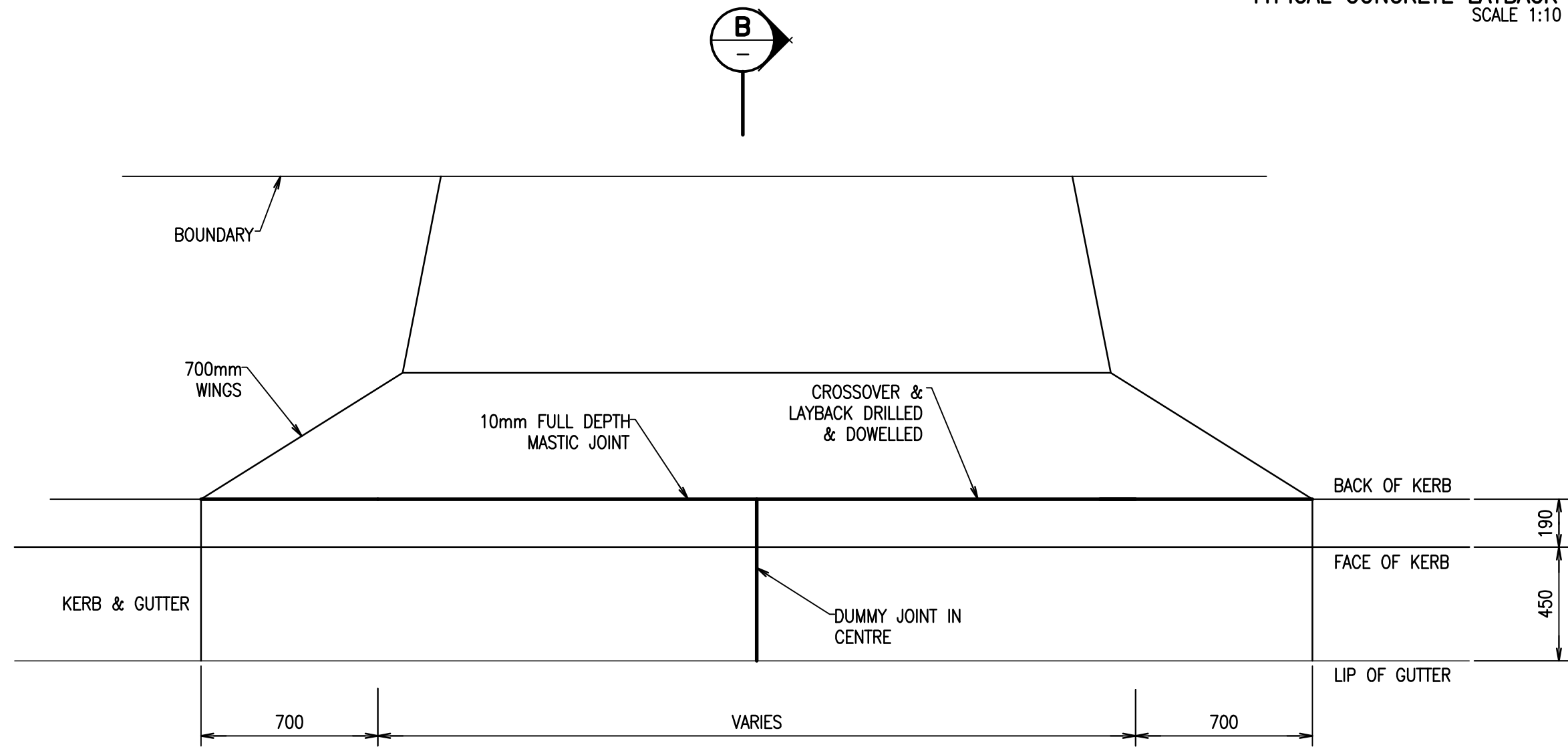
TYPICAL WIDE CONCRETE KERB ONLY (KO)
SCALE 1:10



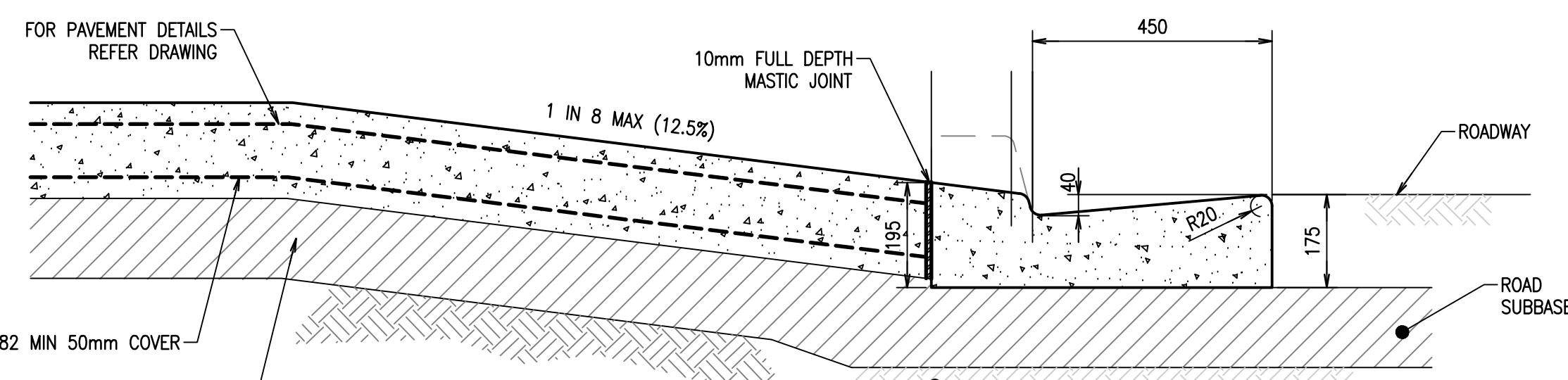
REINFORCED DISH CROSSING (DD)
SCALE 1:10



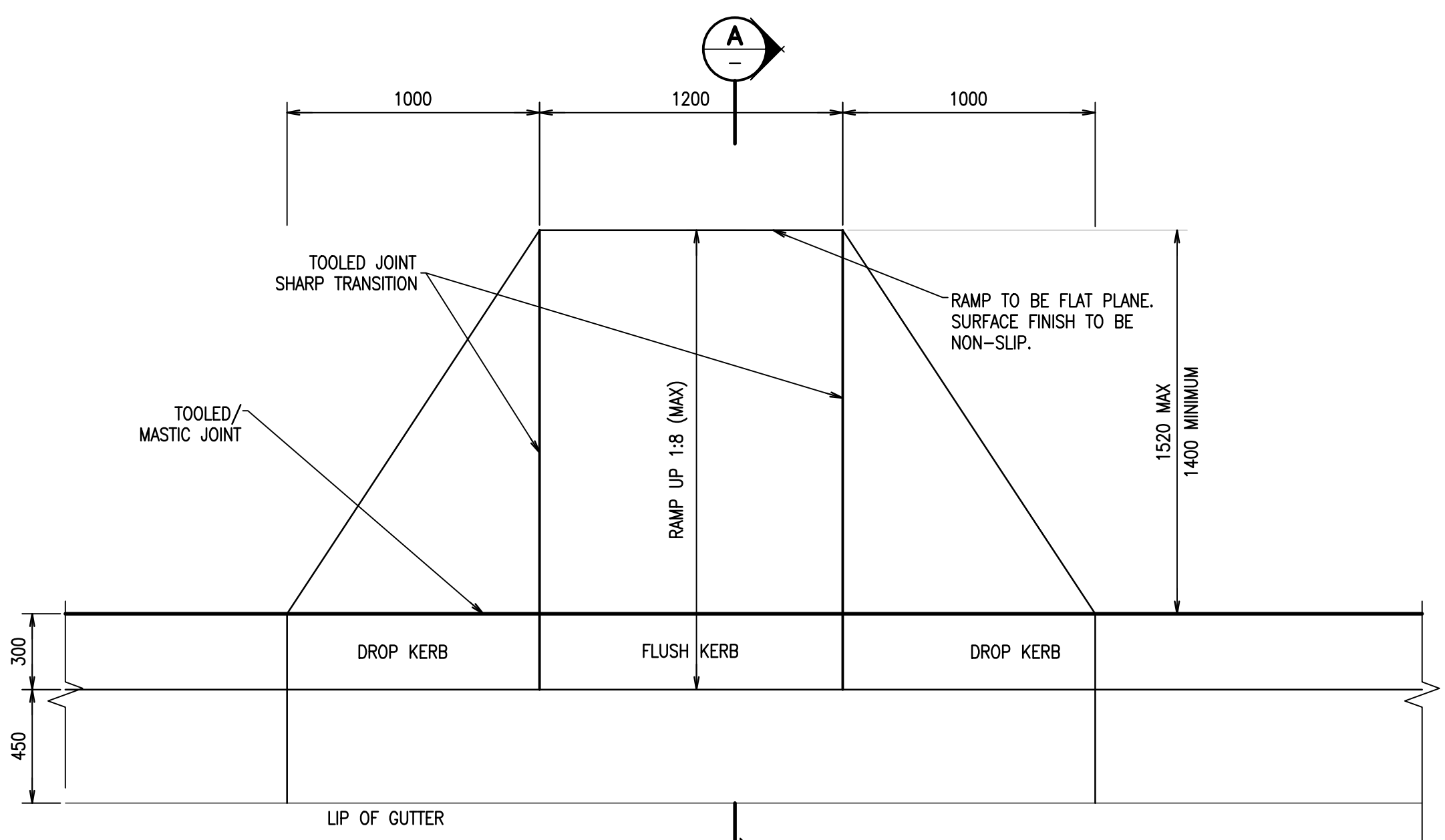
TYPICAL CONCRETE LAYBACK TO PAVING SECTION
SCALE 1:10



VEHICULAR CROSSING PLAN
SCALE 1:20



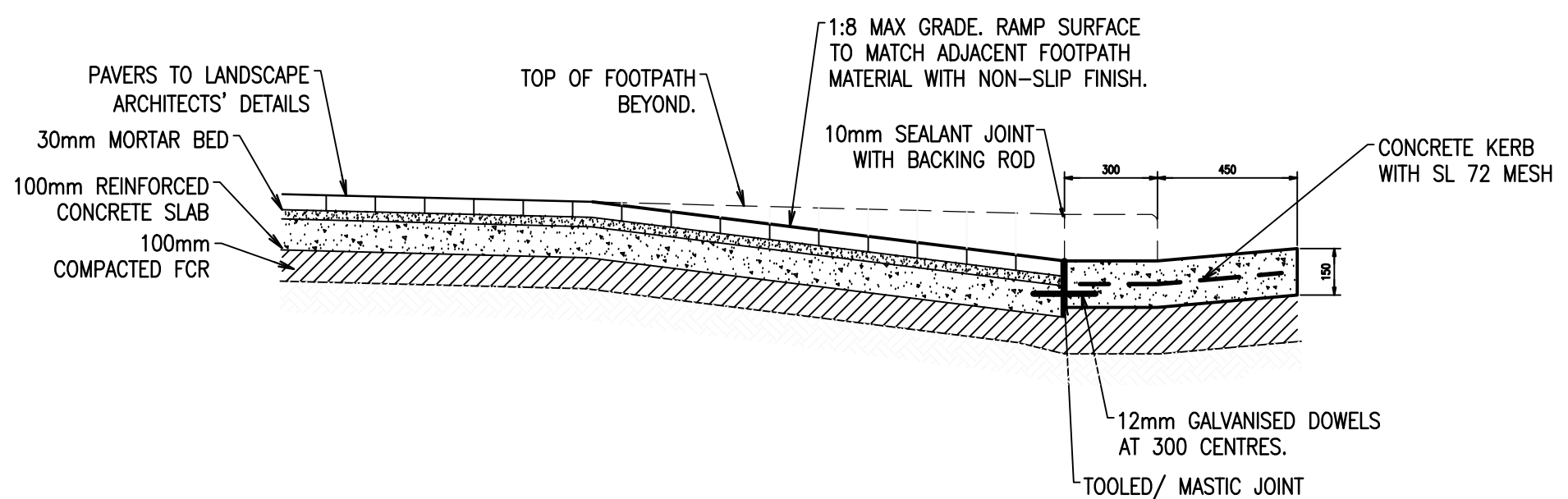
DRIVEWAY LAYBACK SECTION
SCALE 1:10



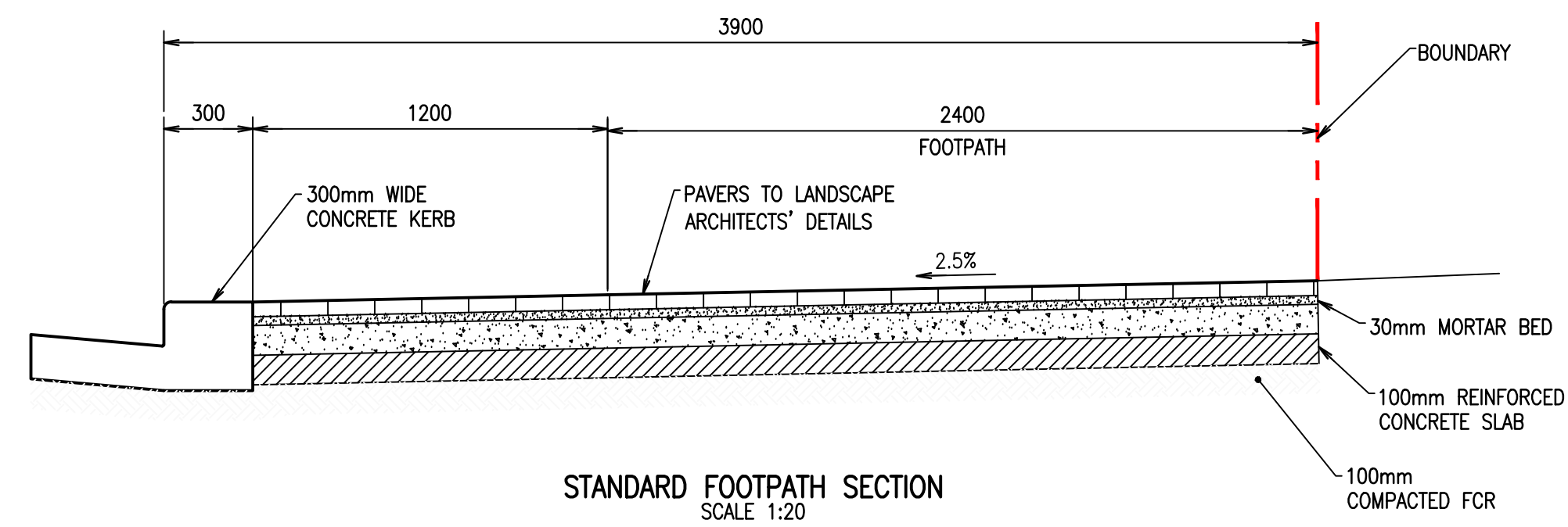
KERB RAMP PLAN
SCALE 1:20

NOTE:
PRAM RAMPS HAVE NO LIP AT INVERT OF GUTTER

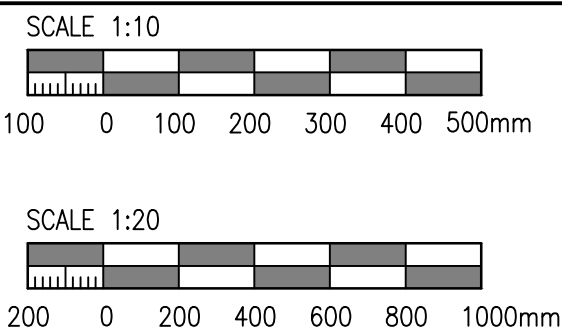
- NOTES:
1. KERB RAMP DETAILS ARE BASED ON AS 1428.1 - "DESIGN FOR ACCESS AND MOBILITY".
 2. CONCRETE TO BE 25MPa (F_c) AT 28 DAYS
 3. KERB RAMP TO BE DOWELLED INTO BACK OF KERB
 4. ALL DIMENSIONS ARE IN MILLIMETRES
 5. SHARP TRANSITIONS ARE CRITICAL IN GUIDING PEDESTRIANS WITH VISION IMPAIRMENTS.



KERB RAMP SECTION
SCALE 1:20



STANDARD FOOTPATH SECTION
SCALE 1:20



Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
6	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
6	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

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ACN 010 580 248

TOGA

Client

Title
CIVIL DETAILS

Project
HIGH STREET PENRITH

ISSUED FOR DEVELOPMENT APPLICATION

Scale at A1
AS SHOWN
Date
24.02.20

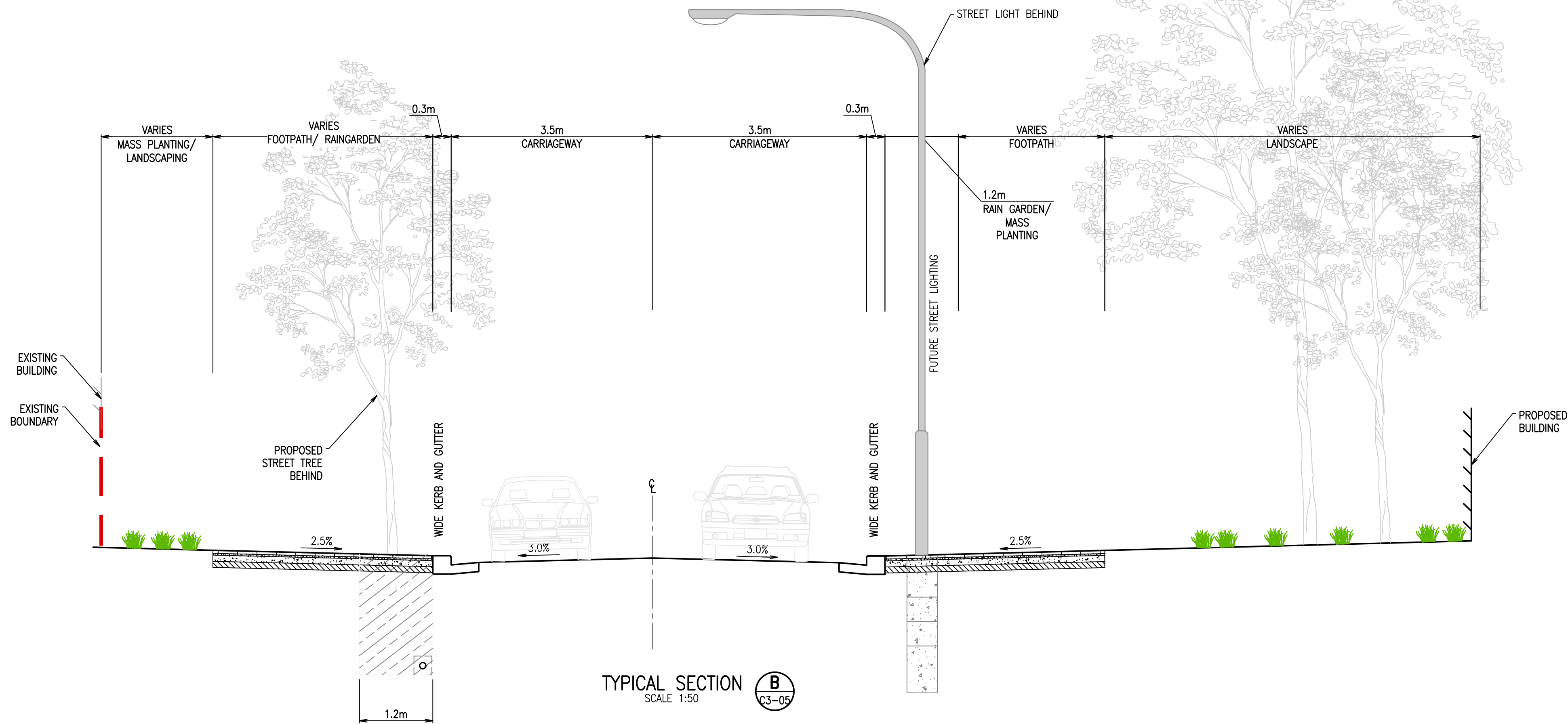
Drawn
S.MANANDHAR
Designer
R.ATHERTON

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

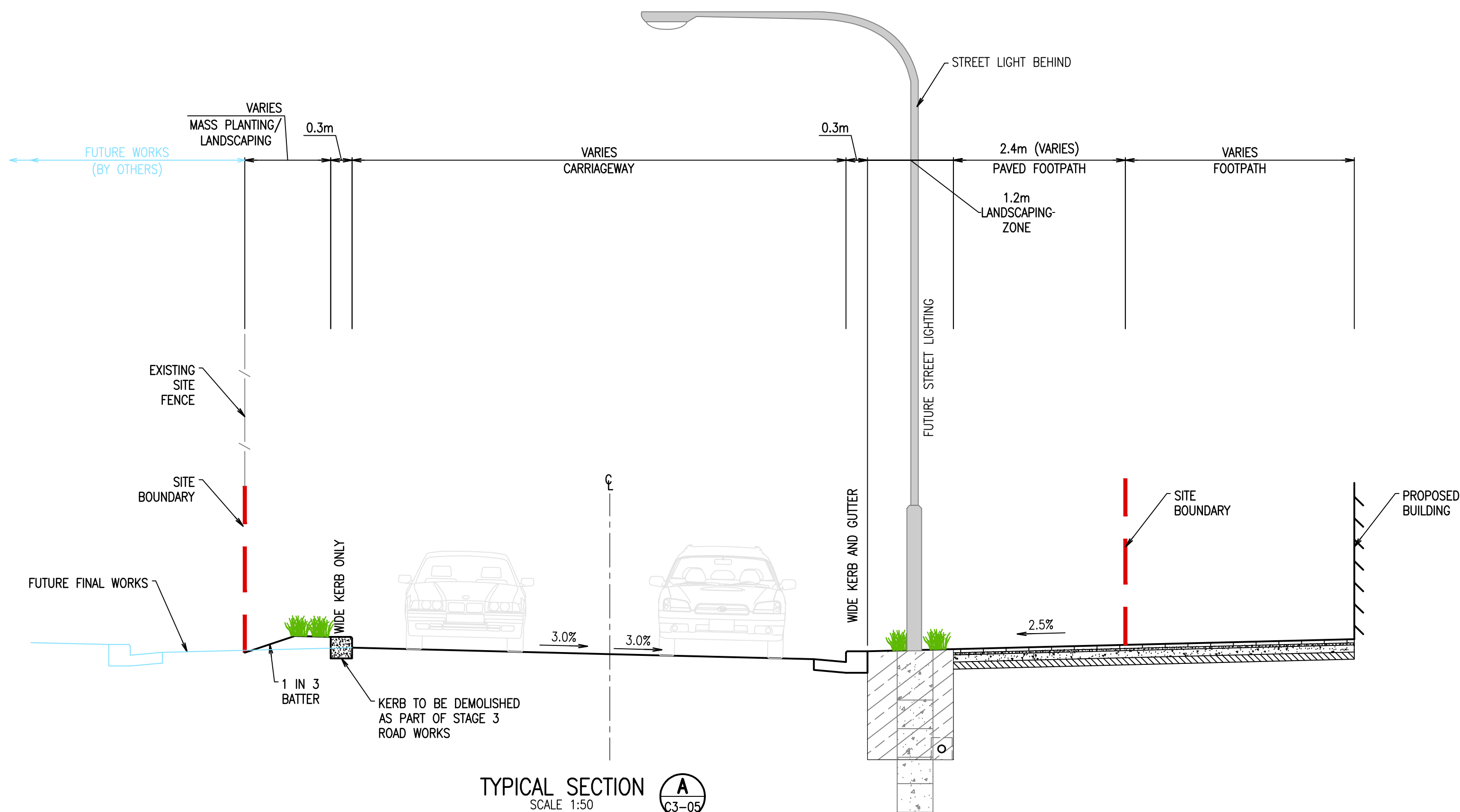
Drawing Number
C3-10

Revision
6



TYPICAL SECTION
SCALE 1:50

B
C3-05



TYPICAL SECTION
SCALE 1:50

A
C3-05



Rev	Revision Description	By	App	Date
1	ISSUED FOR PRELIMINARY COORDINATION	SM	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
8	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	06.06.19
9	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	02.03.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR PRELIMINARY COORDINATION	SM	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
8	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	06.06.19
9	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	02.03.20

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Client

Title
**TYPICAL ROAD CROSS SECTIONS -
SHEET 1 OF 2**

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
24.02.20

Drawn
S.MANANDHAR
Designer
R.ATHERTON

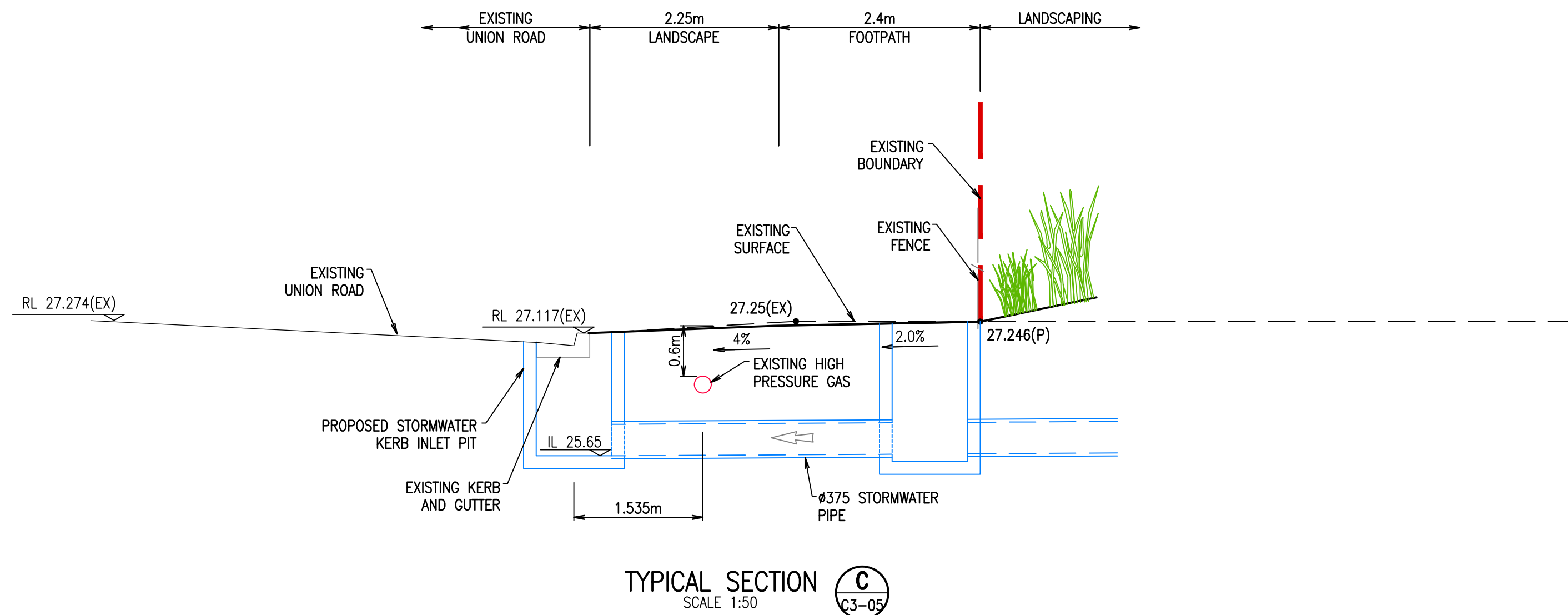
Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C3-15

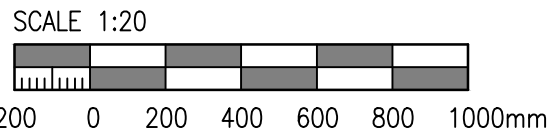
Revision
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ISSUED FOR DEVELOPMENT APPLICATION



TYPICAL SECTION C3-05
SCALE 1:50

ISSUED FOR DEVELOPMENT APPLICATION



Rev	Revision Description	By	App	Date
1	ISSUED FOR PRELIMINARY COORDINATION	SM	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR PRELIMINARY COORDINATION	SM	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

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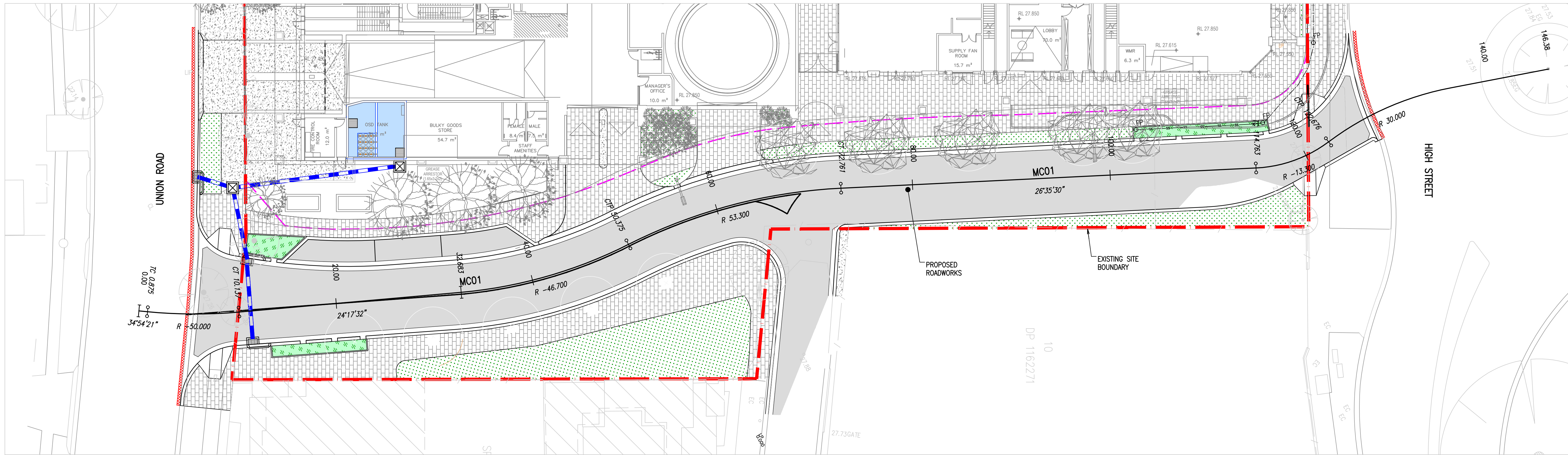
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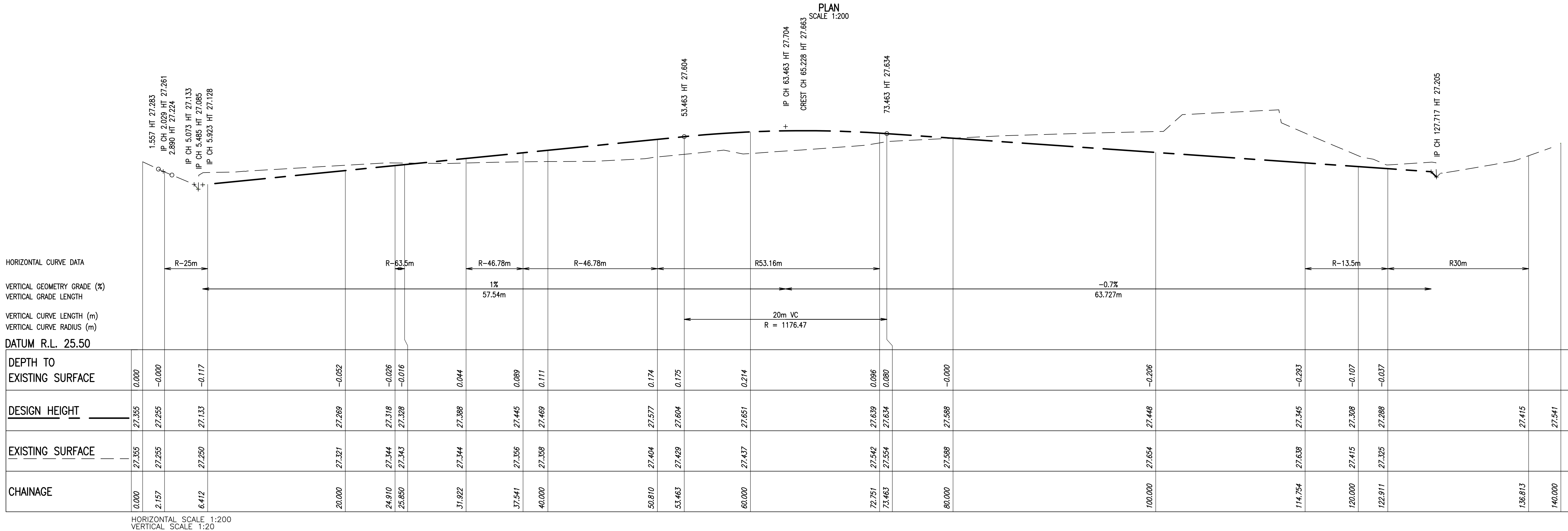
Title
**TYPICAL ROAD CROSS SECTIONS –
SHEET 2 OF 2**

Project
HIGH STREET PENRITH

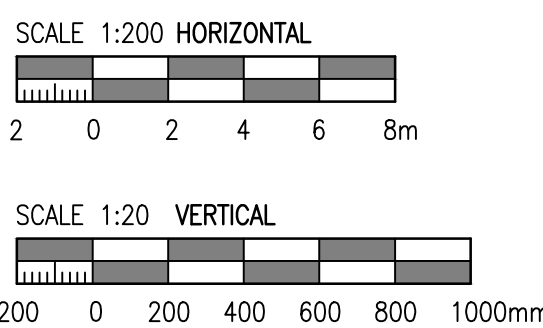
Scale at A1 AS SHOWN	Drawn S.MANANDHAR	Design Checker C.ROPE
Date 24.02.20	Designer R.ATHERTON	Approved C.WAITE
		Job Number 17665C
NOT FOR CONSTRUCTION		
Drawing Number C3-16		Revision 7



PLAN
SCALE 1:200



LONGITUDINAL SECTION MC01



Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	07.12.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	07.12.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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Client

TOGA

Title
**ROADWAY LONGITUDINAL SECTION
ULTIMATE ROAD**

Project
HIGH STREET PENRITH

ISSUED FOR DEVELOPMENT APPLICATION

Scale at A1
AS SHOWN
Date
21.02.20

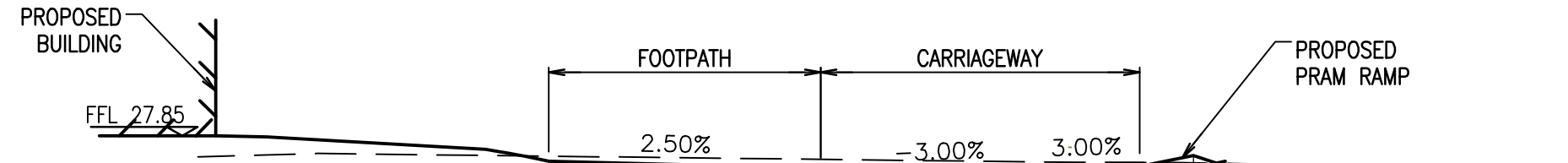
Drawn
S.MANANDHAR
Designer
R.ATHERTON

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C3-20

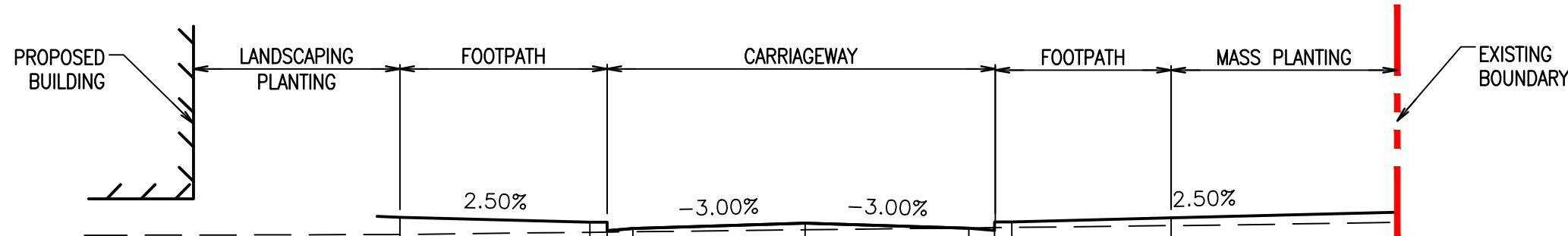
Revision
7



DATUM R.L. 26.00

DESIGN HEIGHT	27.422	27.323	27.323	27.213	27.299	27.351	27.514	27.393
SUBGRADE HEIGHT	27.422	27.323	27.173	27.213	27.299	27.351	27.514	27.393
EXISTING SURFACE	27.503	27.457	27.453	27.448	27.415	27.405	27.400	27.393
OFFSETS	-7.562	-3.600	-3.300	-2.850	0.000	1.743	2.543	2.904

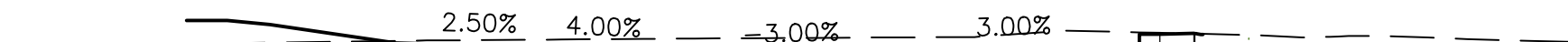
CHAINAGE 120.000



DATUM R.L. 26.00

DESIGN HEIGHT	27.573	27.490	27.490	27.470	27.385	27.385	27.564	27.663
SUBGRADE HEIGHT	27.573	27.490	27.340	27.470	27.385	27.345	27.564	27.663
EXISTING SURFACE	27.275	27.313	27.317	27.356	27.389	27.394	27.429	27.663
OFFSETS	-7.061	-3.752	-3.452	0.000	2.853	3.303	6.378	10.318

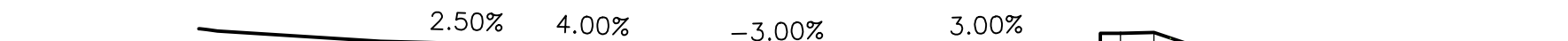
CHAINAGE 40.000



DATUM R.L. 26.00

DESIGN HEIGHT	27.572	27.511	27.463	27.439	27.549	27.699	27.711	27.707
SUBGRADE HEIGHT	27.572	27.511	27.463	27.439	27.549	27.699	27.711	27.707
EXISTING SURFACE	27.603	27.623	27.631	27.653	27.726	27.719	27.707	27.707
OFFSETS	-7.232	-4.800	-3.600	0.000	3.668	3.968	4.468	4.461

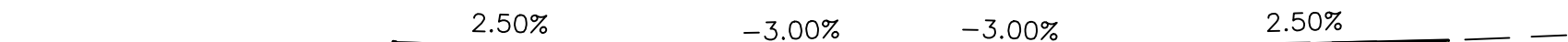
CHAINAGE 100.000



DATUM R.L. 26.00

DESIGN HEIGHT	27.715	27.651	27.603	27.579	27.681	27.831	27.843	27.615
SUBGRADE HEIGHT	27.715	27.651	27.603	27.579	27.681	27.831	27.843	27.615
EXISTING SURFACE	27.540	27.557	27.564	27.587	27.606	27.604	27.621	27.615
OFFSETS	-7.351	-4.800	-3.600	0.000	3.394	3.694	4.194	4.879

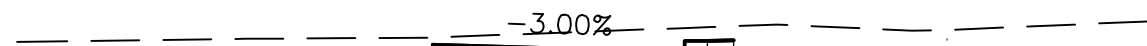
CHAINAGE 80.000



DATUM R.L. 26.00

DESIGN HEIGHT	27.360	27.279	27.279	27.270	27.185	27.185	27.398	27.398
SUBGRADE HEIGHT	27.360	27.279	27.129	27.270	27.185	27.145	27.398	27.398
EXISTING SURFACE	27.271	27.293	27.295	27.321	27.341	27.344	27.399	27.398
OFFSETS	-7.352	-4.123	-3.823	0.000	2.863	3.313	7.729	7.729

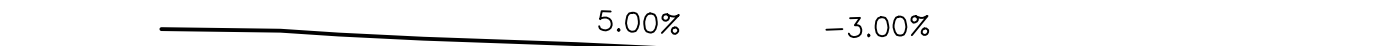
CHAINAGE 20.000



DATUM R.L. 26.00

DESIGN HEIGHT	27.164	27.085	27.215	27.223	27.085	27.215	27.223
SUBGRADE HEIGHT	27.164	27.085	27.215	27.223	27.085	27.215	27.223
EXISTING SURFACE	27.260	27.386	27.397	27.410	27.386	27.397	27.410
OFFSETS	0.000	3.330	3.630	3.979	3.330	3.630	3.979

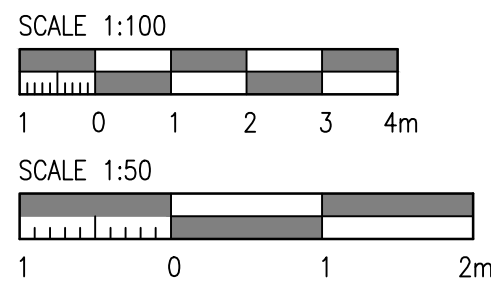
CHAINAGE 9.394



DATUM R.L. 26.00

DESIGN HEIGHT	27.703	27.623	27.563	27.649	27.649	27.649	27.649
SUBGRADE HEIGHT	27.703	27.623	27.563	27.649	27.649	27.649	27.649
EXISTING SURFACE	27.347	27.373	27.381	27.434	27.434	27.434	27.434
OFFSETS	-5.403	-3.800	-3.300	0.000	0.000	0.000	0.000

CHAINAGE 60.000



Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	OW	28.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	OW	04.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
5	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	OW	28.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	OW	04.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
5	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

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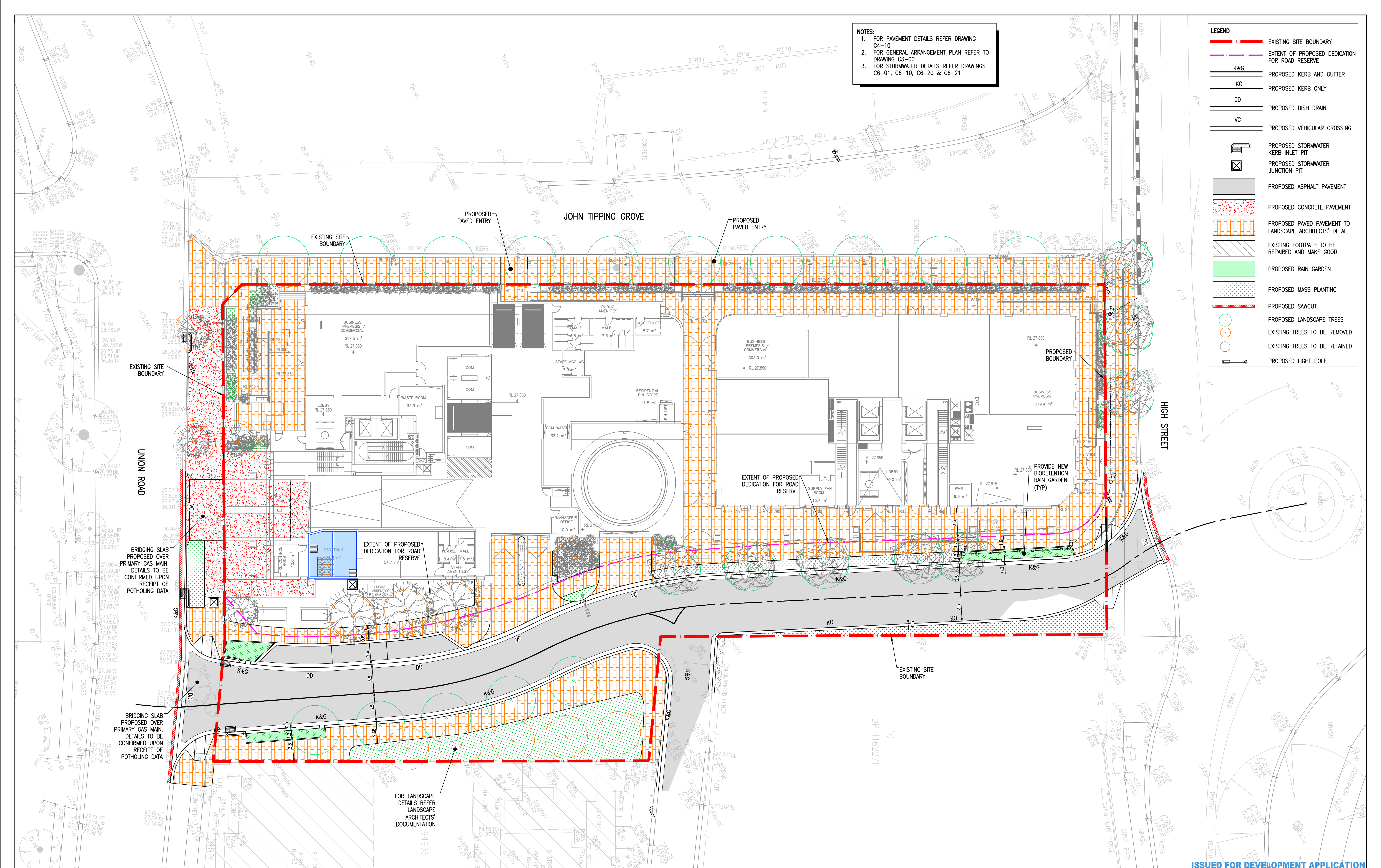
Structural, Civil & Construction Engineering Consultant
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Email: brisbane@robertbird.com.au
Web: www.robertbird.com
ACN 010 580 248

Client
TOGA

Title
ROADWAY CROSS SECTIONS - SHEET 1
Project
HIGH STREET PENRITH

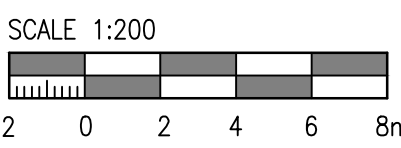
Scale at A1
AS SHOWN
Date
13.02.20
Drawn
S.MANANDHAR
Designer
C.WAITE
Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C
NOT FOR CONSTRUCTION
Drawing Number
C3-40
Revision
5

ISSUED FOR DEVELOPMENT APPLICATION



NOTES:
1. FOR PAVEMENT DETAILS REFER DRAWING C4-10
2. FOR GENERAL ARRANGEMENT PLAN REFER TO DRAWING C3-00
3. FOR STORMWATER DETAILS REFER DRAWINGS C6-01, C6-10, C6-20 & C6-21

- LEGEND**
- EXISTING SITE BOUNDARY
 - EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE
 - K&G PROPOSED KERB AND GUTTER
 - KO PROPOSED KERB ONLY
 - DD PROPOSED DISH DRAIN
 - VC PROPOSED VEHICULAR CROSSING
 - PROPOSED STORMWATER KERB INLET PIT
 - PROPOSED STORMWATER JUNCTION PIT
 - PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE PAVEMENT
 - PROPOSED PAVED PAVEMENT TO LANDSCAPE ARCHITECTS' DETAIL
 - EXISTING FOOTPATH TO BE REPAIRED AND MAKE GOOD
 - PROPOSED RAIN GARDEN
 - PROPOSED MASS PLANTING
 - PROPOSED SAWCUT
 - PROPOSED LANDSCAPE TREES
 - EXISTING TREES TO BE REMOVED
 - EXISTING TREES TO BE RETAINED
 - PROPOSED LIGHT POLE



Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
8	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
8	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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ACN 010 580 248

Client

TOGA

Title
PAVEMENT LAYOUT PLAN

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

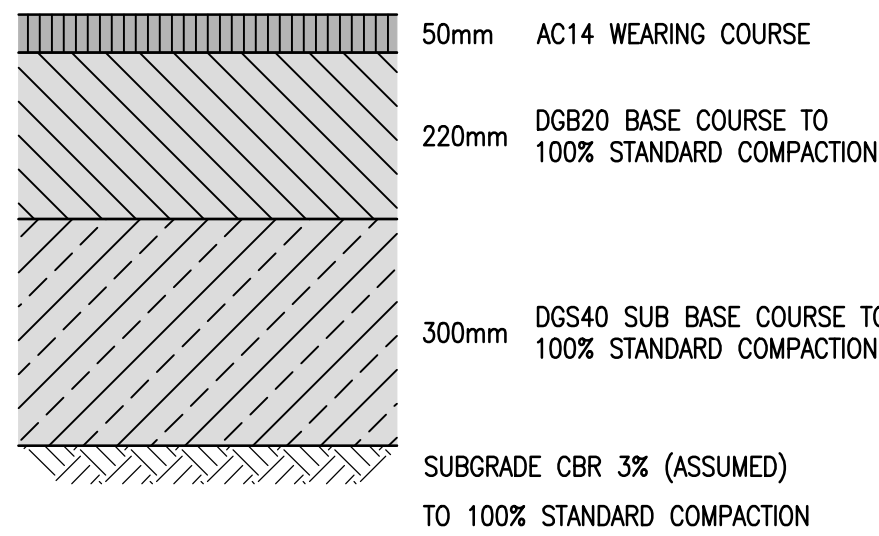
Drawn
S.MANANDHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

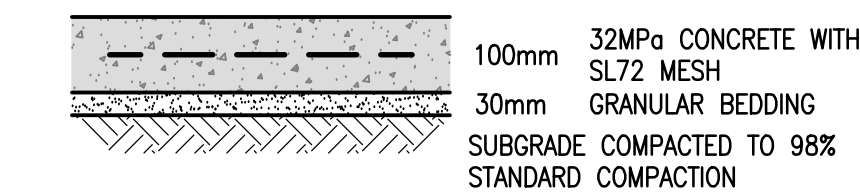
Drawing Number
C4-01

Revision
8

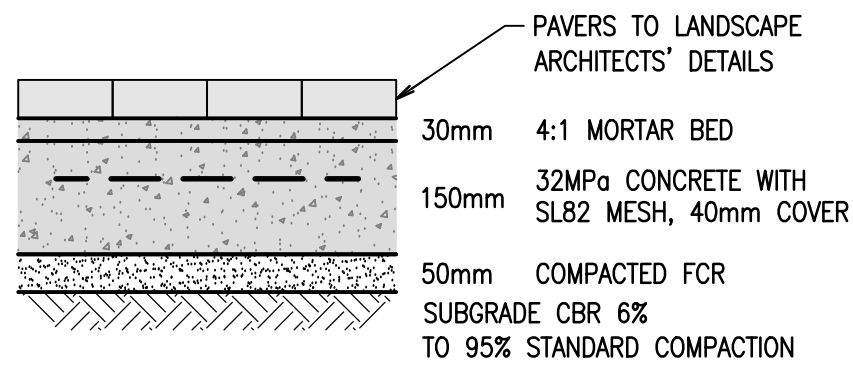


FULL ROAD DEPTH
ASPHALT PAVEMENT
SCALE 1:10

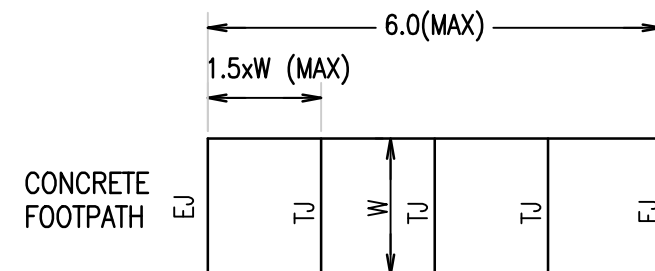
NOTE:
ESAs = 5X10⁵
DESIGN LIFE = 20YRS



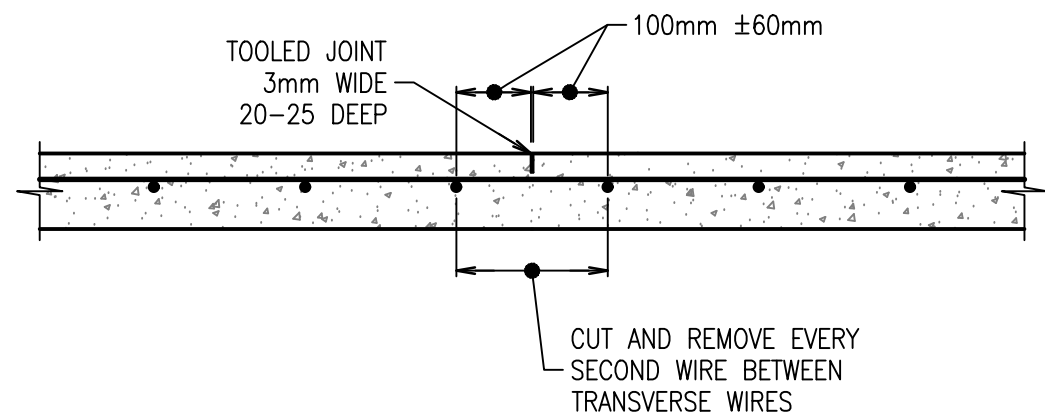
CONCRETE FOOTPATH PAVEMENT
TYPICAL DETAIL
SCALE 1:10



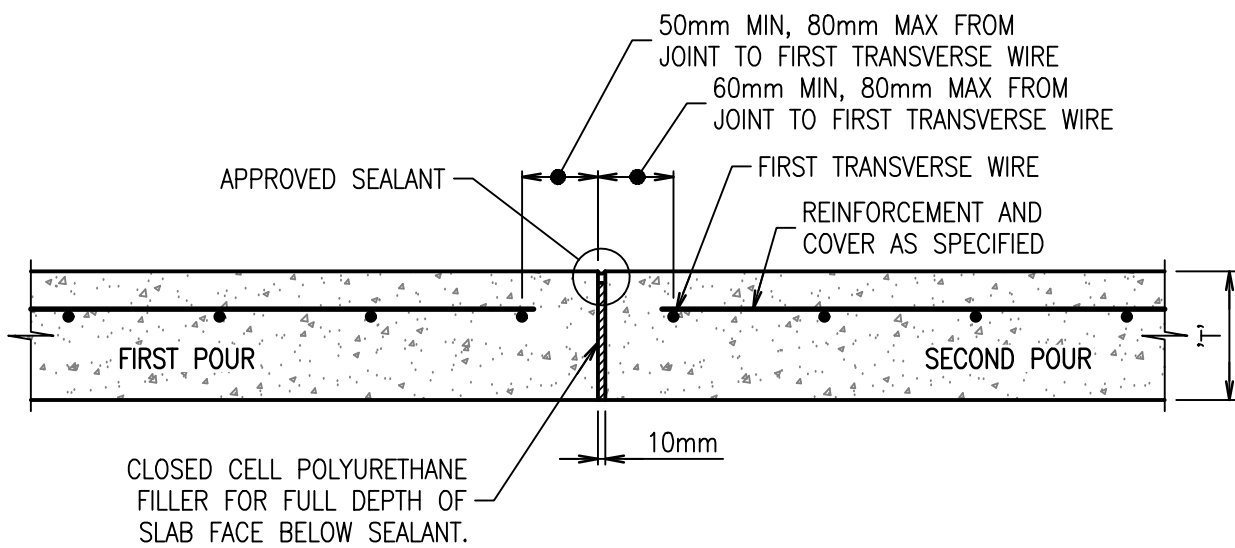
PAVED CONCRETE FOOTPATH PAVEMENT
TYPICAL DETAIL
SCALE 1:10



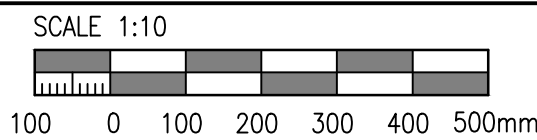
T.J.: TROWELLED JOINT
E.J.: EXPANSION JOINT
TYPICAL FOOTPATH JOINTING
NTS



TOOLED JOINT (Tj) DETAIL
SCALE 1:10



EXPANSION JOINT (Ej) DETAIL
SCALE 1:10



Rev	Revision Description	By	App	Date
1	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
5	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

Rev	Revision Description	By	App	Date
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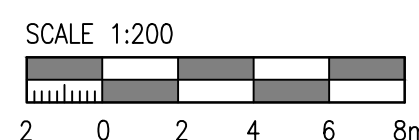
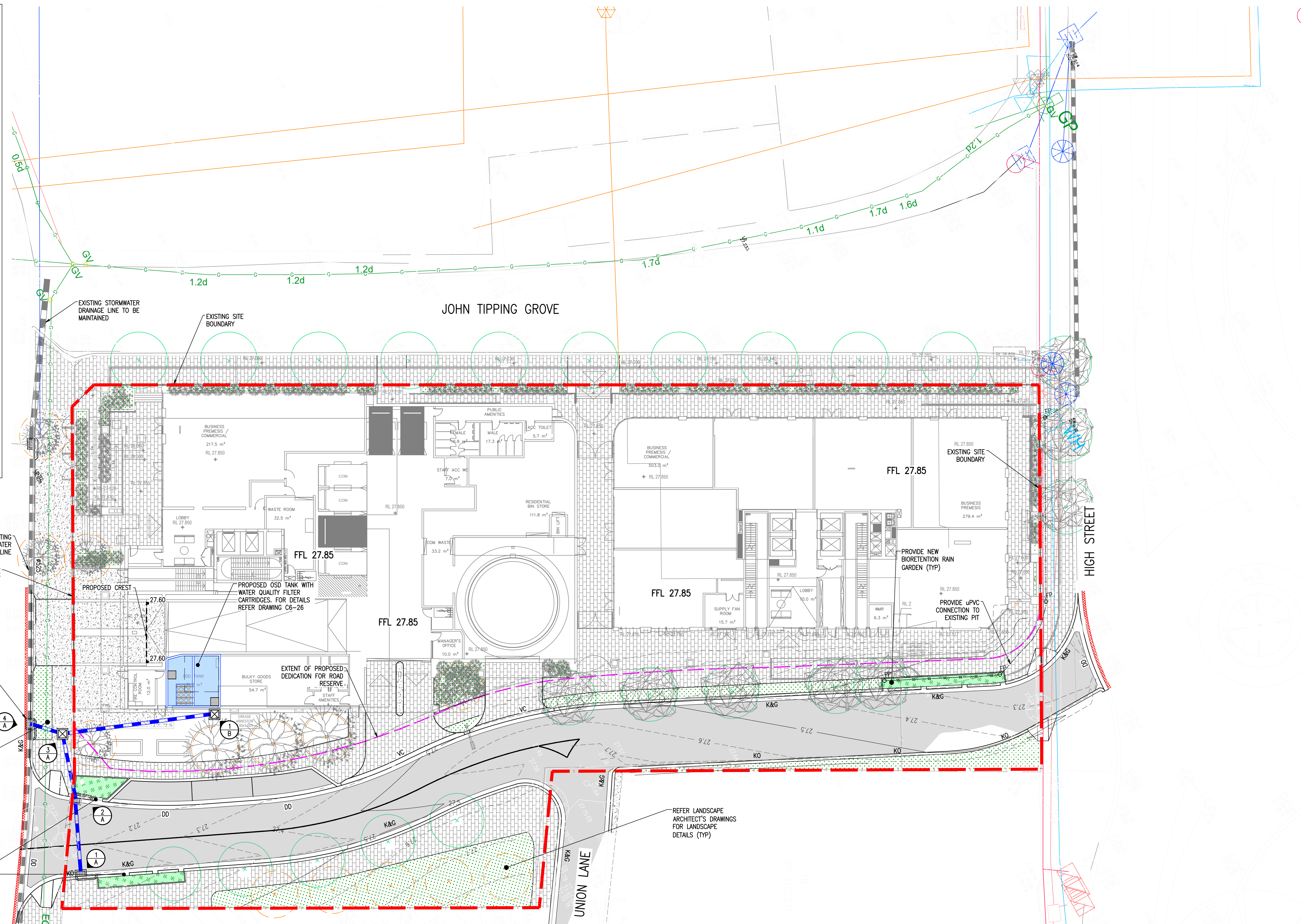
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Title
PAVEMENT DETAILS

Project
HIGH STREET PENRITH

ISSUED FOR DEVELOPMENT APPLICATION		Scale at A1 AS SHOWN	Drawn S.MANANDHAR	Design Checker C.ROPE
		Date 06.05.19	Designer R.ATHERTON	Approved C.WAITE
				Job Number 17665C
		NOT FOR CONSTRUCTION		
		Drawing Number C4-10	Revision 5	



Rev	Revision Description	By	App	Date
1	PRELIMINARY ISSUE FOR OSD REVIEW	RA	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
8	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
9	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
10	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.07.20

Rev	Revision	Description	By	App	Date
3					
3					
3					
3					
3					
3					
3					
3					
9					
0					

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Client

Title **STORMWATER MANAGEMENT PLAN**

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
24.02.20

Drawn	Design Checker
M.CLAVEL	C.ROPE
Designer	Approved
Z.JONES	C.WAITE
	Job Number
	17665C

NOT FOR CONSTRUCTION

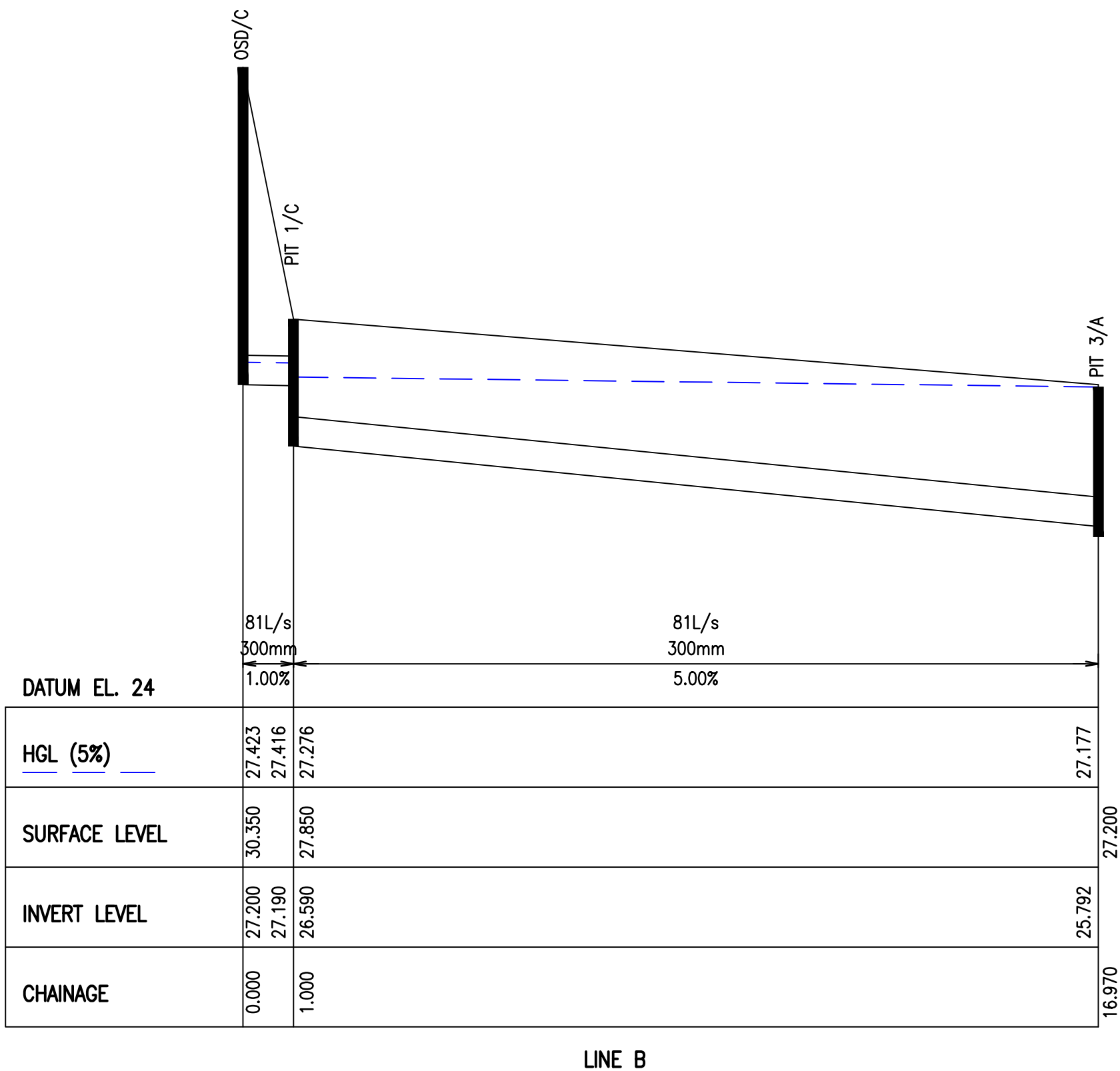
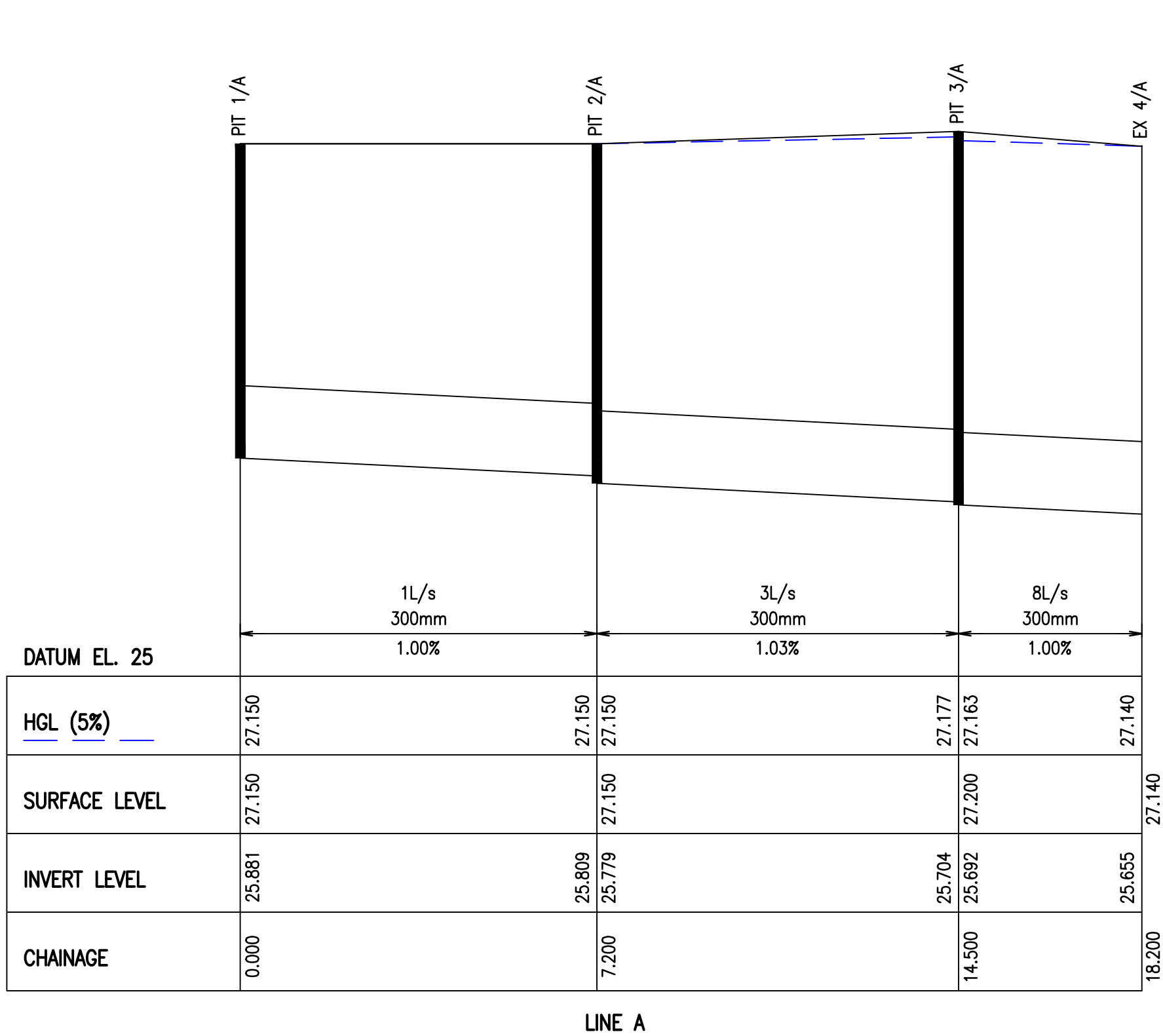
Drawing Number
C6-01

Revision
10

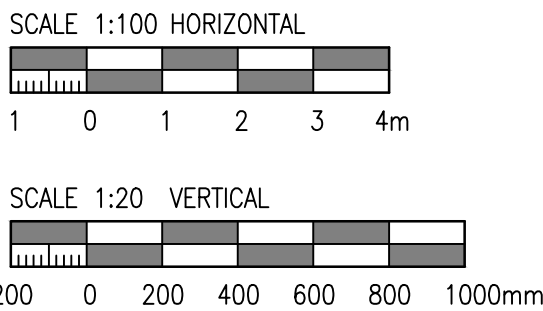
MINIMUM INTERNAL DIMENSIONS FOR
STORMWATER AND INLET PITS

DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)	
	RECTANGULAR	
	WIDTH	LENGTH
≤600	450	450
>600 ≤900	600	600
>900 ≤1200	600	900
>1200	900	900

- NOTES:
- PIT DEPTHS > 1200 REQUIRE STEP IRONS.
 - PIPE SUPPORT HS3 TYPE IN ACCORDANCE WITH AS3725.
 - ALL PIPES TO BE RCP UNLESS NOTED OTHERWISE.
 - ALL RCP PIPE CLASSES AS NOTED IN BRACKETS ON THE LONGSECTION.
 - MINIMUM COVER OF 400mm DURING CONSTRUCTION.
 - ALL COVERS TO BE IN ACCORDANCE WITH COUNCIL STANDARDS AND SPECIFICATION.



ISSUED FOR DEVELOPMENT APPLICATION



Rev	Revision	Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	RA	CW		15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW		23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW		28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		18.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		19.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW		21.02.20

Rev	Revision	Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	RA	CW		15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW		23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW		28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		18.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		19.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR		05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW		21.02.20

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Client

Title
**STORMWATER LONGSECTIONS –
SHEET 1 OF 2**

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

Drawn
M.CLAVEL
Designer
M.CLAVEL

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

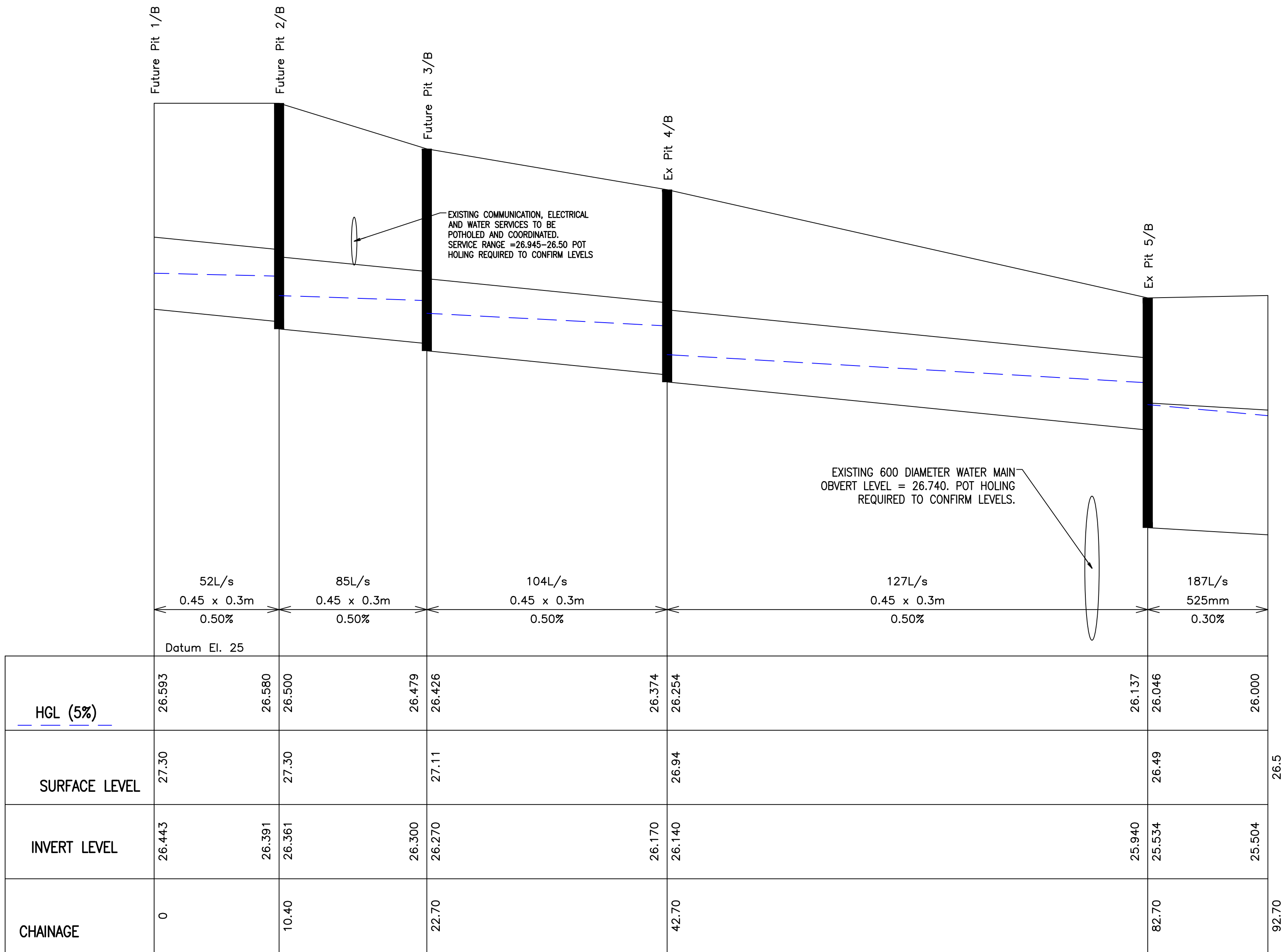
Drawing Number
C6-20

Revision
7

MINIMUM INTERNAL DIMENSIONS FOR
STORMWATER AND INLET PITS

DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)	
	RECTANGULAR	
	WIDTH	LENGTH
≤600	450	450
>600 ≤900	600	600
>900 ≤1200	600	900
>1200	900	900

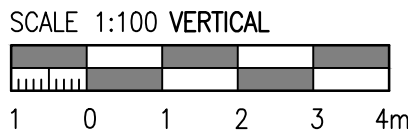
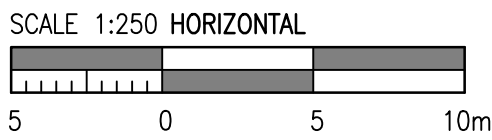
- NOTES:
- PIT DEPTHS > 1200 REQUIRE STEP IRONS.
 - PIPE SUPPORT HS3 TYPE IN ACCORDANCE WITH AS3725.
 - ALL PIPES TO BE RCP UNLESS NOTED OTHERWISE.
 - ALL RCP PIPE CLASSES AS NOTED IN BRACKETS ON THE LONGSECTION.
 - MINIMUM COVER OF 400mm DURING CONSTRUCTION.
 - ALL COVERS TO BE IN ACCORDANCE WITH COUNCIL STANDARDS AND SPECIFICATION.



LINE B

NOTE: LINE B IS TO BE CONSTRUCTED IN THE ULTIMATE STAGE 3 ROAD CASE

ISSUED FOR DEVELOPMENT APPLICATION



Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	ZJ	CR	18.06.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
4	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	ZJ	CR	18.06.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
4	ISSUED FOR DEVELOPMENT APPLICATION	RG	CR	21.02.20

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Client

Title
**STORMWATER LONGSECTIONS –
ULTIMATE STAGE 3 DESIGN**

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

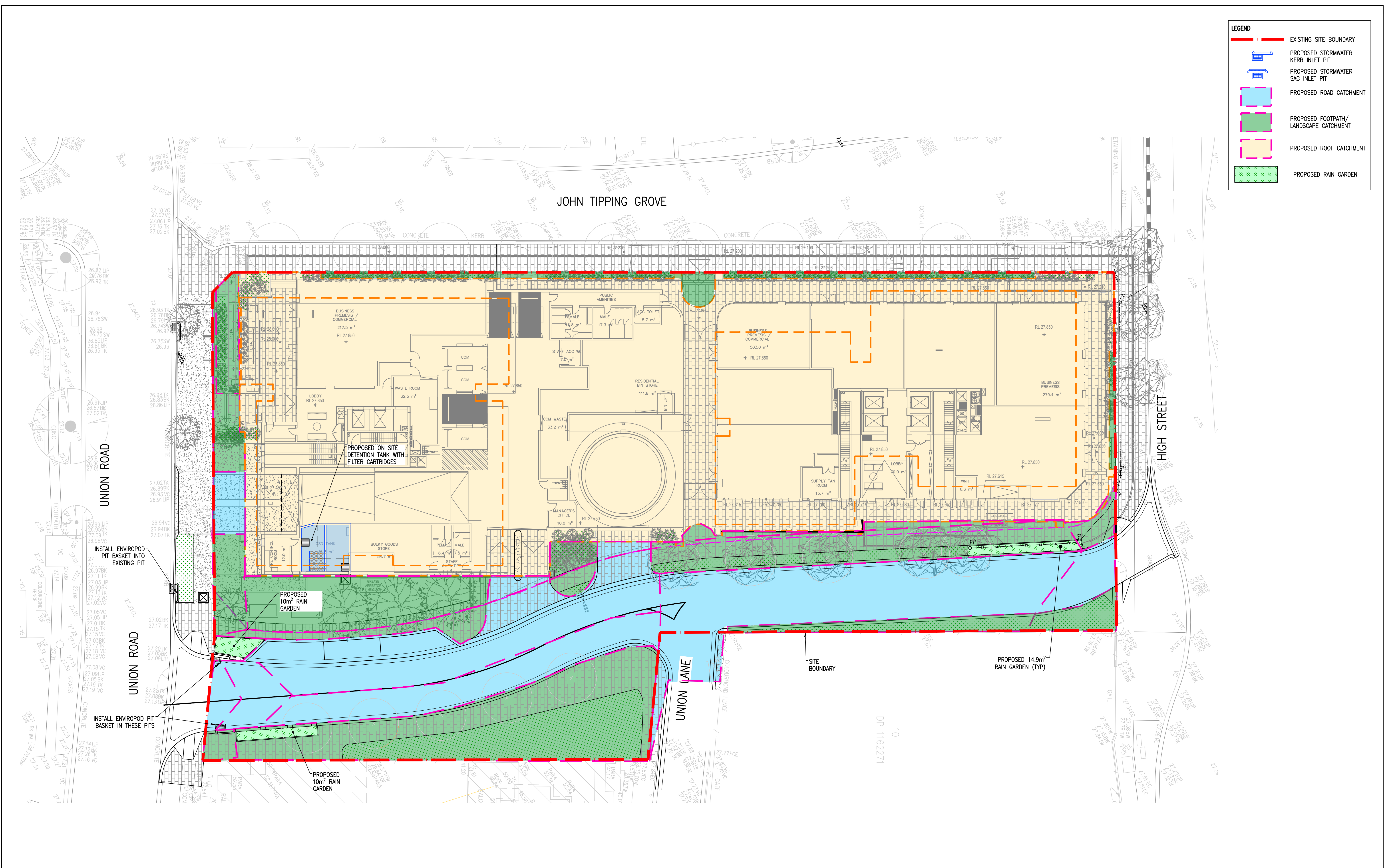
Drawn
S.MANADHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C6–22

Revision
4





SCALE 1:200

2

0

2

4

6

8m

Rev	Revision Description	By	App	Date
1	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
2	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
3	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	04.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	18.06.18
7	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
8	ISSUED FOR APPROVAL	CW	CR	24.04.19
9	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
10	ISSUED FOR DEVELOPMENT APPLICATION	MC	CW	21.02.20

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TOGA

Client

Title

WATER QUALITY PLAN

Project

HIGH STREET PENRITH

Scale at A1

AS SHOWN

Date

21.02.20

Drawn

S.MANANDHAR

Designer

Z.JONES

Design Checker

C.ROPE

Approved

C.WAITE

Job Number

17665C

NOT FOR CONSTRUCTION

Drawing Number

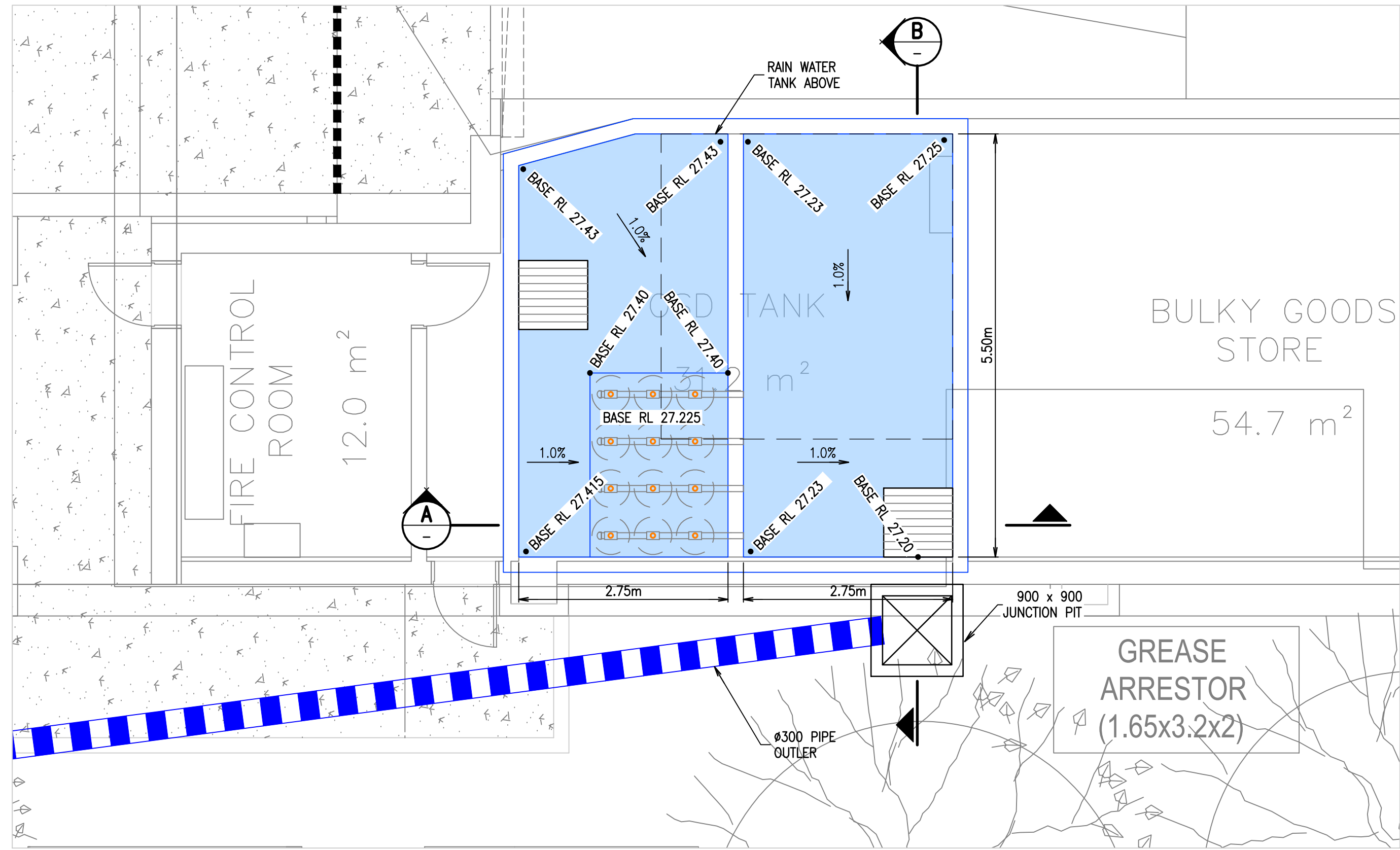
C6-25

Revision

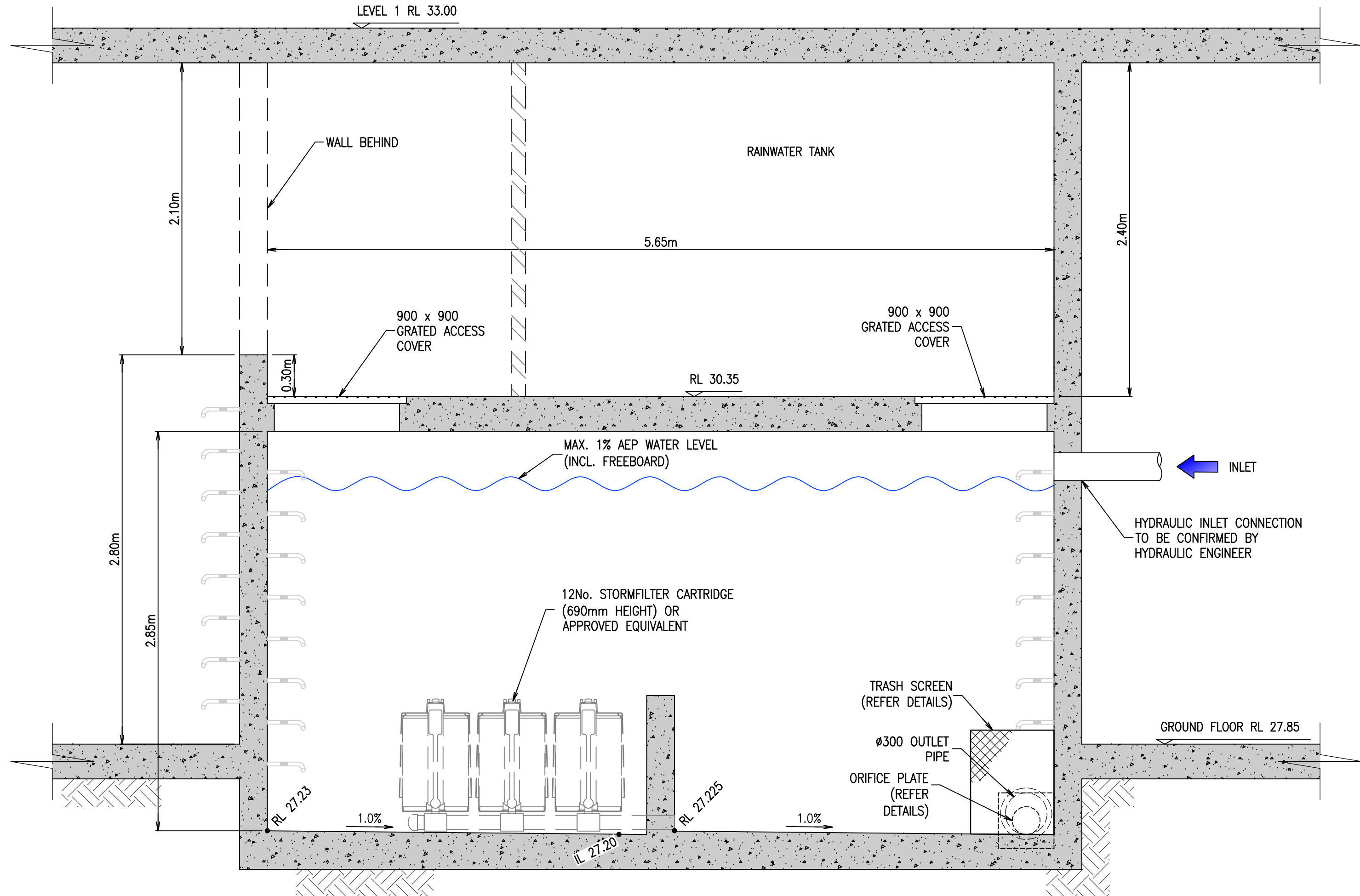
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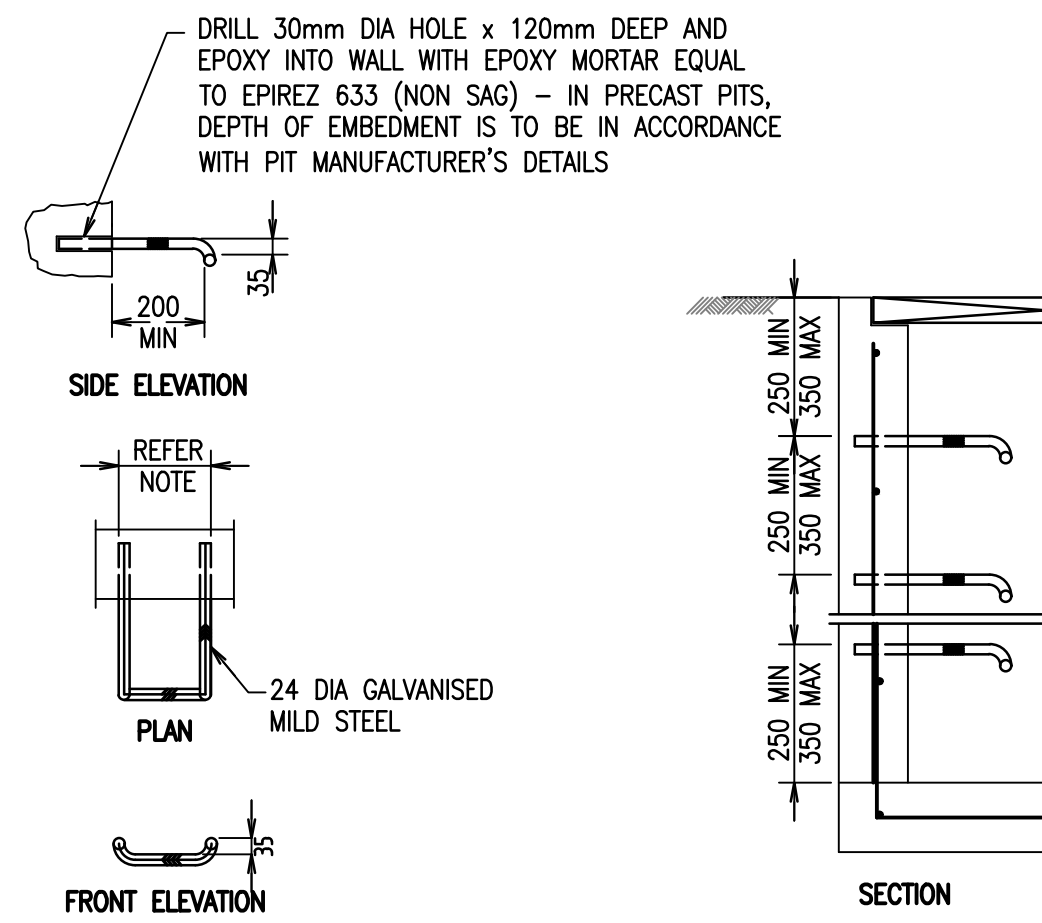
Version: 1, Version Date: 30/03/2020



ON SITE DETENTION TANK PLAN
SCALE 1:50

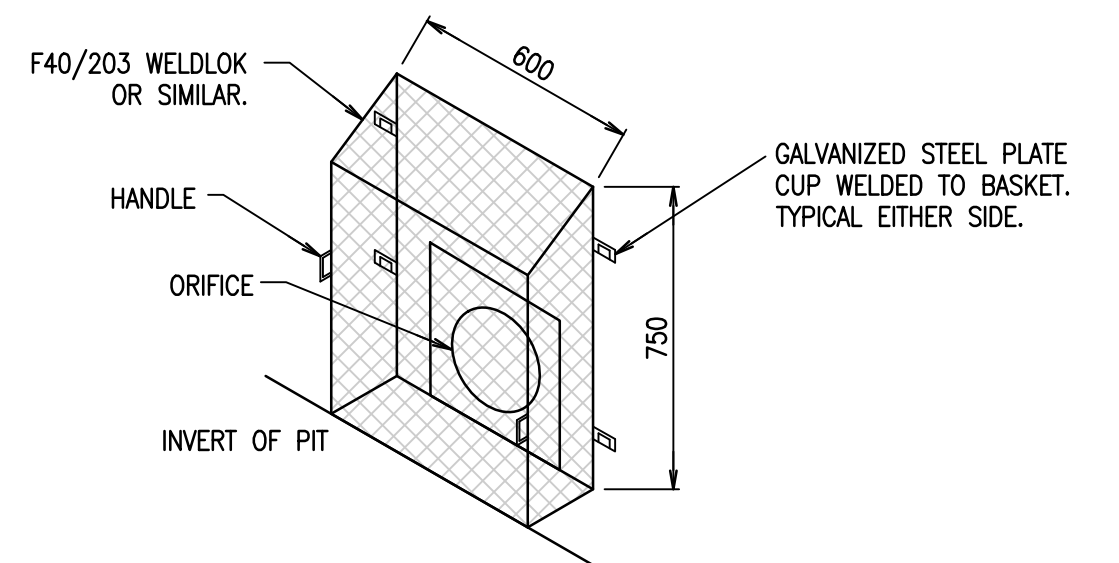


ON SITE DETENTION TANK SECTION
SCALE 1:25

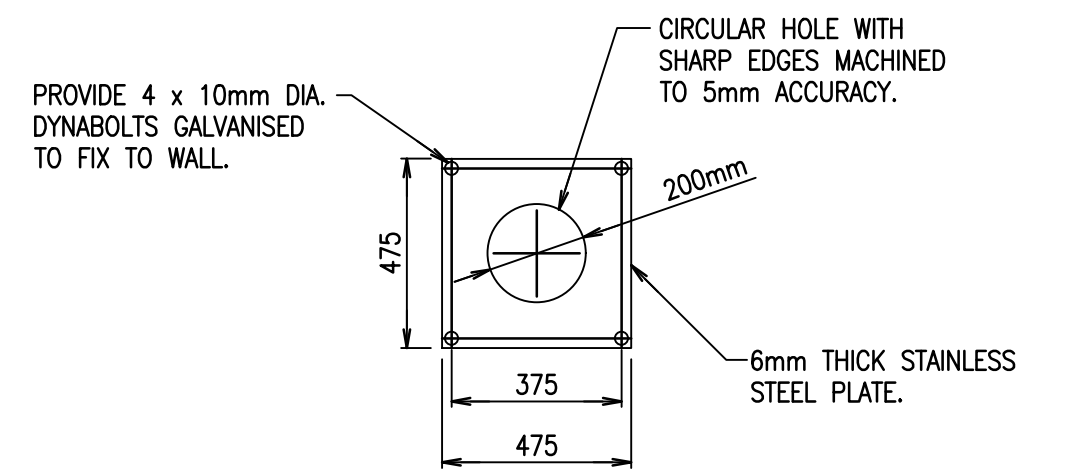


PIT STEP IRON DETAIL
SCALE 1:20

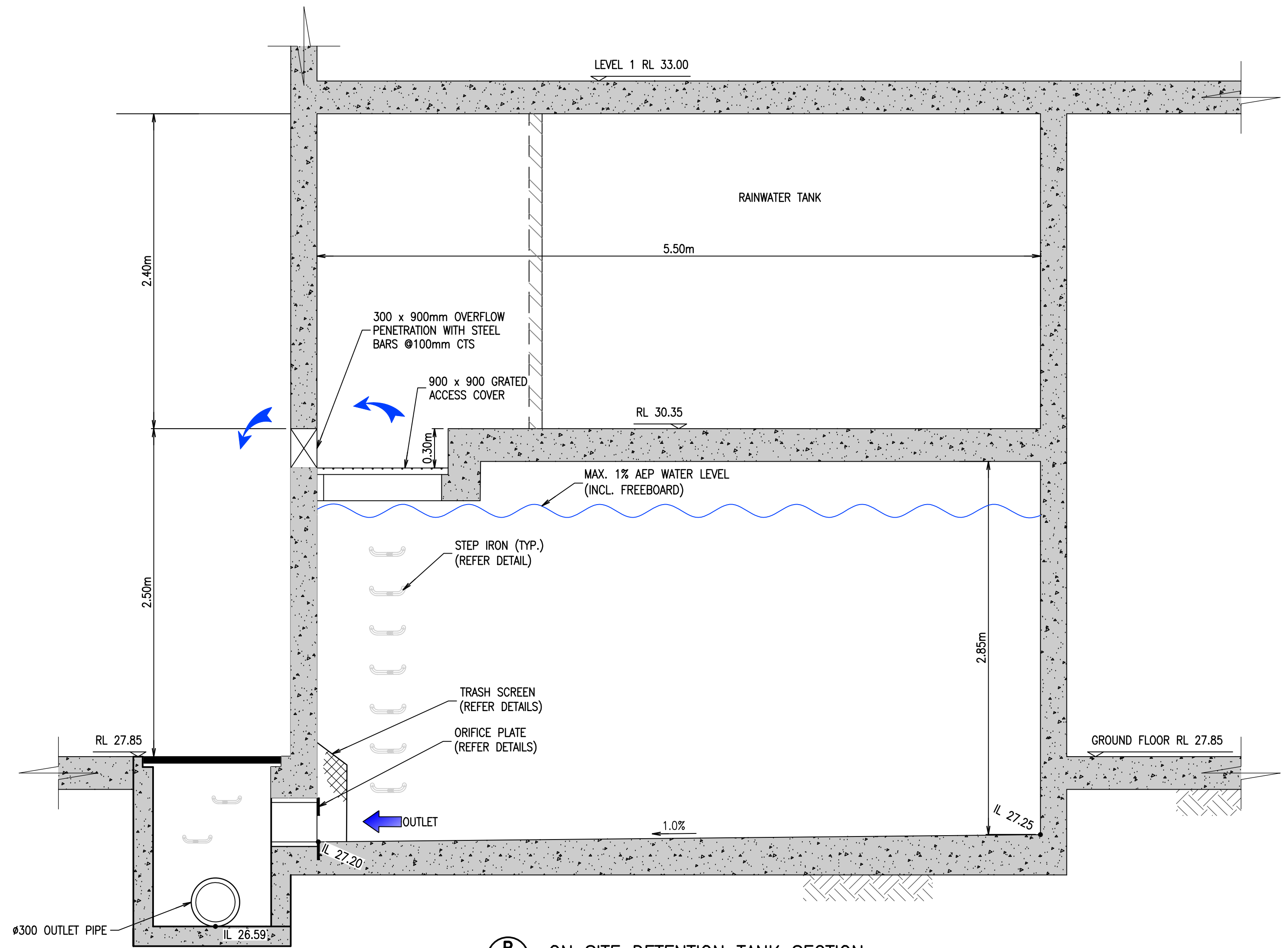
- NOTES:
1. WHEN POSITIONED IN STRAIGHT ALIGNMENT, STEP TO BE 400 WIDE.
 2. STAGGERED STEPS TO BE 200 WIDE, STEPS TO BE STAGGERED 200 CENTRE TO CENTRE FOR ALTERNATE STEPS.
 3. SPACING OF STEPS TO BE UNIFORM TO WITHIN ± 8 mm IN EACH PIT.



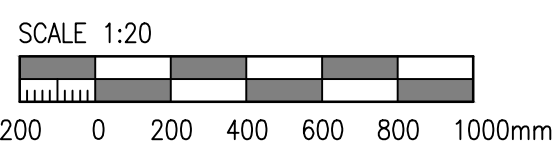
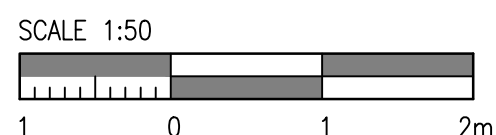
TRASH SCREEN DETAIL
SCALE 1:20



ORIFICE PLATE DETAIL
SCALE 1:20



ON SITE DETENTION TANK SECTION
SCALE 1:25



Rev	Revision Description	By	App	Date
1	ISSUED FOR PRELIMINARY COORDINATION	SM	CW	06.03.18
2	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	15.03.18
3	ISSUED FOR FINAL COORDINATION	SM	CW	23.05.18
4	ISSUED FOR DEVELOPMENT APPLICATION	SM	CW	28.05.18
5	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	19.06.18
6	ISSUED FOR DEVELOPMENT APPLICATION	SM	CR	05.05.19
7	ISSUED FOR DEVELOPMENT APPLICATION	MC	CR	21.02.20

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Client

TOGA

Title
ON SITE DETENTION TANK TYPICAL DETAILS

Project
HIGH STREET PENRITH

ISSUED FOR DEVELOPMENT APPLICATION

Scale at A1
AS SHOWN
Date
21.02.20

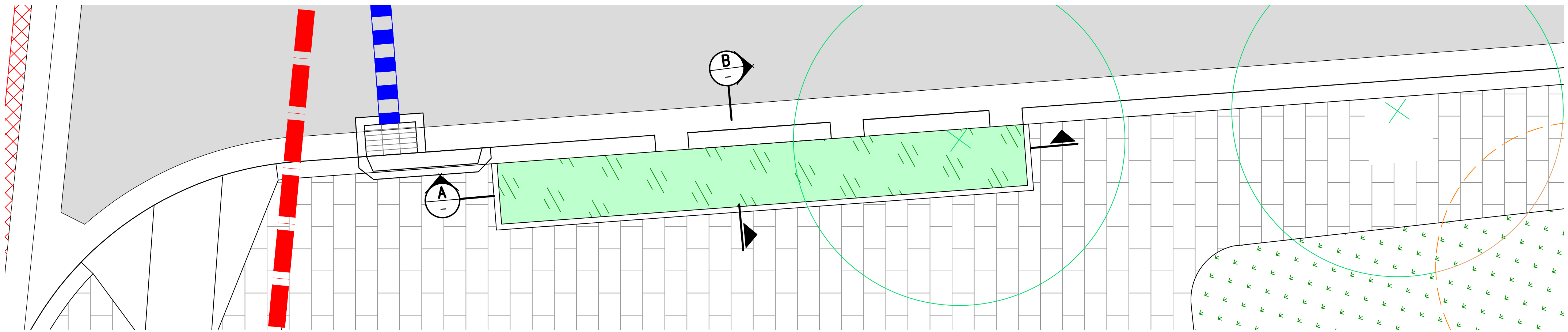
Drawn
M.CLAVEL
Designer
M.CLAVEL

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

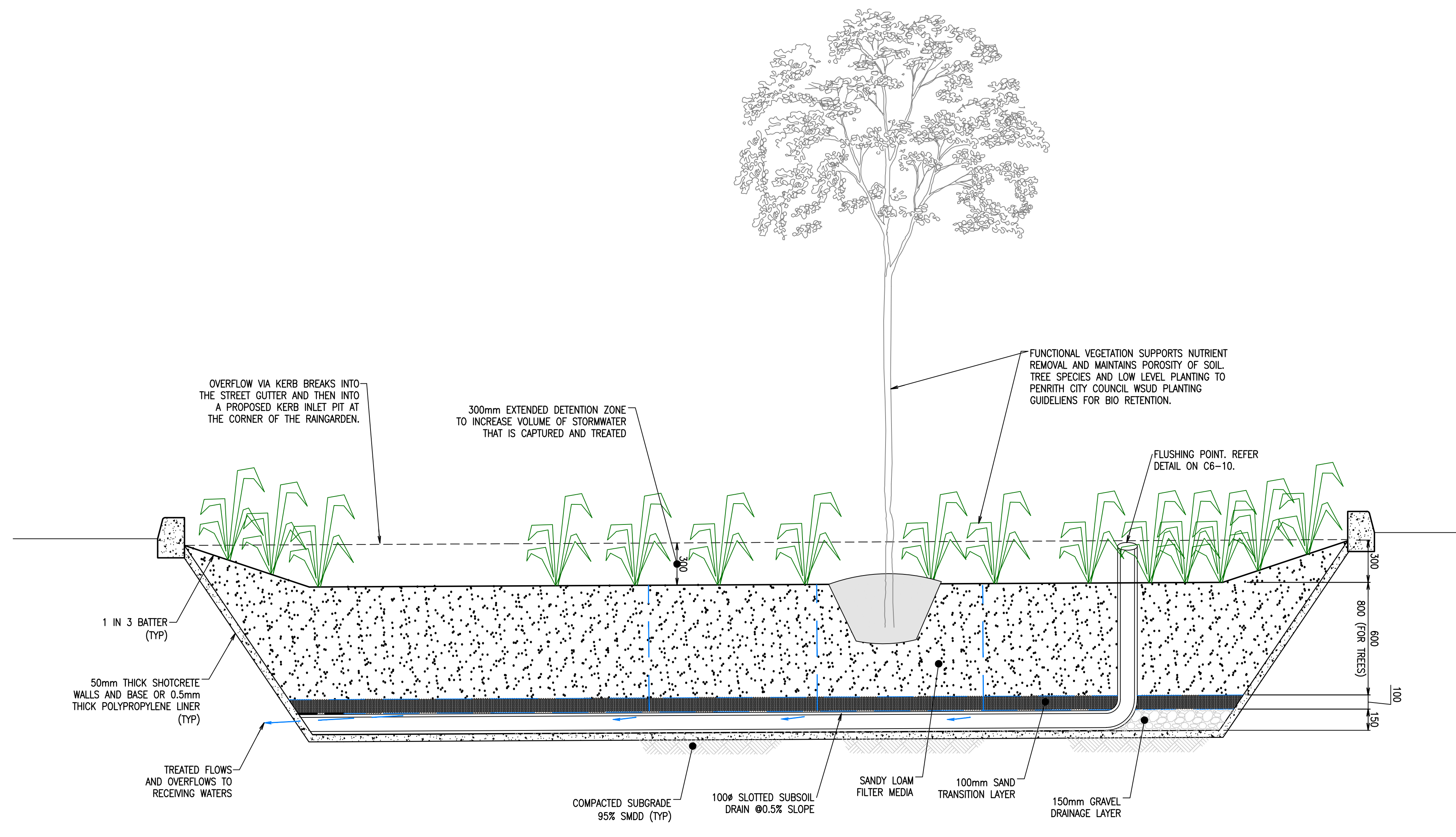
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Drawing Number
C6-26

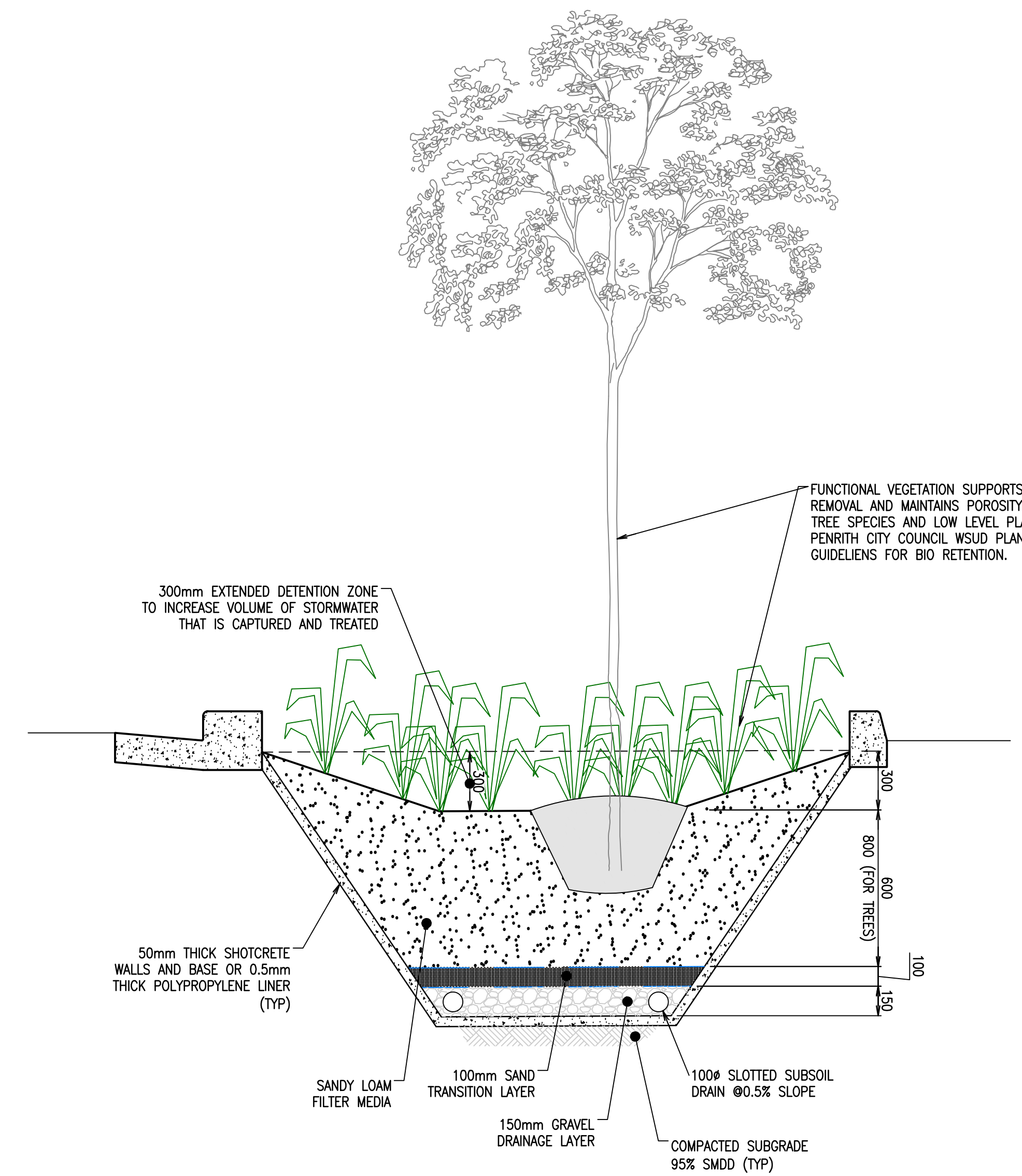
Revision
7



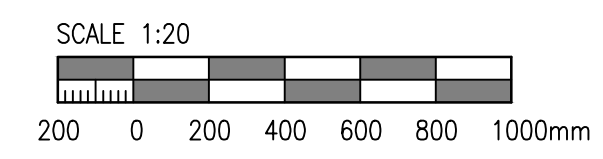
WSUD RAINGARDEN
PLAN VIEW
SCALE 1:50



BIORETENTION SYSTEM ARRANGEMENT
(WSUD TREATMENT DEVICE)
SCALE 1:20



BIORETENTION SYSTEM ARRANGEMENT
(WSUD TREATMENT DEVICE)
SCALE 1:20



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ACN 010 580 248



Client

Title
**BIORETENTION SYSTEM TYPICAL
ARRANGEMENT DETAILS**

Project
HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
06.05.19

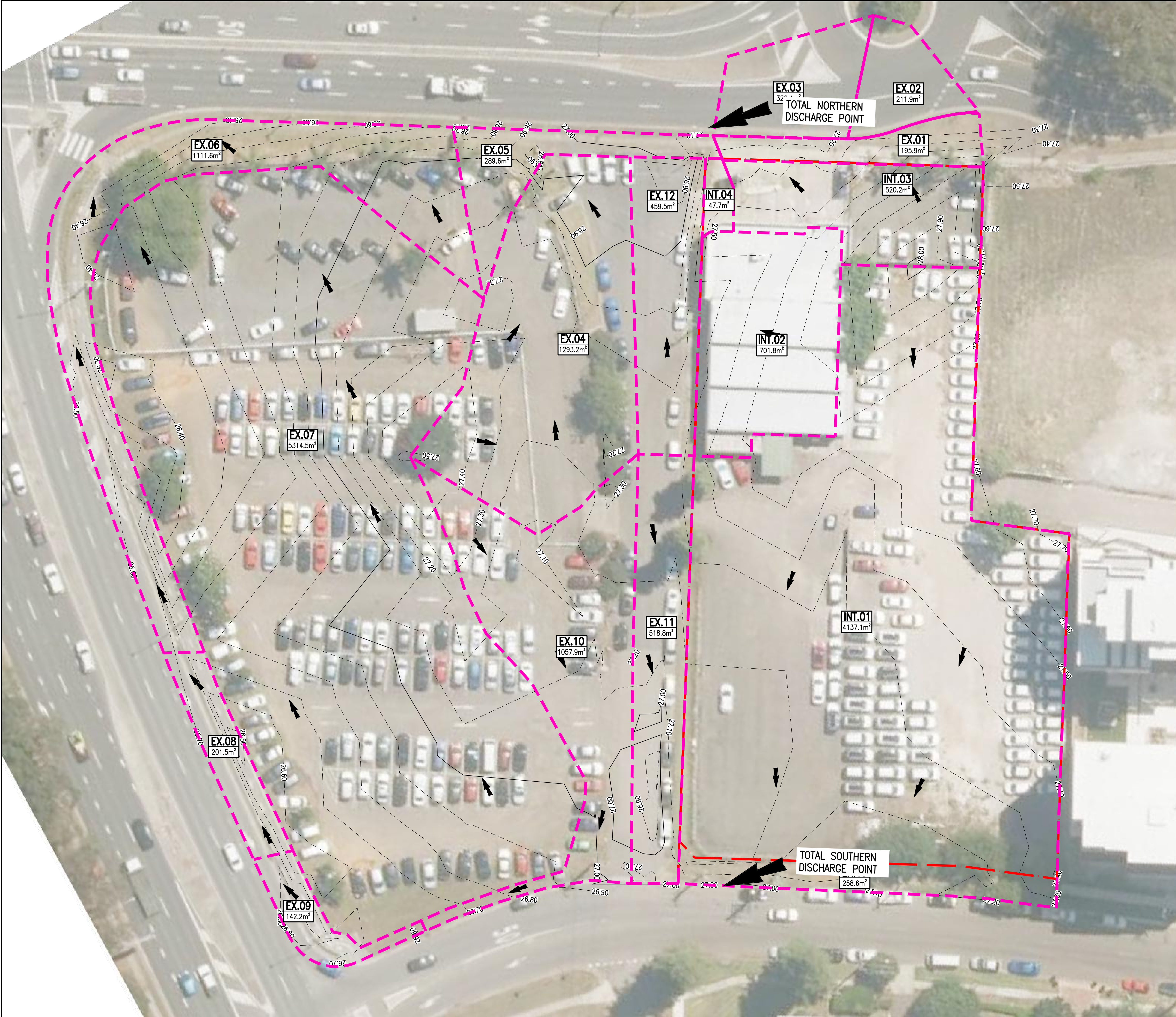
Drawn
S.MANANDHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C6-30

Revision
6



LEGEND

EXISTING SITE BOUNDARY

EXISTING MAJOR CONTOUR

EXISTING MINOR CONTOUR

EXISTING STORMWATER DRAINAGE PIT

EXISTING CATCHMENT BOUNDARY

EXISTING SURFACE FLOW RUNOFF

EX.01

195.9m²

CATCHMENT LABEL

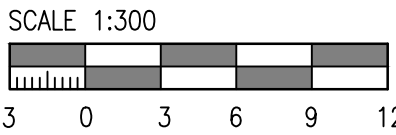
EX.01

195.9m²

CATCHMENT AREA

PRE DEVELOPMENT CATCHMENT SUMMARY				
CATCHMENT	Area	% IMPERVIOUS	Discharge (l/s) 20% AEP	100% AEP
SOUTHERN DISCHARGE				
INT.01	4137.1	80	108.5	239.4
NORTHERN DISCHARGE				
INT.02	701.8	100	24.5	51.4
INT.03	47.7	80	1.3	2.8
INT.04	520.2	80	13.6	30.1
Total Northern Discharge			39.4	84.3

ISSUED FOR DEVELOPMENT APPLICATION



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Title

PRE-DEVELOPMENT CATCHMENT
PLAN

Project

HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

Drawn
M.CLAVEL
Designer
R.ATHERTON

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C6-51

Revision
7



LEGEND

EXISTING SITE BOUNDARY

DETAINED CATCHMENT AREA (AND DETAINED)

TREATED CATCHMENT AREA (NOT DETAINED)

BYPASS CATCHMENT AREA (EXTERNAL TO SITE)

PROPOSED SURFACE FLOW RUNOFF

1/A

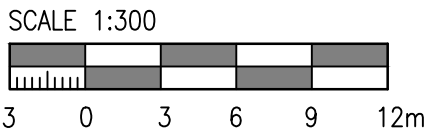
23m²

CATCHMENT LABEL

CATCHMENT AREA

POST DEVELOPMENT CATCHMENT SUMMARY				
NORTHERN DISCHARGE POINTS				
Catchment	Area (m²)	% IMPERVIOUS	Discharge (L/s) (20%AEP)	Discharge (L/s) (100%AEP)
2/B	720	80	22	38
TOTAL NORTHERN DISCHARGE			22	38
SOUTHERN DISCHARGE POINTS				
1A/A (DETAINED)	3582	90	70	83
(1A/1)+(1/A)	581	80	19	42
(2A/1)+(2/A)	542	80	16	29
TOTAL SOUTHERN DISCHARGE			105	154

ISSUED FOR DEVELOPMENT APPLICATION



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Title

POST-DEVELOPMENT CATCHMENT PLAN

Project

HIGH STREET PENRITH

Scale at A1
AS SHOWN
Date
21.02.20

Drawn
S.MANADHAR
Designer
Z.JONES

Design Checker
C.ROPE
Approved
C.WAITE
Job Number
17665C

NOT FOR CONSTRUCTION

Drawing Number
C6-56

Revision
8