

# 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

| Rev | Revision Description               | By | App | Date     |
|-----|------------------------------------|----|-----|----------|
| 1   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 15.03.18 |
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Title  
**COVER SHEET, LOCALITY PLAN  
AND SHEET LIST**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
18.06.18

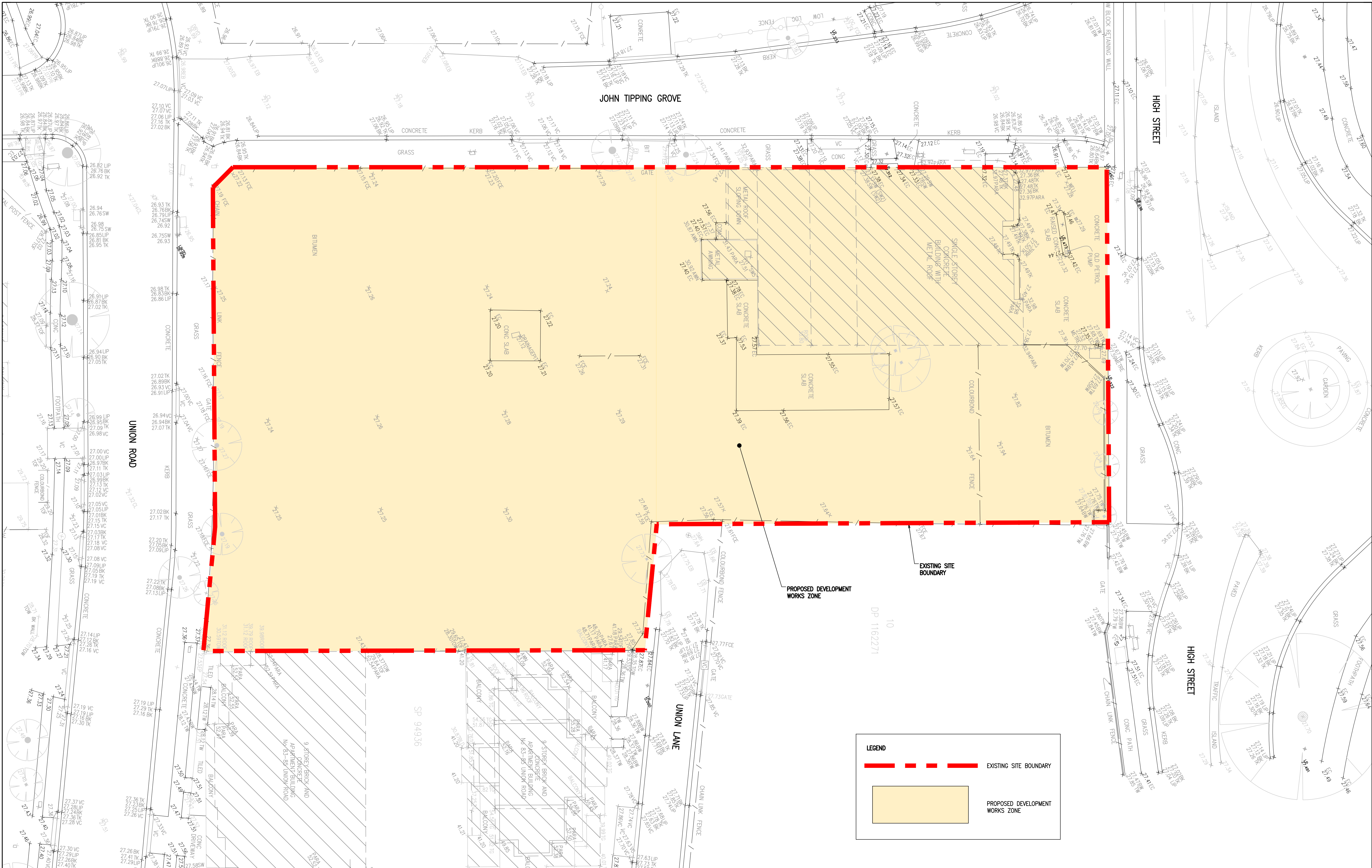
Drawing Number  
**C0-00**

Drawn  
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Designer  
—

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Revision  
**8**



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Client

Title

**SURVEY REFERENCE PLAN**

Project

**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
13.02.20

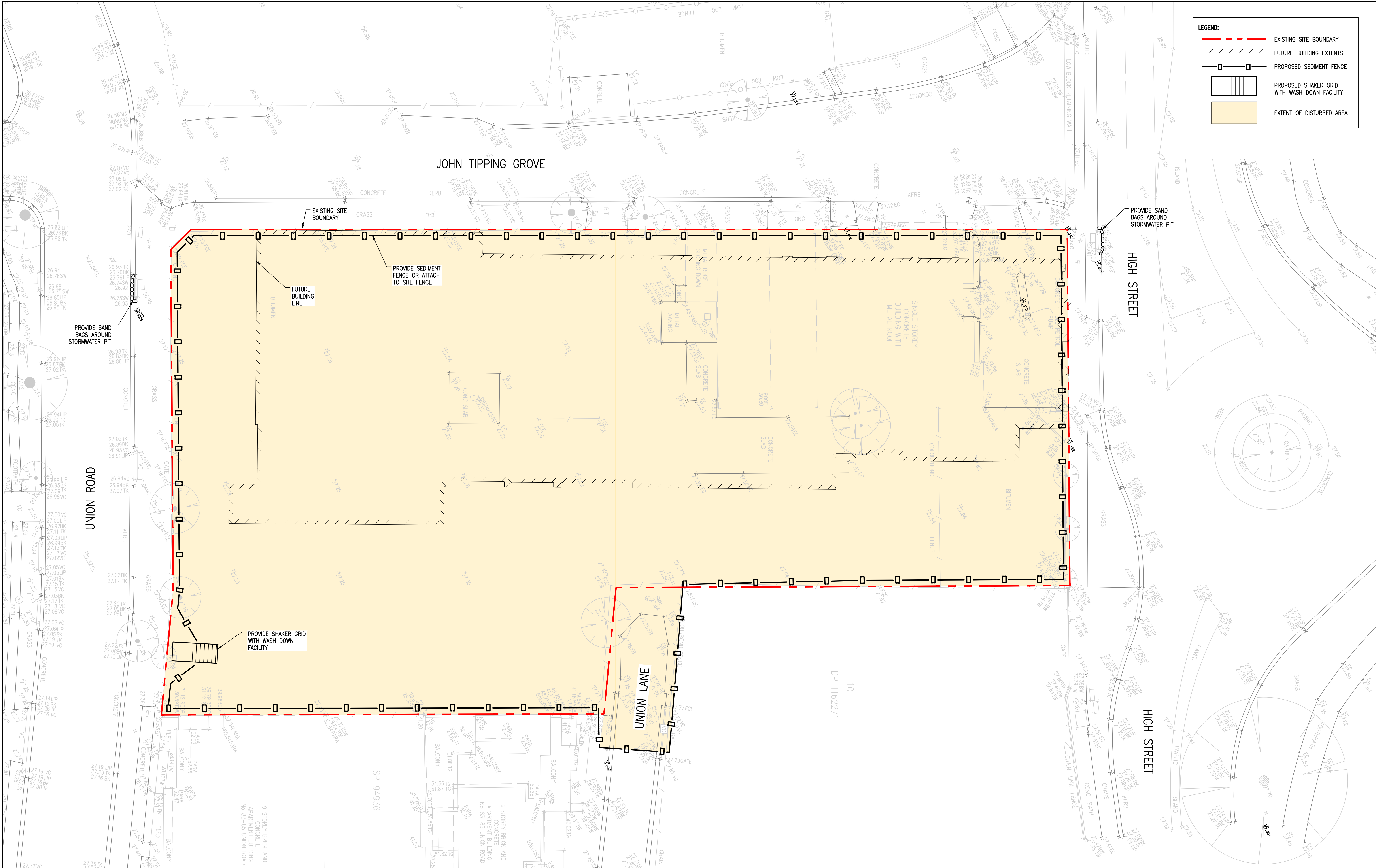
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Z.JONES

Design Checker  
C.ROPE  
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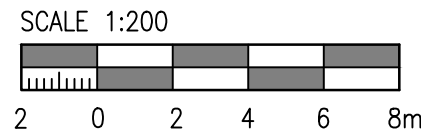
Drawing Number  
**C0-02**

Revision  
**7**



**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

**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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C1-01**

Revision  
**7**

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:

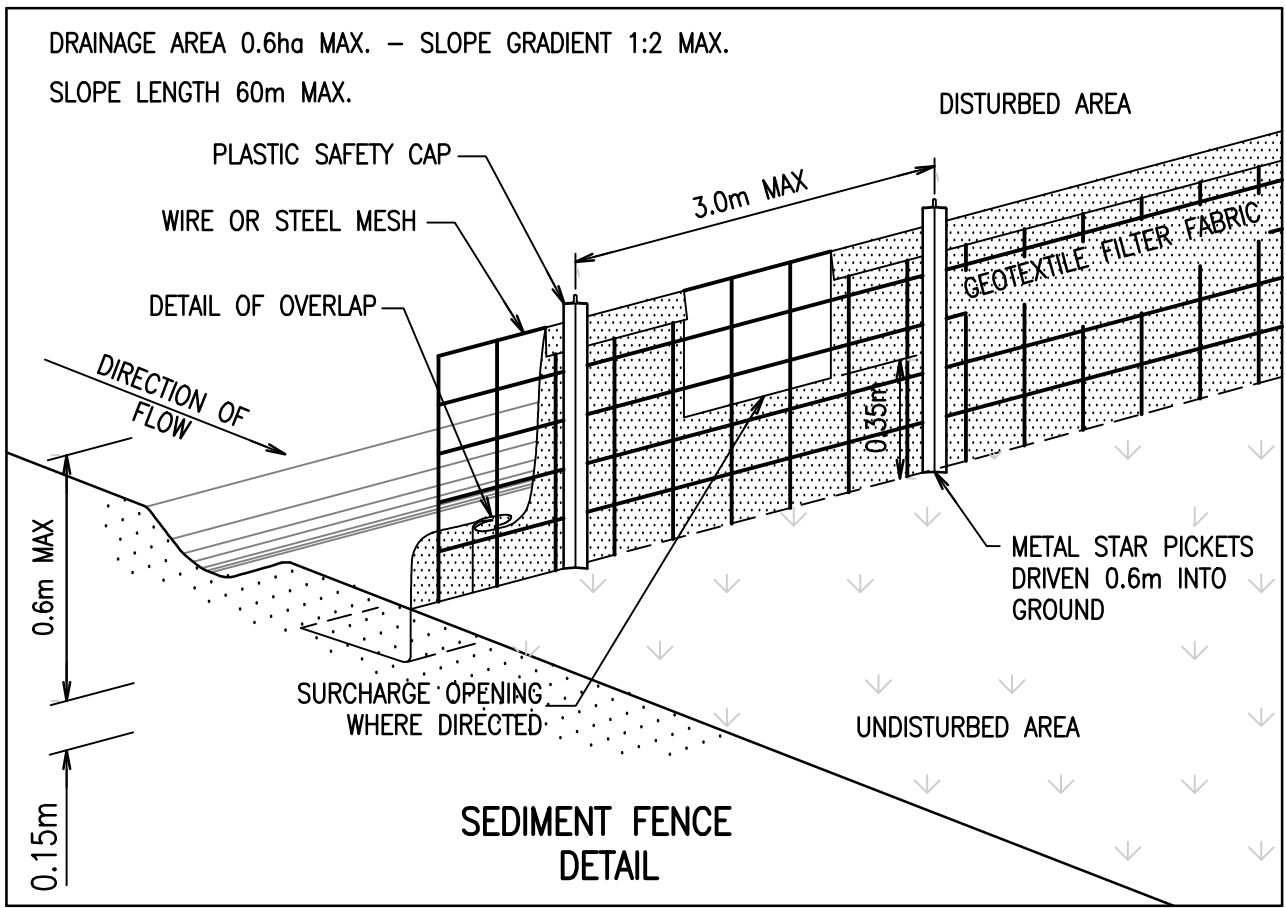
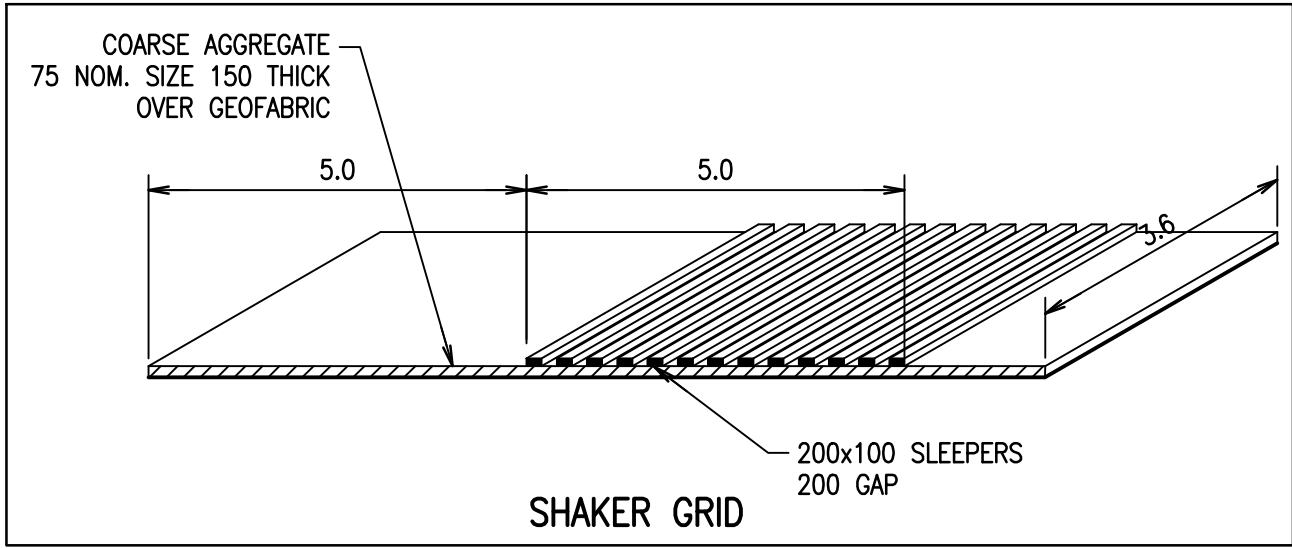
- LD1. ACCESS AREAS ARE TO BE LIMITED TO A MAXIMUM WIDTH OF 10 METERS THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON-SITE. ALL SITE WORKERS WILL CLEARLY RECOGNIZE THOSE BOUNDARIES THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH A BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) 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:

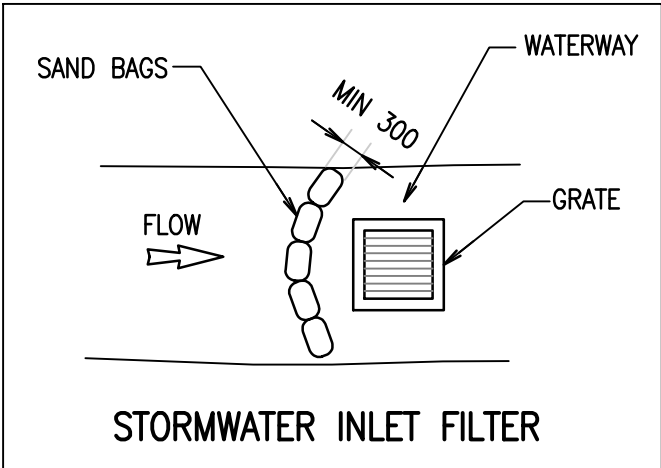
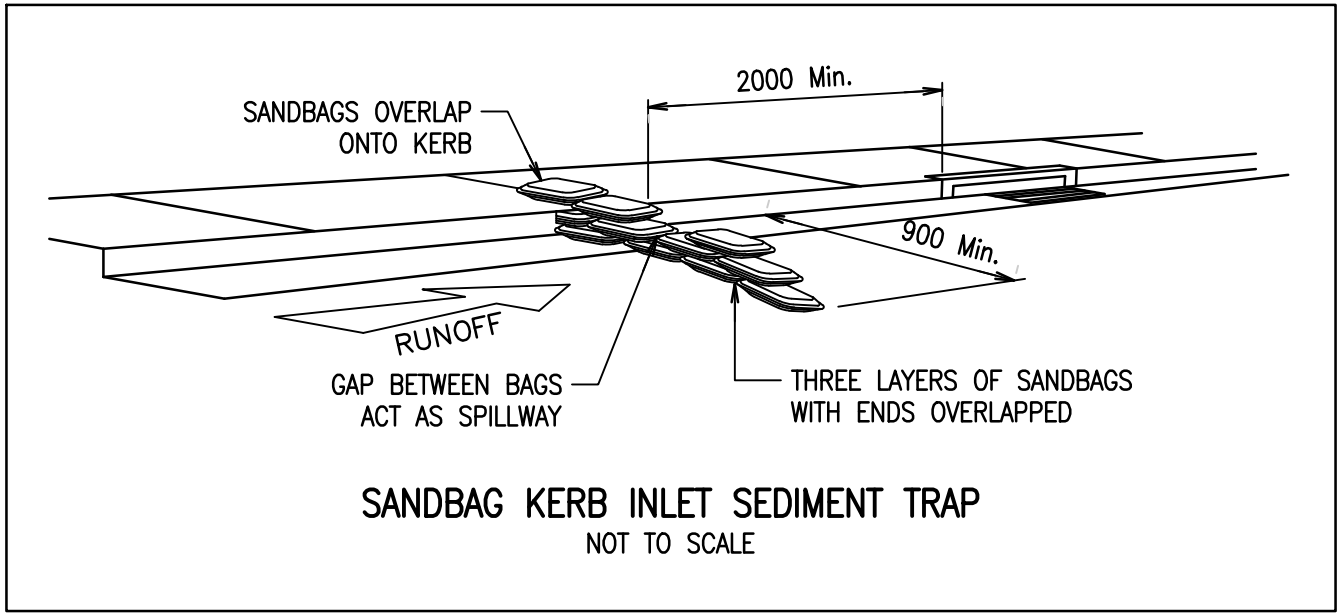
- WC1. ACCEPTABLE BINS WILL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED AT LEAST WEEKLY. DISPOSAL OF WASTE WILL BE IN A MANNER APPROVED BY THE SITE CONTRACTOR.
- WC2. ALL POSSIBLE POLLUTANT MATERIALS 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 (FS2) TO POST.
4. LAY BIDIM GEOTABRIC (SF 2000) AGAINST THE SUPPORT MESH AND FIX BY TIE WIRE, STAPLES OR HOC 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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| 6   | ISSUED FOR DEVELOPMENT APPLICATION | RC | CR  | 21.02.20 |
| 7   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

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Web: www.robertbird.com  
ACN 010 580 248



Client

Title  
**EROSION AND SEDIMENT CONTROL  
DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C1-10**

Revision  
**7**



**NOTES:**

1. TEMPORARY BATTERS FOR BASEMENT AND ROADS NOT ACCOUNTED FOR
2. TOTAL CUT = 11,800m<sup>3</sup>
3. TOTAL FILL = 50m<sup>3</sup>
4. BALANCE = 11,750m<sup>3</sup> 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 |        | Colour |
|-------------|-------------|-------|--------|--------|
| Lower_value | Upper_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 |        |

| 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 |      |
| 5   | ISSUED FOR APPROVAL                | RG          | CW | 05.10.21 |      |

| 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 |      |
| 5   | ISSUED FOR APPROVAL                | RG          | CW | 05.10.21 |      |

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ACN 010 580 248



Client

Title  
**BULK EARTHWORKS PLAN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
18.06.18

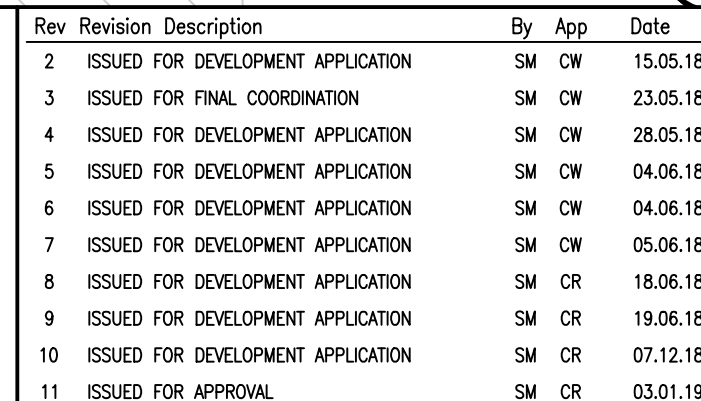
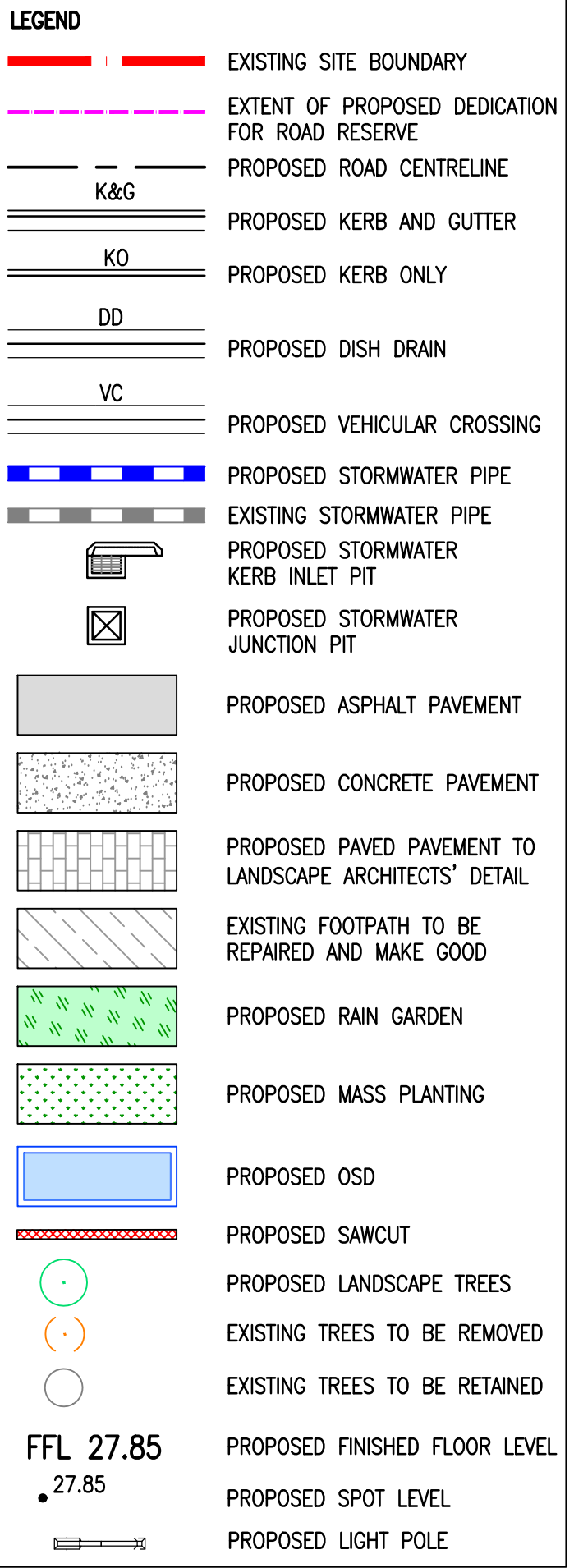
Drawn  
R.ATHERTON  
Designer  
R.ATHERTON

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C2-01**

Revision  
**5**



| Rev | Revision                           | Description | By | App | Date     |
|-----|------------------------------------|-------------|----|-----|----------|
| 12  | ISSUED FOR REVIEW                  |             | RG | CW  | 26.03.15 |
| 13  | RAIN GARDEN REINSTATED             |             | RG | CW  | 29.03.15 |
| 14  | ISSUED FOR APPROVAL                |             | RG | CW  | 24.04.15 |
| 15  | ISSUED FOR DEVELOPMENT APPLICATION |             | SM | CR  | 05.05.15 |
| 16  | ISSUED FOR DEVELOPMENT APPLICATION |             | MC | CW  | 21.02.20 |
| 17  | ISSUED FOR APPROVAL                |             | RG | CW  | 05.10.21 |

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ACN 010 580 248

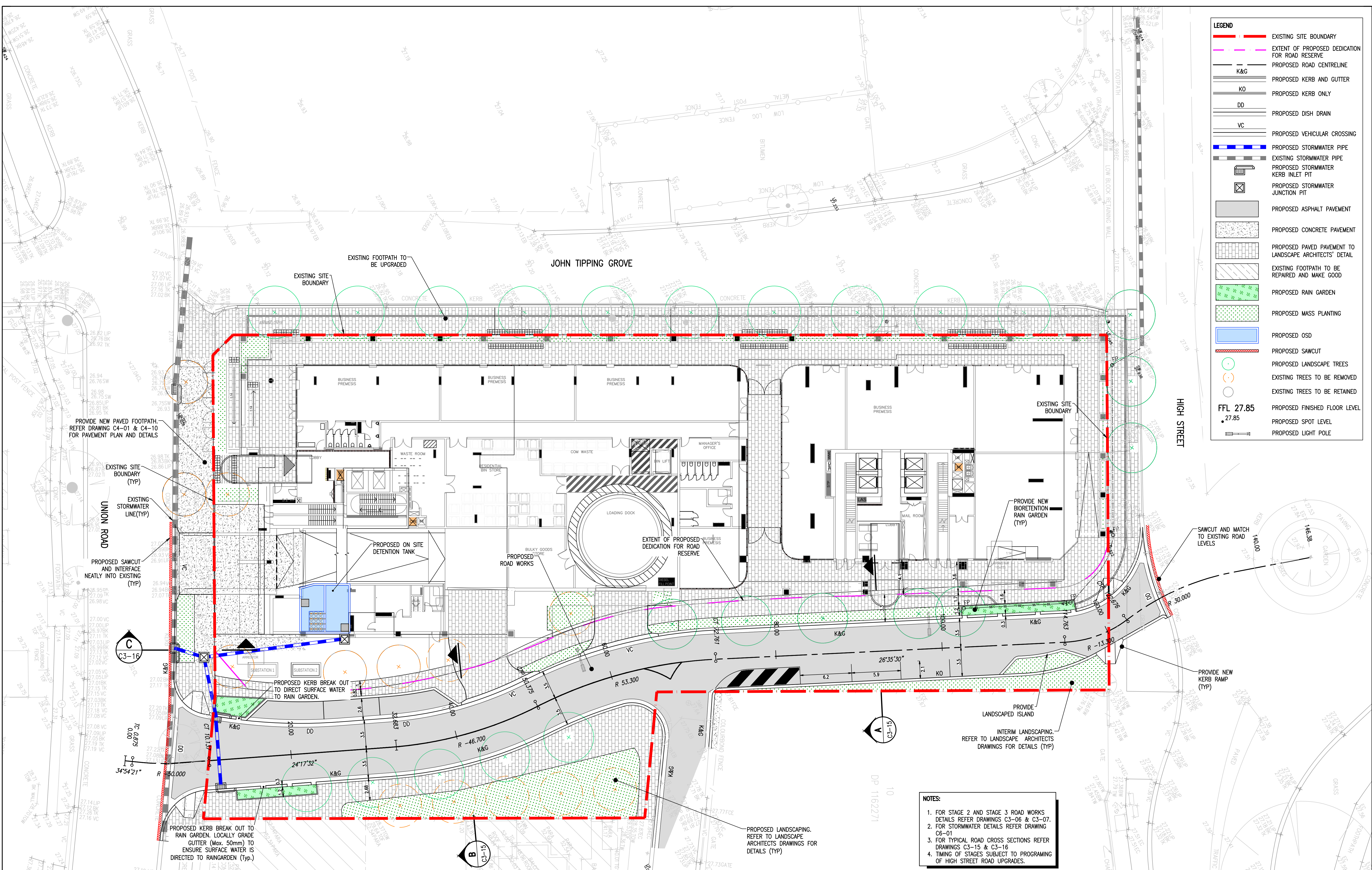
Client

 TOGA

Title  
**GENERAL ARRANGEMENT PLAN**

Project  
**HIGH STREET PENRITH**

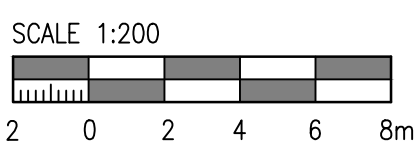
|                                          |                     |                          |
|------------------------------------------|---------------------|--------------------------|
| Scale of A1<br>AS SHOWN                  | Drawn<br>M.CLAVEL   | Design Checker<br>C.ROPE |
| Date<br>05.10.21                         | Designer<br>Z.JONES | Approved<br>C.WAITE      |
|                                          |                     | Job Number<br>17665C     |
| <b>FOR APPROVAL NOT FOR CONSTRUCTION</b> |                     |                          |
| Drawing Number<br><b>C3-00</b>           |                     | Revision<br><b>17</b>    |



**LEGEND**

- EXISTING SITE BOUNDARY
- EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE
- PROPOSED ROAD CENTRELINE
- PROPOSED KERB AND GUTTER
- PROPOSED KERB ONLY
- PROPOSED DISH DRAIN
- 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:**
- FOR STAGE 2 AND STAGE 3 ROAD WORKS DETAILS REFER DRAWINGS C3-06 & C3-07.
  - 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.



| 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 |
| 12  | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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A/CN 010 580 248



Client

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

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

Drawn  
S.MANANDHAR

Design  
Z.JONES

Design Checker  
C.ROPE

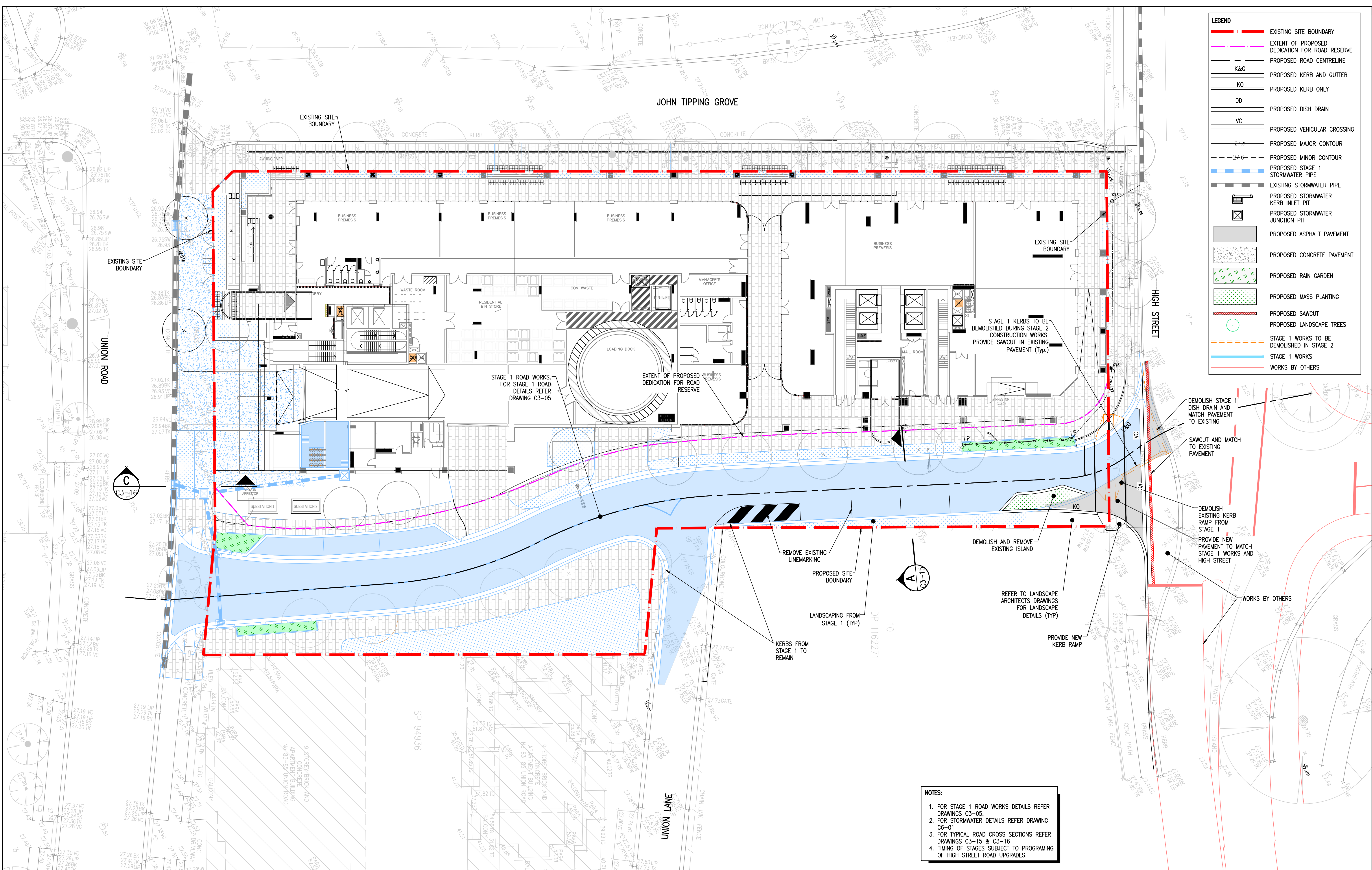
Approved  
C.WAITE

Job Number  
17665C

**FOR APPROVAL NOT FOR CONSTRUCTION**

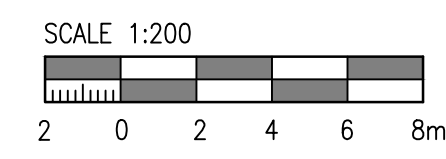
Drawing Number  
**C3-05**

Revision  
**12**



| LEGEND |                                                |
|--------|------------------------------------------------|
|        | EXISTING SITE BOUNDARY                         |
|        | EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE |
|        | PROPOSED ROAD CENTRELINE                       |
|        | PROPOSED KERB AND GUTTER                       |
|        | PROPOSED KERB ONLY                             |
|        | PROPOSED DISH DRAIN                            |
|        | PROPOSED VEHICULAR CROSSING                    |
|        | PROPOSED MAJOR CONTOUR                         |
|        | 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.



| 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 | CR  | 17.10.18 |
| 8   | ISSUE FOR REVIEW                   | CR | CW  | 26.03.19 |
| 9   | RAIN GARDEN REINSTATED             | CR | 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 |
| 12  | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248

Client

TOGA

Title  
**STAGING PLAN – STAGE 2 –  
CONNECTING TO SIGNALISED  
INTERSECTION**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

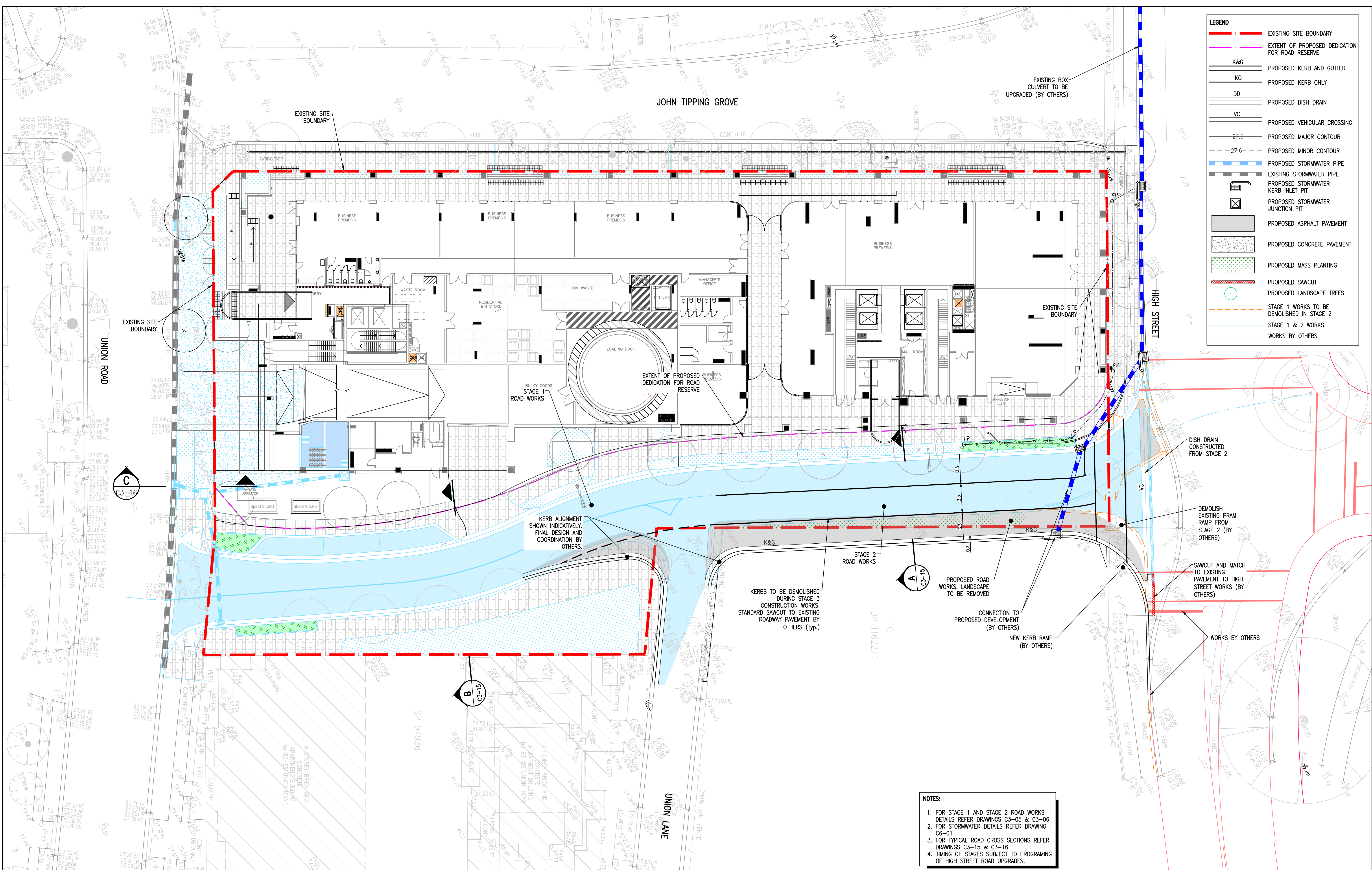
Drawn  
S.MANANDHAR  
Designer  
Z.JONES

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

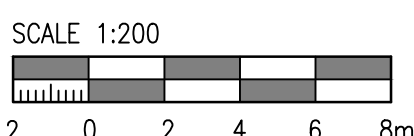
Drawing Number  
**C3-06**

Revision  
**12**



- 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 PROGRAMMING OF HIGH STREET ROAD UPGRADES.



| 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 | CR  | 17.10.18 |
| 8   | ISSUED FOR REVIEW                  | CR | CW  | 26.03.19 |
| 9   | RAIN GARDEN REINSTATED             | CR | 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 |
| 12  | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248

Client

**TOGA**

Title  
**STAGING PLAN - STAGE 3  
ULTIMATE ROAD DESIGN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

Drawn  
S.MANANDHAR  
Designer  
Z.JONES

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

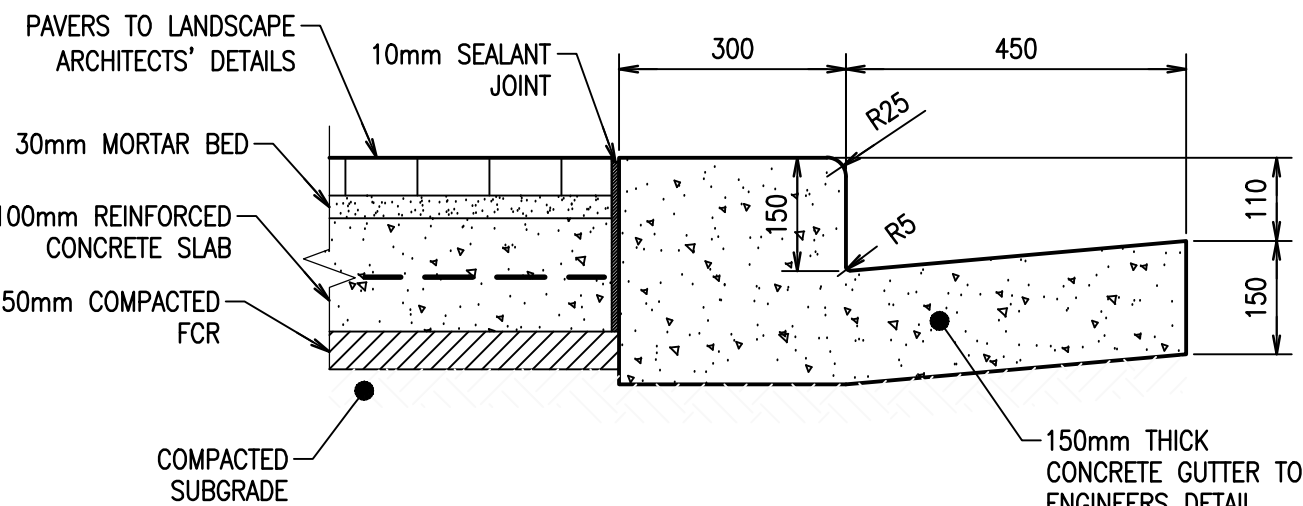
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Drawing Number  
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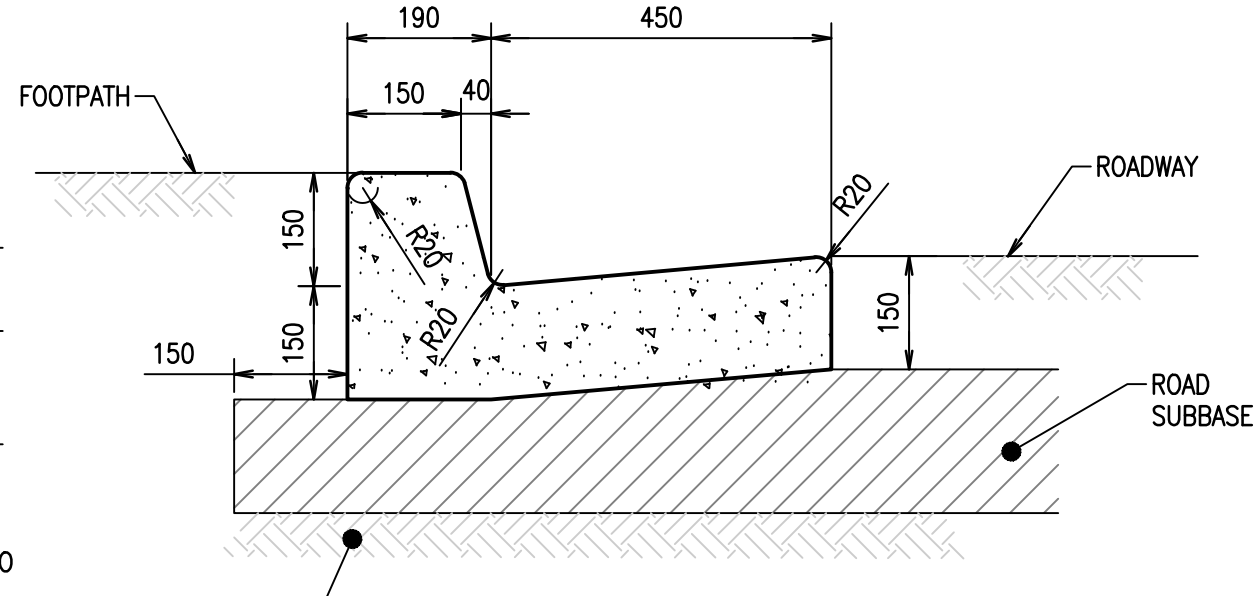
Revision  
**12**

NOTES:

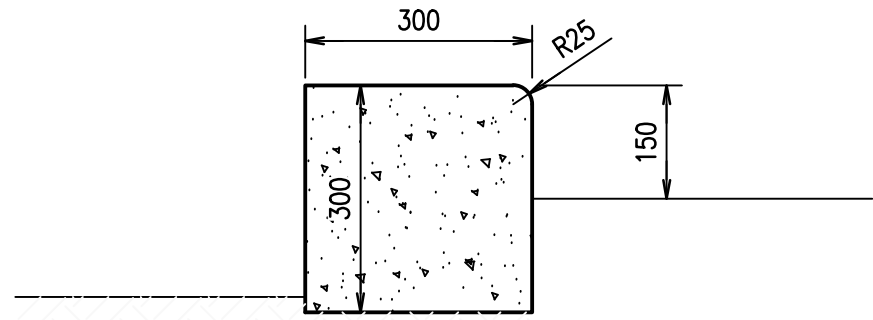
1. CONCRETE COMPRESSIVE STRENGTH (F'c) AT 28 DAYS, TO BE 20MPa FOR KERB AND GUTTER
2. LAYBACKS TO BE 20MPa, REINFORCED WITH SL72 MESH.
3. ROAD SUB-BASE SHALL BE EXTENDED 150mm BEHIND REAR OF KERB AND GUTTER WITH THE THICKNESS TO BE NOT LESS THAN THE ROAD PAVEMENT SUB-BASE THICKNESS.
4. ALL DIMENSIONS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



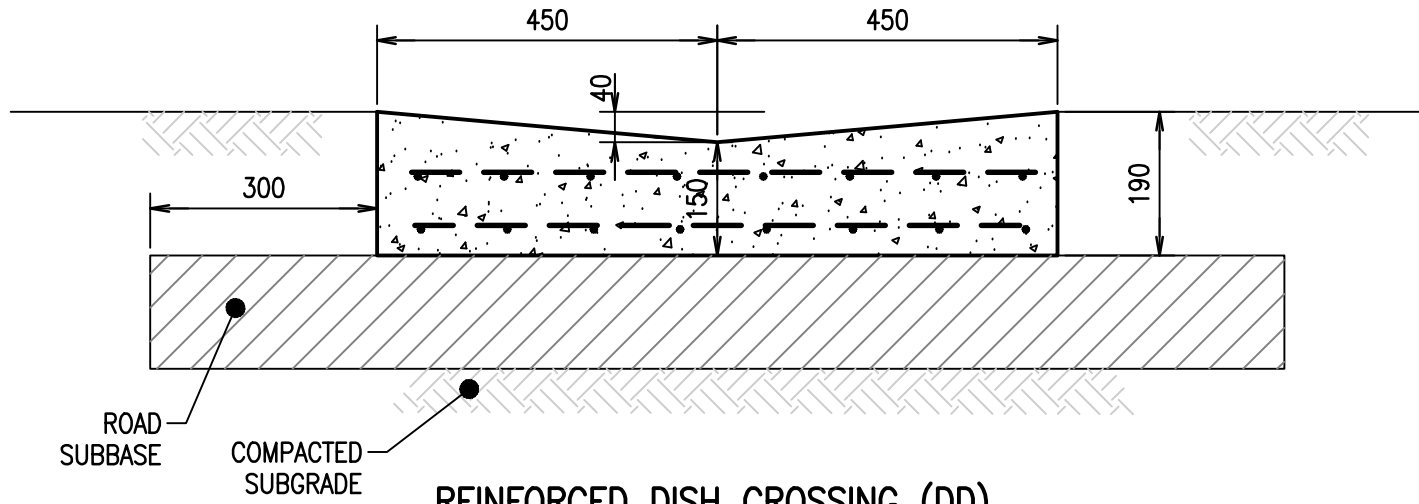
TYPICAL WIDE CONCRETE KERB AND GUTTER (K&G)  
SCALE 1:10



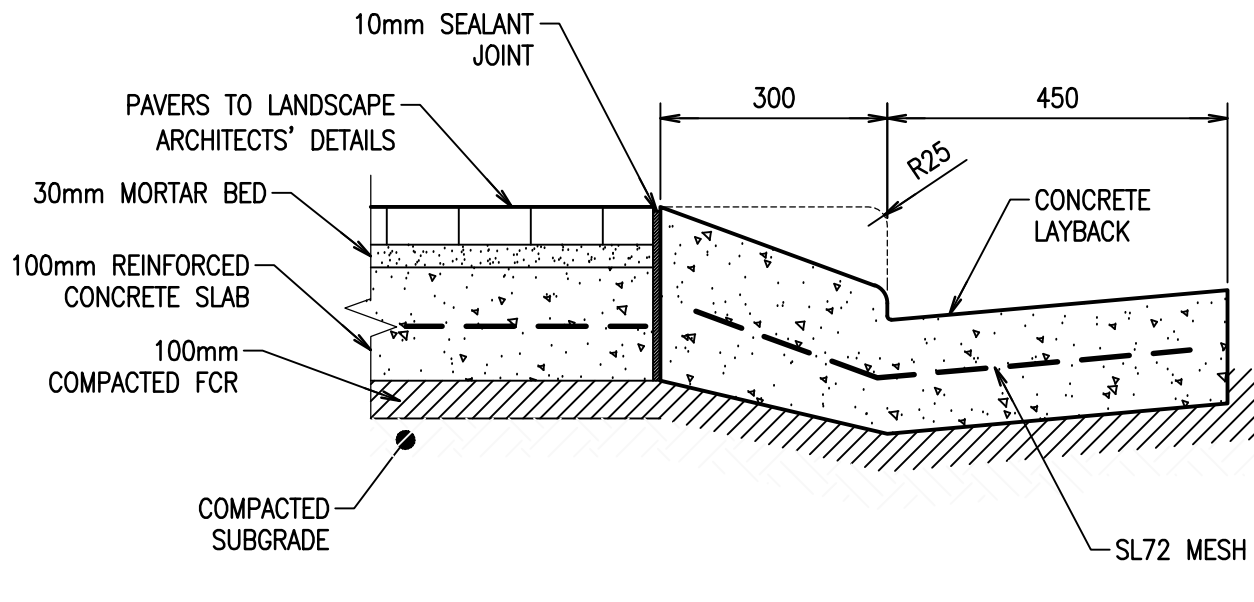
KERB AND GUTTER (K&G)  
SCALE 1:10



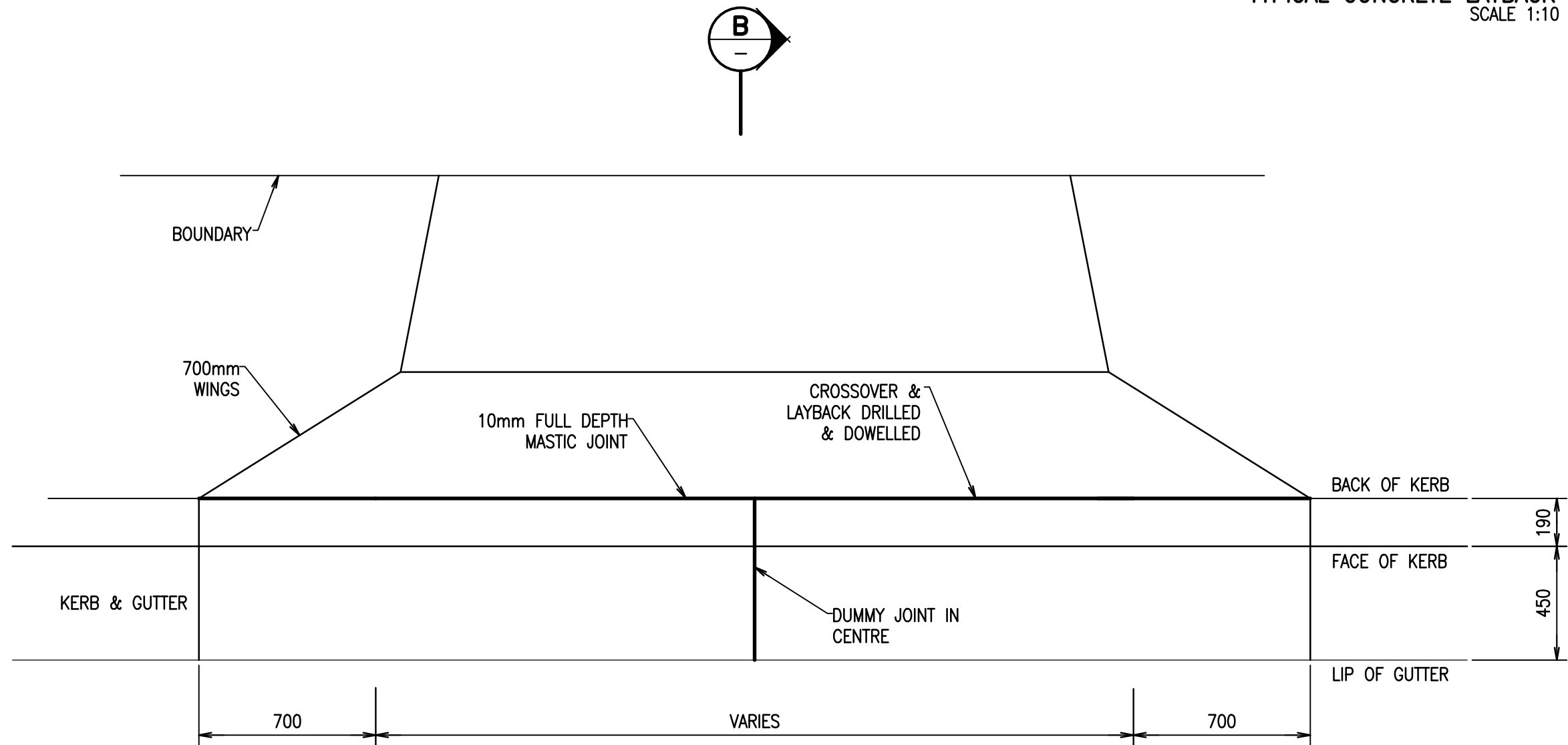
TYPICAL WIDE CONCRETE KERB ONLY (KO)  
SCALE 1:10



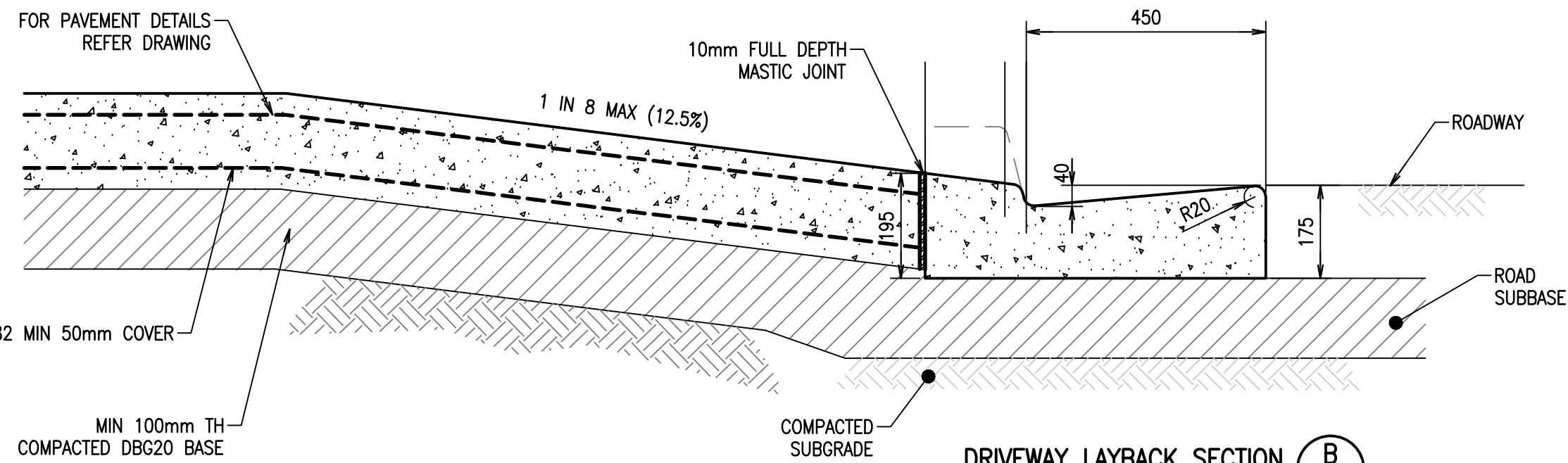
REINFORCED DISH CROSSING (DD)  
SCALE 1:10



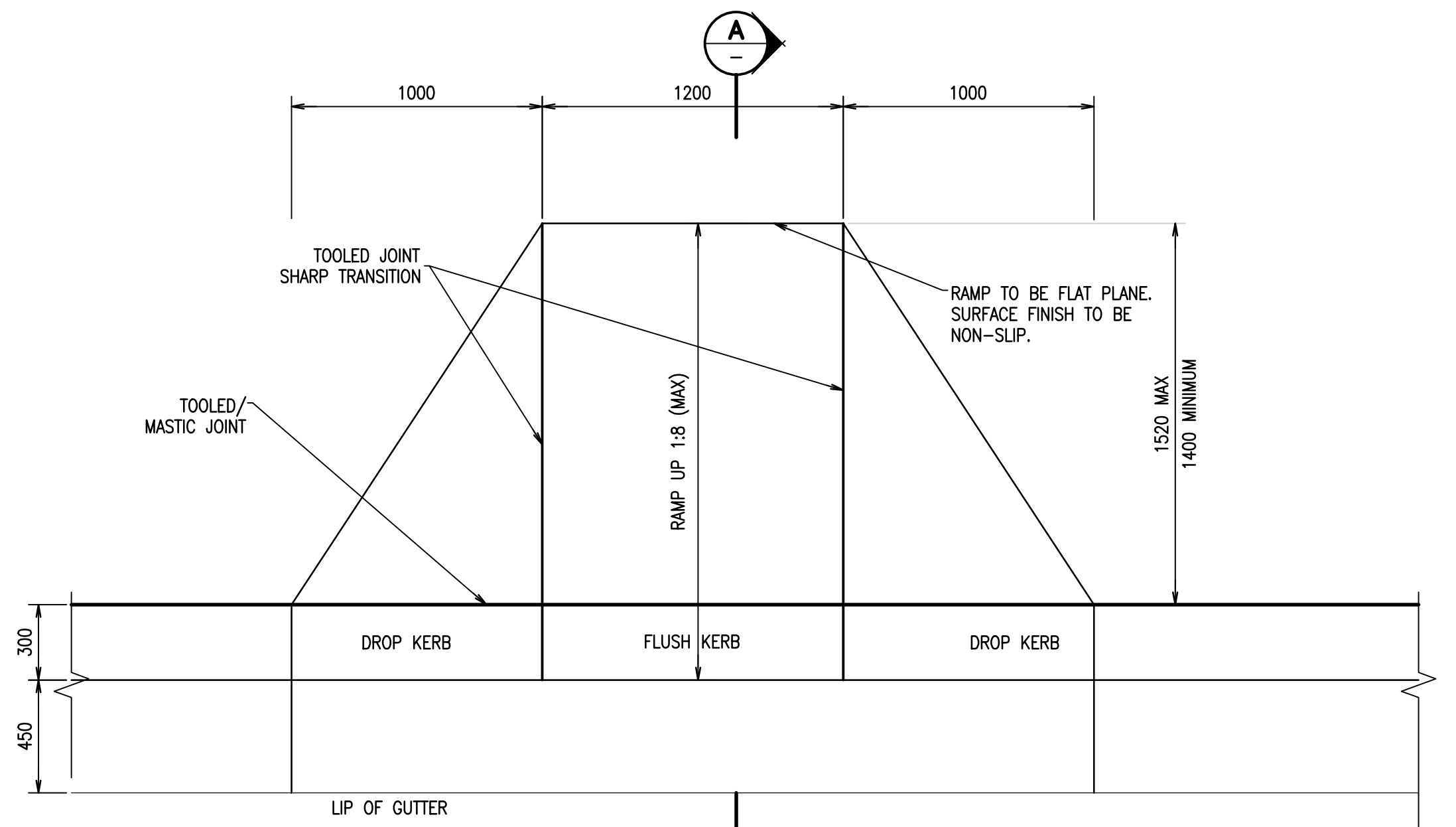
TYPICAL CONCRETE LAYBACK TO PAVING SECTION  
SCALE 1:10



VEHICULAR CROSSING PLAN  
SCALE 1:20



DRIVEWAY LAYBACK SECTION  
SCALE 1:10

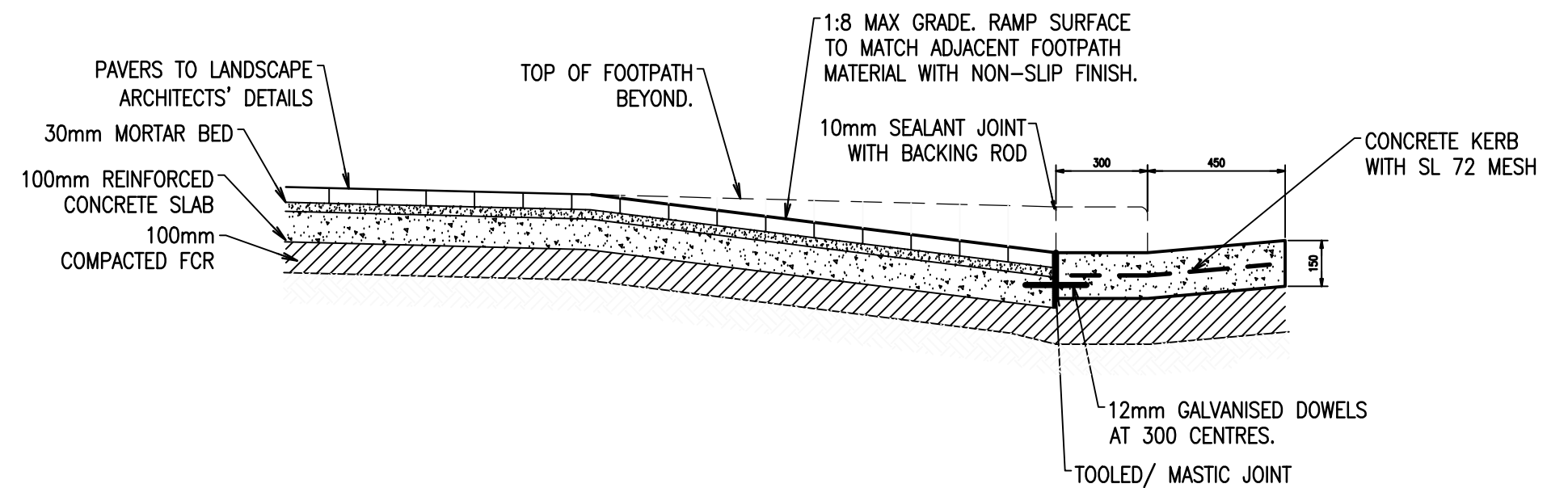


KERB RAMP PLAN  
SCALE 1:20

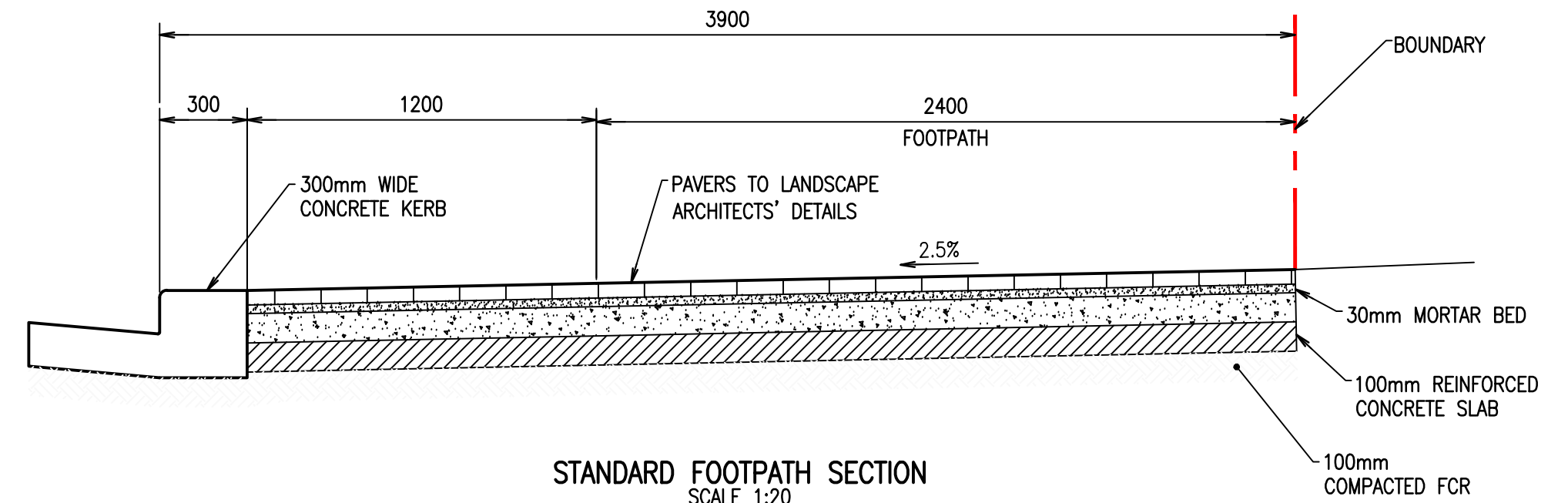
NOTE:  
PRAM RAMPS HAVE NO LIP AT INVERT OF GUTTER

NOTES:

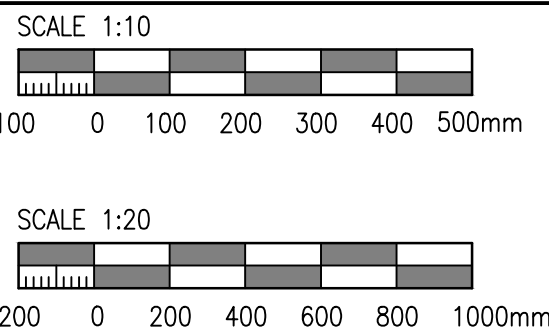
1. KERB RAMP DETAILS ARE BASED ON AS 1428.1
2. CONCRETE TO BE 25MPa (F'c) AT 28 DAYS
3. KERB RAMP TO BE DOWELLED INTO BACK OF KERB
4. ALL DIMENSIONS ARE IN MILLIMETRES
5. SHARP TRANSITIONS ARE CRITICAL IN GUIDING PEDESTRIANS WITH VISION IMPAIRMENTS.



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 |
| 7   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

| 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 |
| 7   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248



Client

Title  
**CIVIL DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
24.02.20

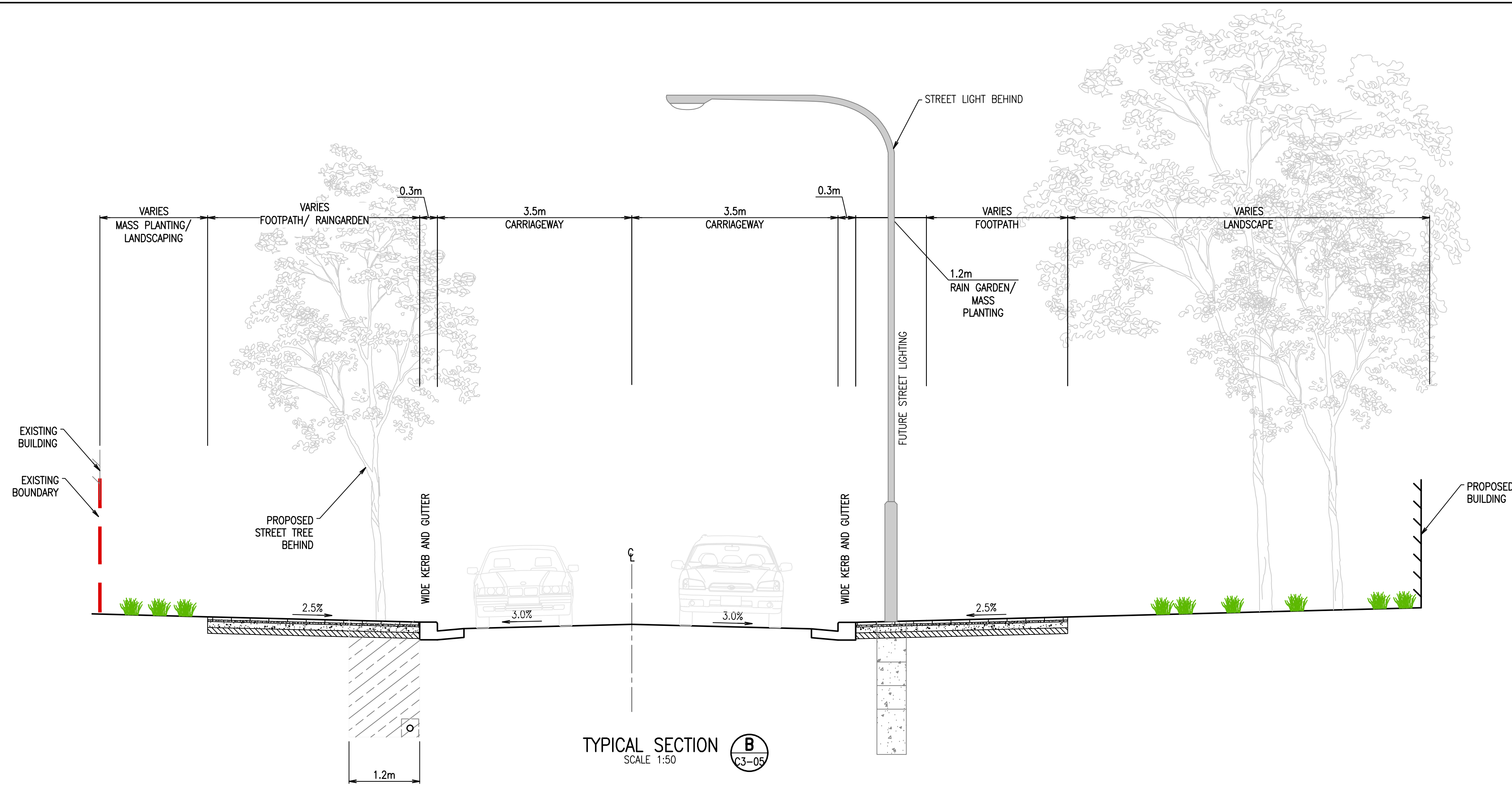
Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

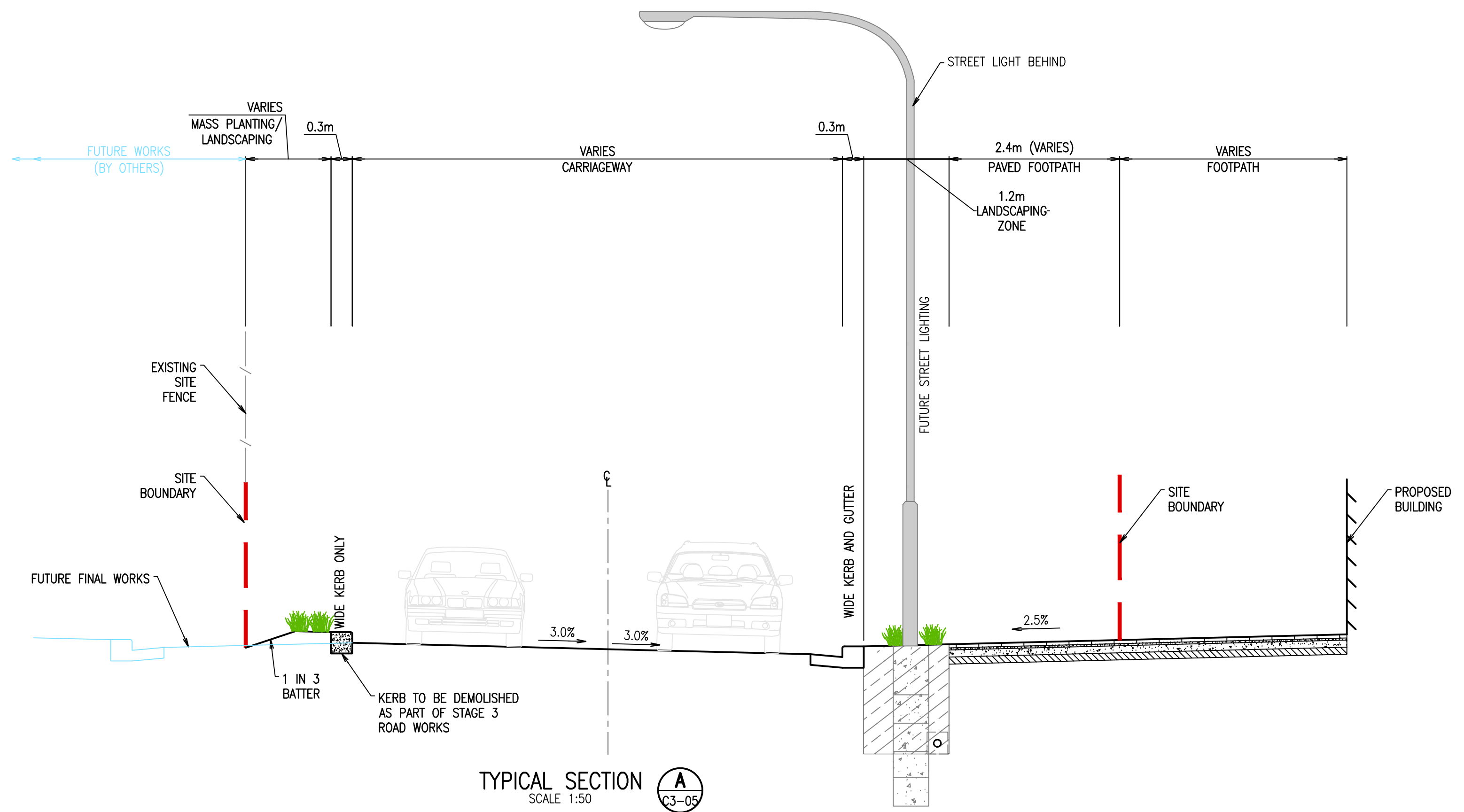
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Drawing Number  
**C3-10**

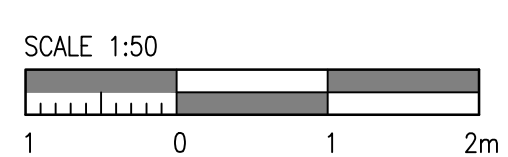
Revision  
**7**



TYPICAL SECTION B  
SCALE 1:50



TYPICAL SECTION A  
SCALE 1:50



| 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  | 06.05.19 |
| 9   | ISSUED FOR DEVELOPMENT APPLICATION  | RG | CR  | 02.03.20 |
| 10  | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

| 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 |
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| 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  | 06.05.19 |
| 9   | ISSUED FOR DEVELOPMENT APPLICATION  | RG | CR  | 02.03.20 |
| 10  | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

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Client

**TOGA**

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

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

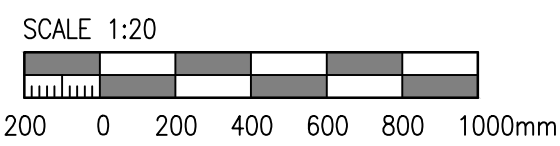
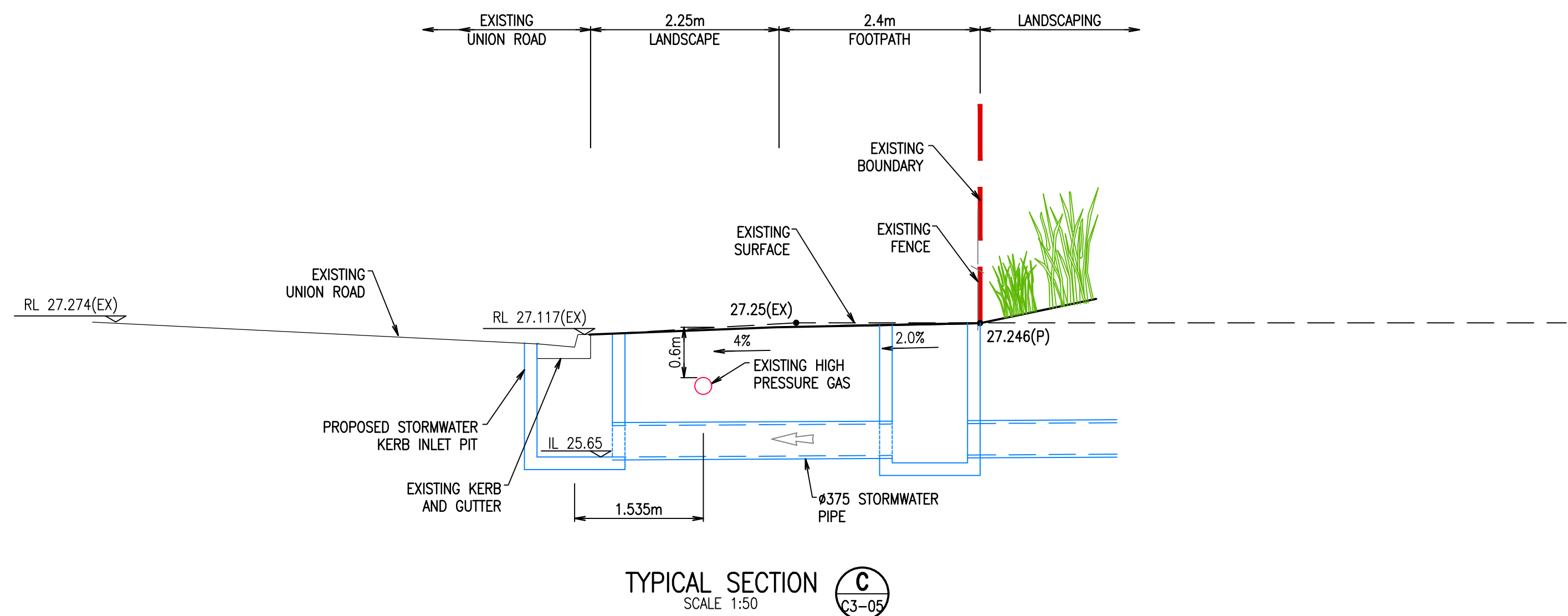
Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C3-15**

Revision  
**10**



| Rev | Revision Description                | By | App | Date     |
|-----|-------------------------------------|----|-----|----------|
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| 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 |
| 8   | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

| 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 |
| 8   | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

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ACN 010 580 248



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

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

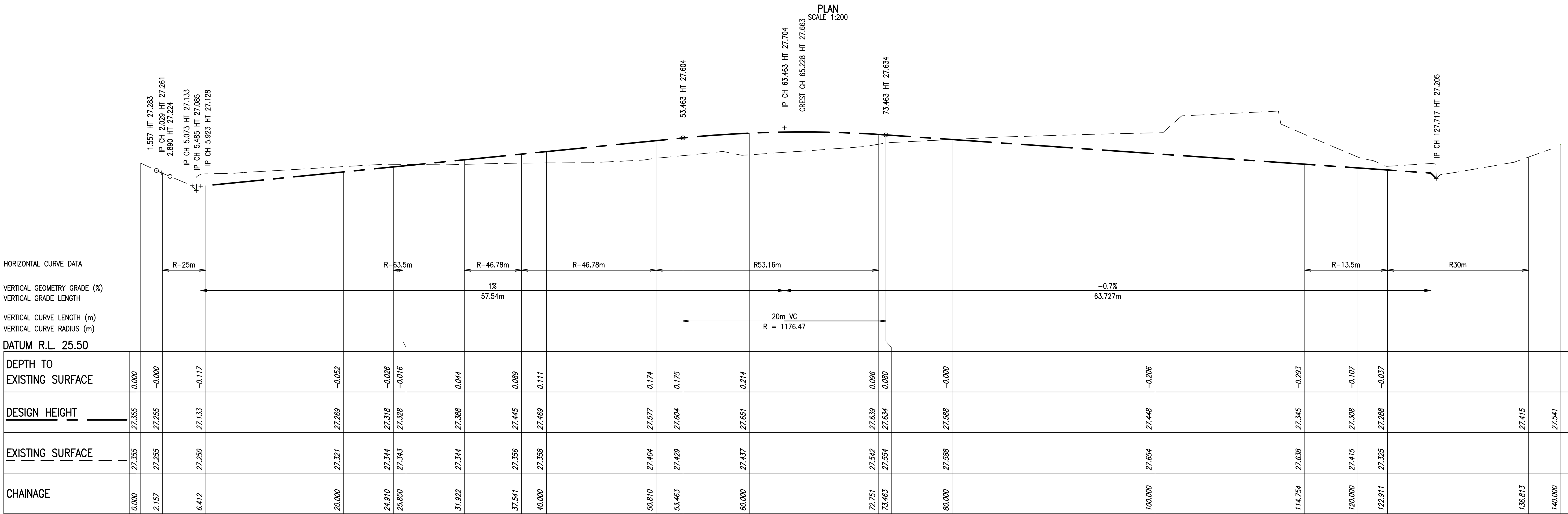
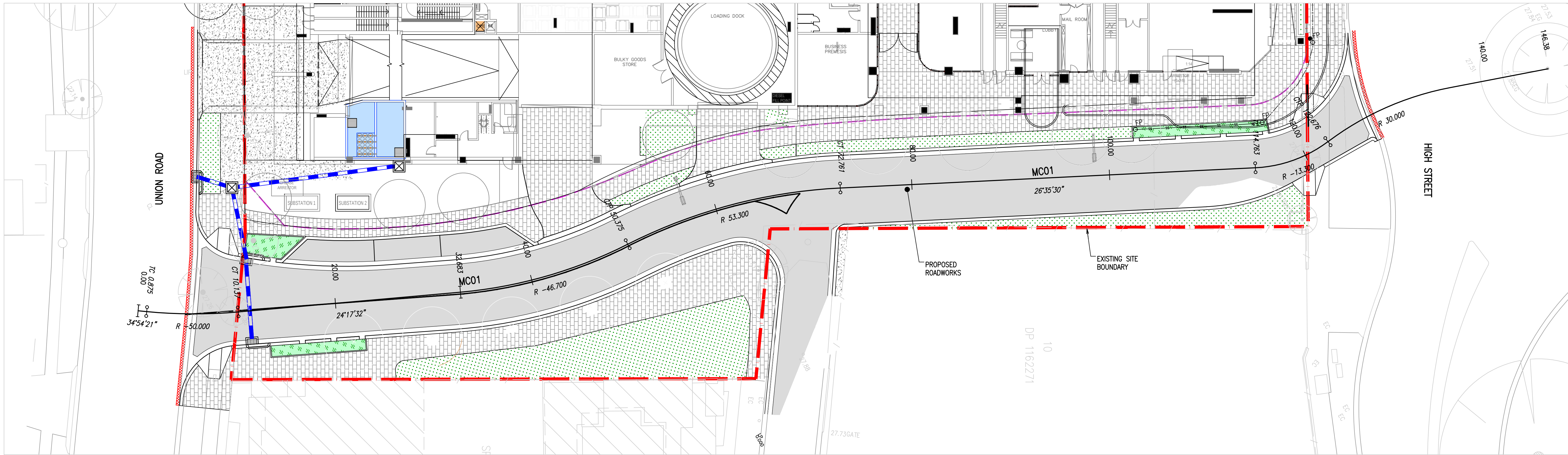
Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

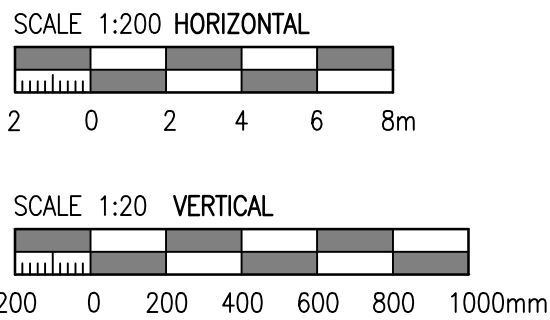
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Drawing Number  
**C3-16**

Revision  
**8**



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 |
| 8   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

| 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 |
| 8   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

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ACN 010 580 248



Client

Title  
**ROADWAY LONGITUDINAL SECTION  
ULTIMATE ROAD**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

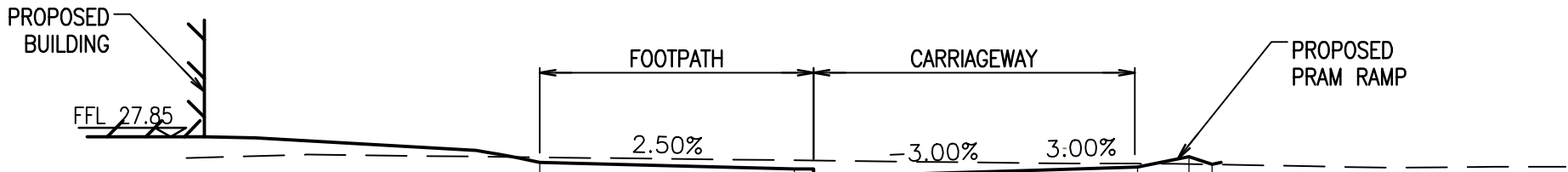
Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

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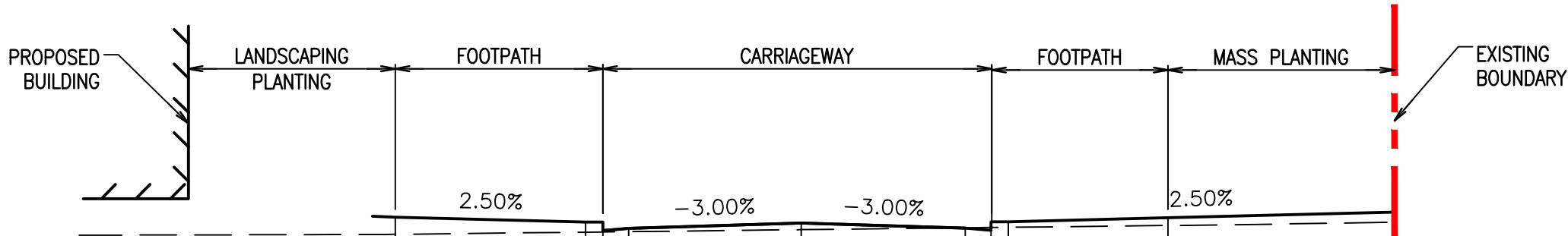
Drawing Number  
**C3-20**

Revision  
**8**



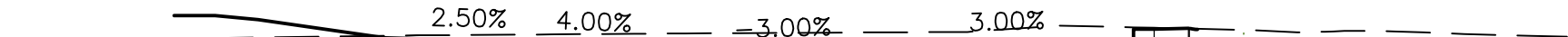
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| SUBGRADE HEIGHT  |  |  |  |  |  |
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| OFFSETS          |  |  |  |  |  |

CHAINAGE 120.000



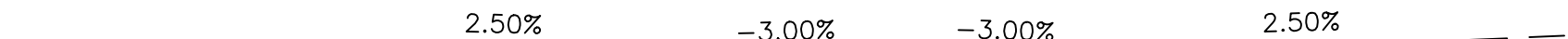
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CHAINAGE 40.000



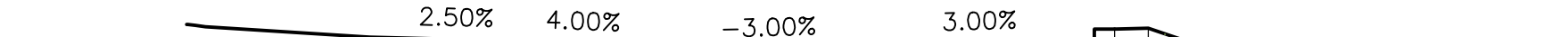
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CHAINAGE 100.000



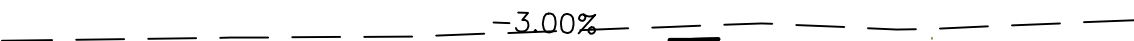
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| EXISTING SURFACE |  |  |  |  |  |  |  |  |  |  |
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CHAINAGE 20.000



|                  |  |  |  |  |  |  |  |  |  |  |
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| DATUM R.L. 26.00 |  |  |  |  |  |  |  |  |  |  |
| DESIGN HEIGHT    |  |  |  |  |  |  |  |  |  |  |
| SUBGRADE HEIGHT  |  |  |  |  |  |  |  |  |  |  |
| EXISTING SURFACE |  |  |  |  |  |  |  |  |  |  |
| OFFSETS          |  |  |  |  |  |  |  |  |  |  |

CHAINAGE 80.000



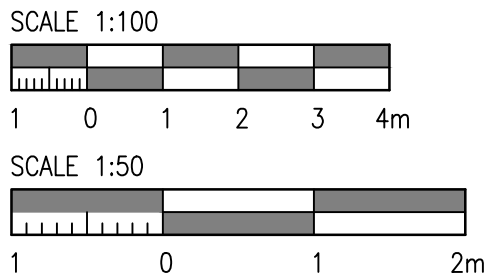
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| DATUM R.L. 26.00 |  |  |  |  |  |
| DESIGN HEIGHT    |  |  |  |  |  |
| SUBGRADE HEIGHT  |  |  |  |  |  |
| EXISTING SURFACE |  |  |  |  |  |
| OFFSETS          |  |  |  |  |  |

CHAINAGE 9.394



|                  |  |  |  |  |  |
|------------------|--|--|--|--|--|
| DATUM R.L. 26.00 |  |  |  |  |  |
| DESIGN HEIGHT    |  |  |  |  |  |
| SUBGRADE HEIGHT  |  |  |  |  |  |
| EXISTING SURFACE |  |  |  |  |  |
| OFFSETS          |  |  |  |  |  |

CHAINAGE 60.000



| Rev | Revision Description               | By | App | Date     |
|-----|------------------------------------|----|-----|----------|
| 1   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 28.05.18 |
| 2   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 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 | RC | CR  | 21.02.20 |
| 6   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

| Rev | Revision Description               | By | App | Date     |
|-----|------------------------------------|----|-----|----------|
| 1   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 28.05.18 |
| 2   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 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 | RC | CR  | 21.02.20 |
| 6   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

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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

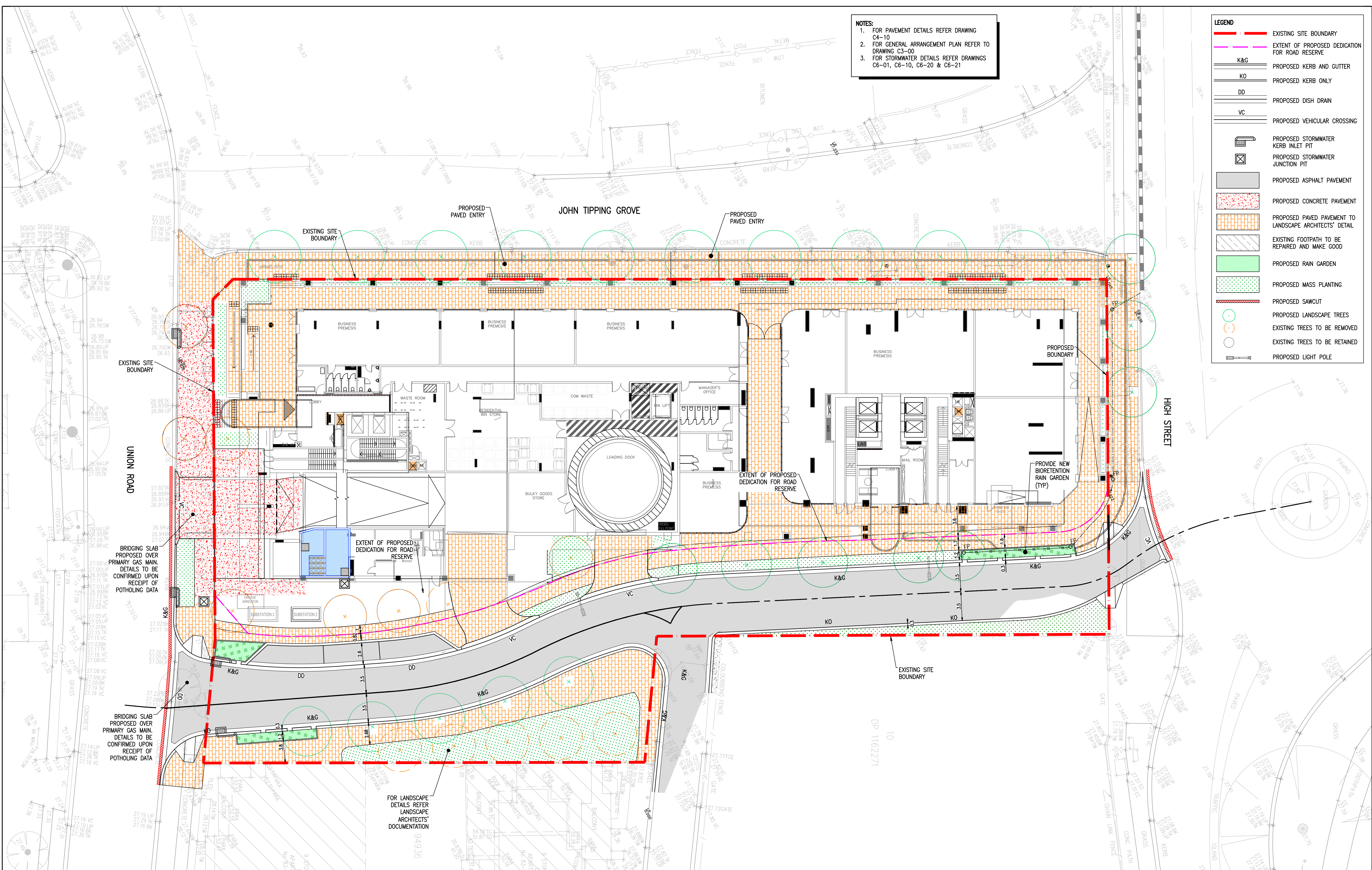
Drawn  
S.MANANDHAR  
Designer  
C.WAITE

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

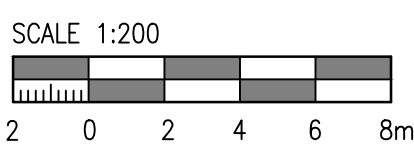
Drawing Number  
**C3-40**

Revision  
**6**



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 |
| 9   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

| 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 |
| 9   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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Web: www.robertbird.com  
ACN 010 580 248



Client

**PAVEMENT LAYOUT PLAN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

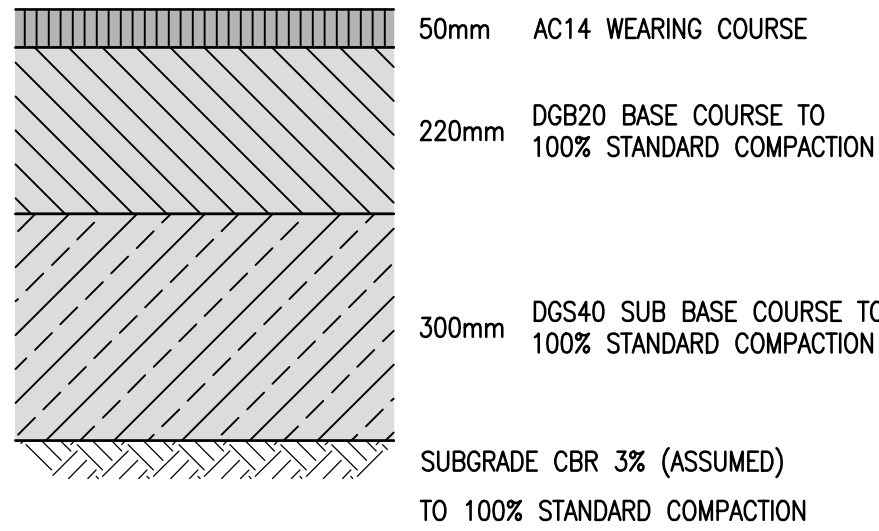
Drawn  
**S.MANANDHAR**  
Designer  
**Z.JONES**

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

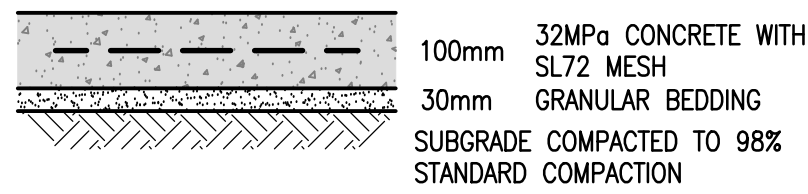
Drawing Number  
**C4-01**

Revision  
**9**

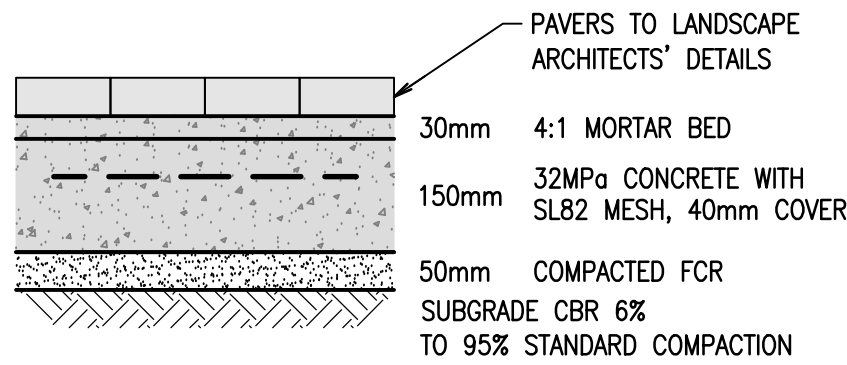


FULL ROAD DEPTH  
ASPHALT PAVEMENT  
SCALE 1:10

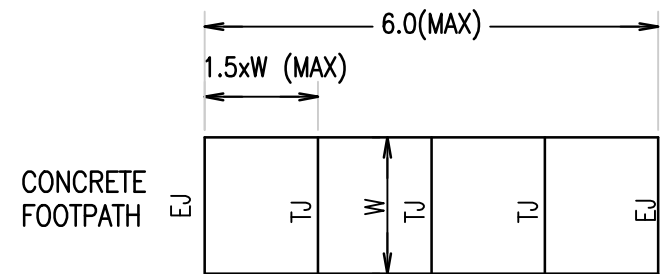
NOTE:  
ESAs = 5X10<sup>5</sup>  
DESIGN LIFE = 20YRS



CONCRETE FOOTPATH PAVEMENT  
TYPICAL DETAIL  
SCALE 1:10

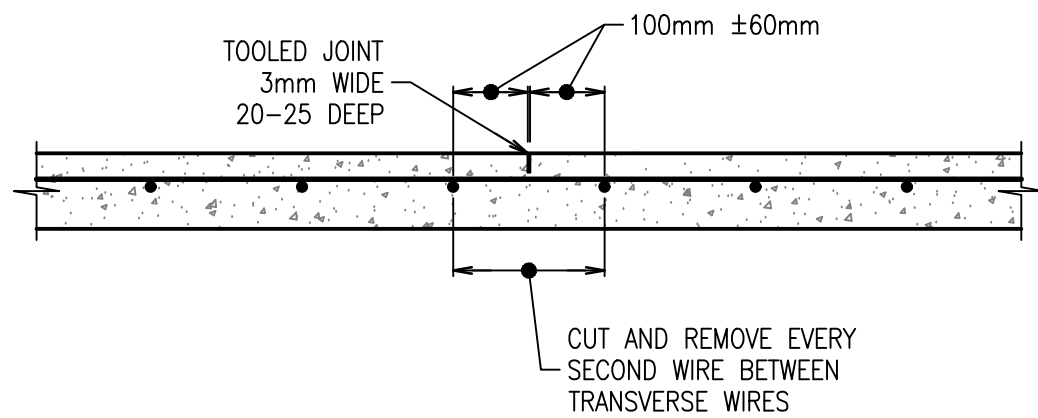


PAVED CONCRETE FOOTPATH PAVEMENT  
TYPICAL DETAIL  
SCALE 1:10

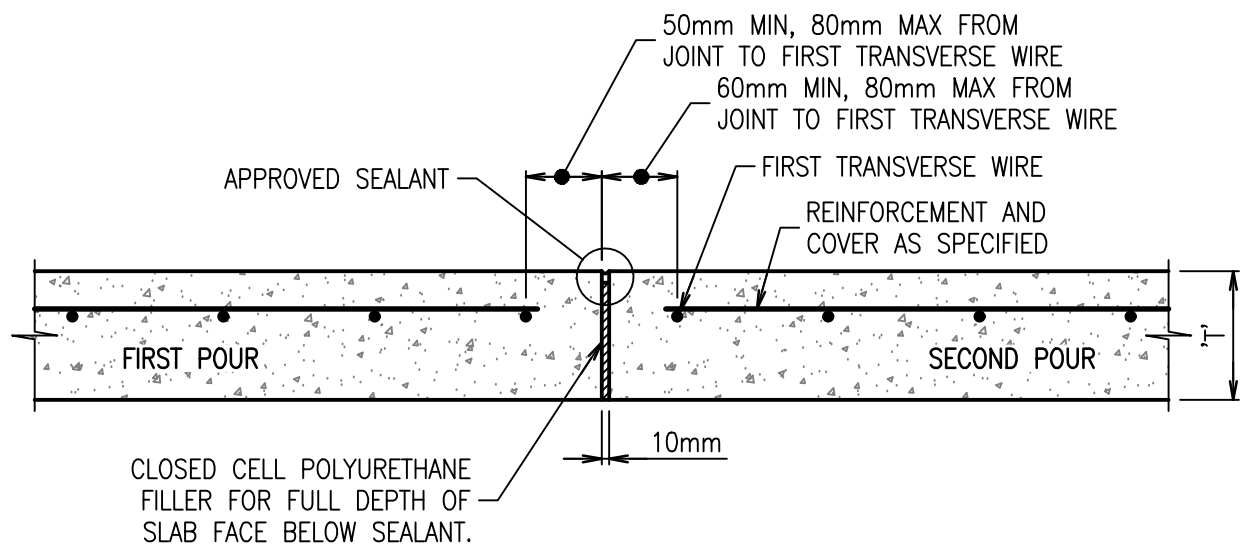


TJ: TROWELLED JOINT  
EJ: EXPANSION JOINT

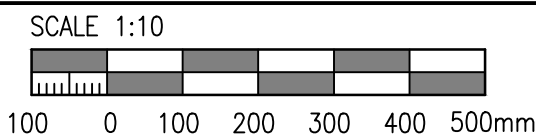
TYPICAL FOOTPATH JOINTING  
NTS



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 |
| 6   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

| 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 |
| 6   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248



Title  
**PAVEMENT DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
**AS SHOWN**  
Date  
06.05.19

Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

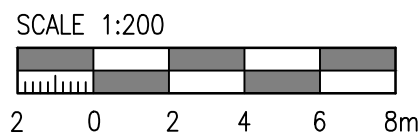
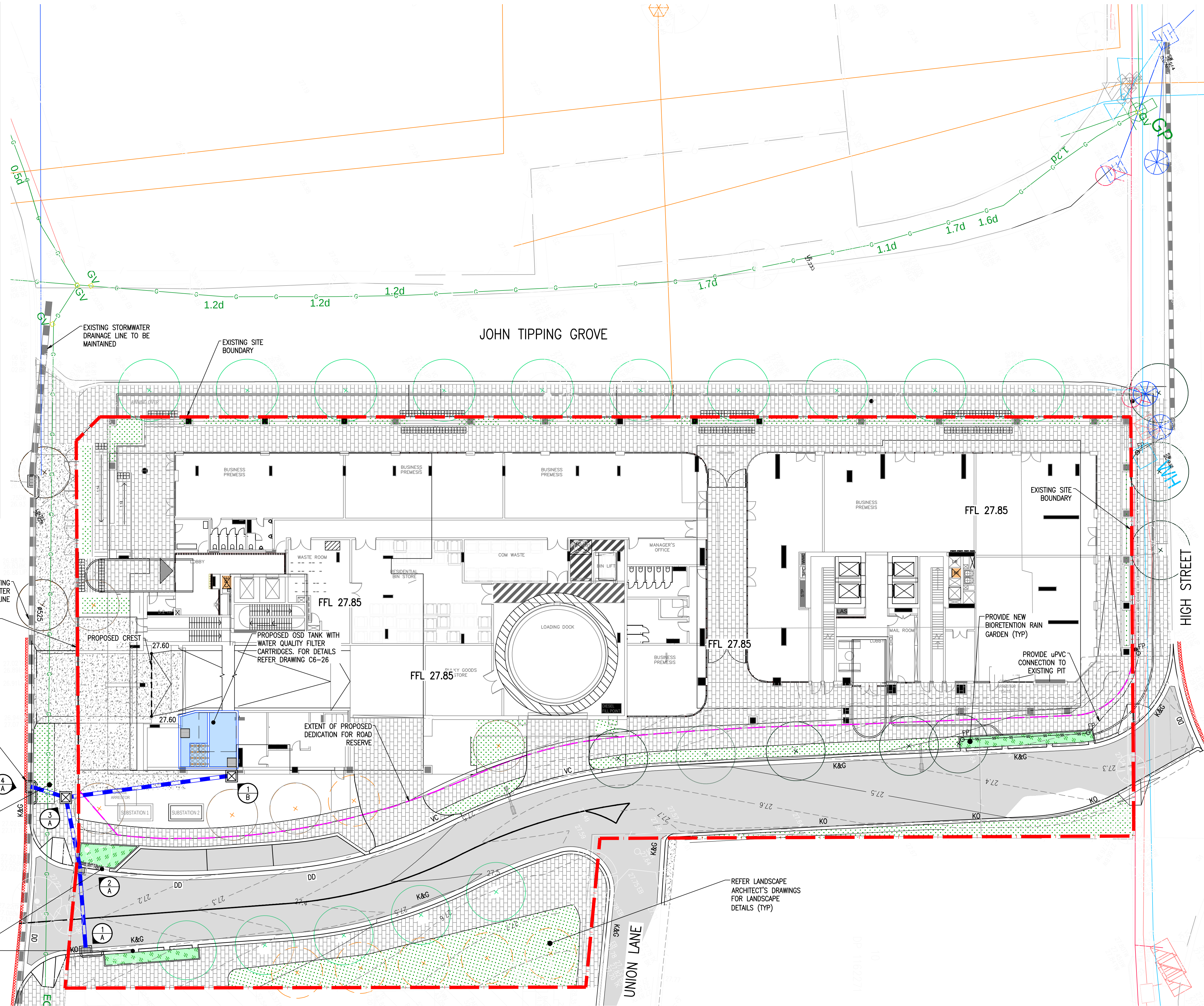
Design Checker  
C.ROPE  
Approved  
C.WAITE  
Job Number  
17665C

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C4-10**

Revision  
**6**

- LEGEND**
- EXISTING SITE BOUNDARY
  - EXTENT OF PROPOSED DEDICATION FOR ROAD RESERVE
  - PROPOSED ROAD CENTRELINE
  - 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 STORMWATER PIPE DIAMETER
  - 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 FINISHED FLOOR LEVEL
  - PROPOSED SPOT LEVEL



| 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  | 21.02.20 |

| Rev | Revision Description | By | App | Date     |
|-----|----------------------|----|-----|----------|
| 11  | ISSUED FOR APPROVAL  | RG | CW  | 05.10.21 |

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Title  
**STORMWATER MANAGEMENT PLAN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

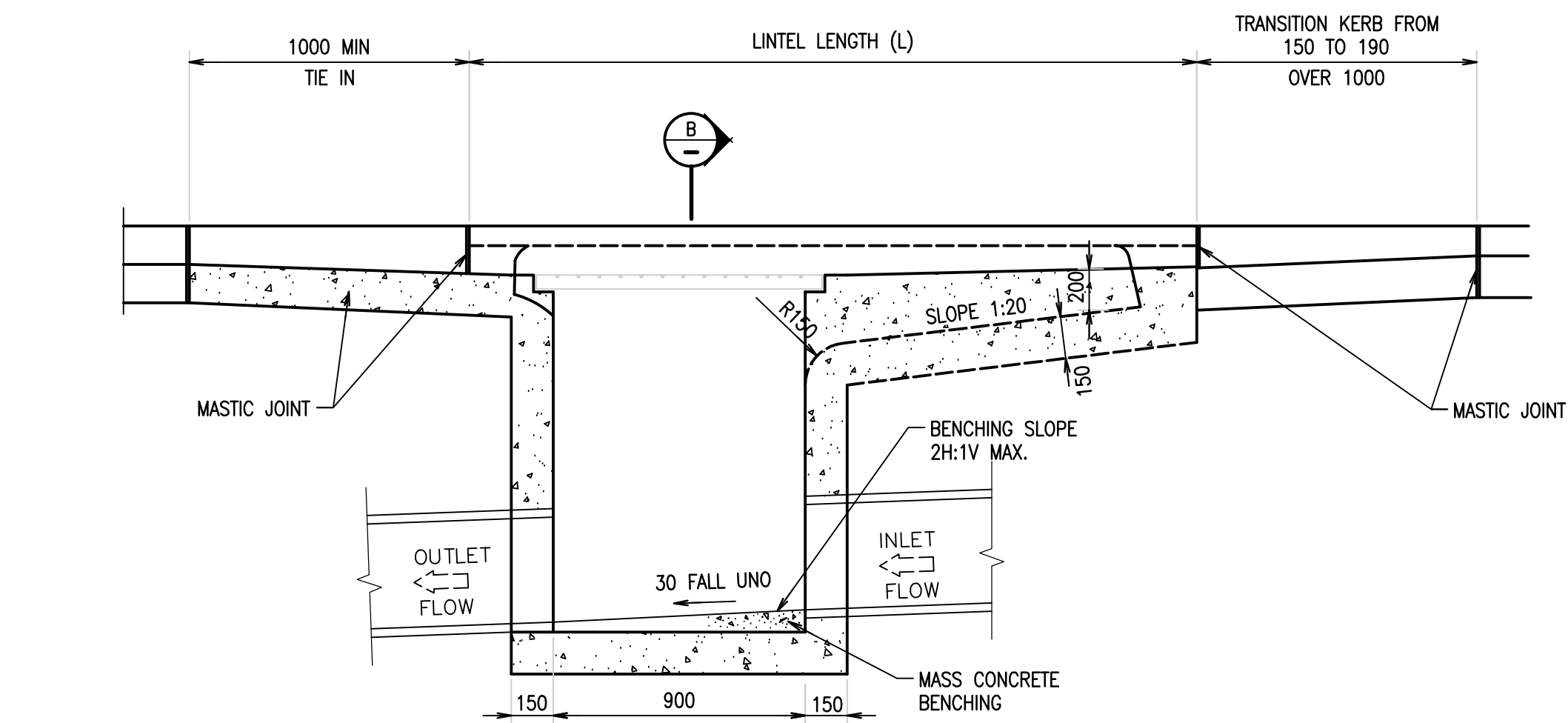
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**C6-01**

Drawn  
M.CLAVEL  
Designer  
Z.JONES

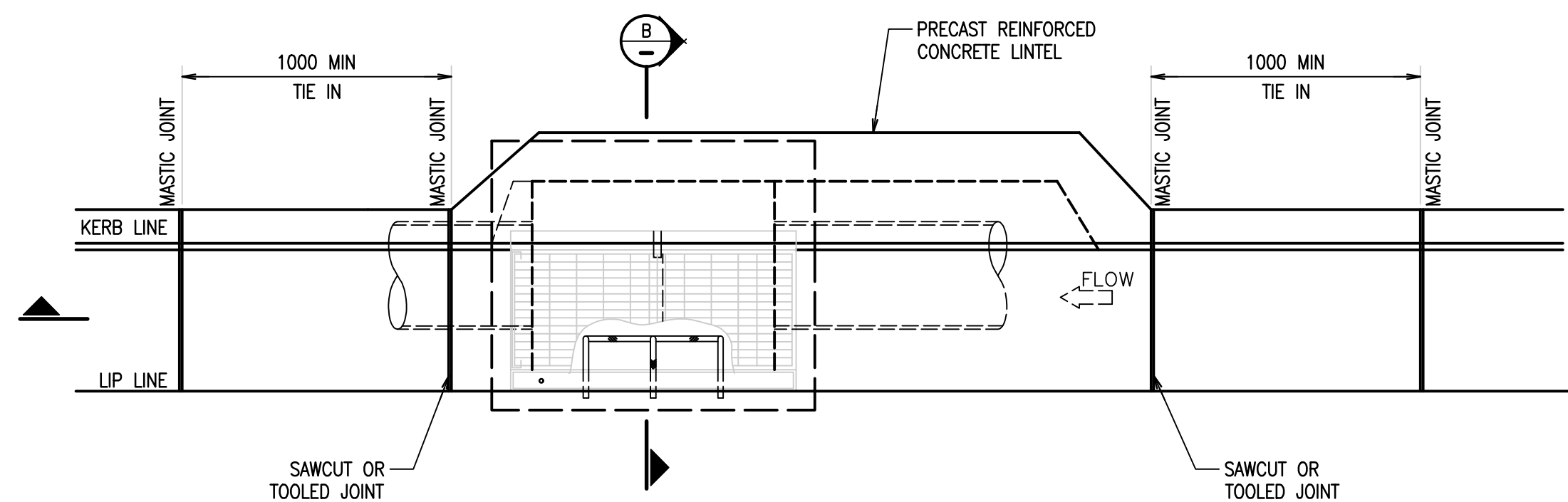
Design Checker  
C.ROPE  
Approved  
C.WAITE  
Job Number  
17665C

**FOR APPROVAL NOT FOR CONSTRUCTION**

Revision  
**11**



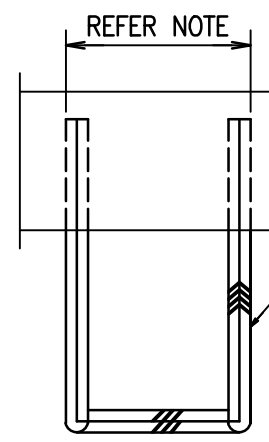
SECTION A  
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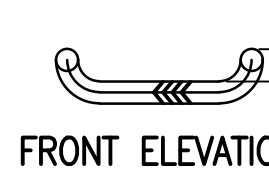
PLAN  
SCALE 1:20  
ON GRADE PIT WITH LINTEL

DRILL 30mm DIA HOLE x 120mm DEEP AND EPOXY INTO WALL WITH EPOXY MORTAR EQUAL TO EPIREZ 633 (NON SAG) - IN PRECAST PITS. DEPTH OF EMBEDMENT IS TO BE IN ACCORDANCE WITH PIT MANUFACTURER'S DETAILS

SIDE ELEVATION



PLAN

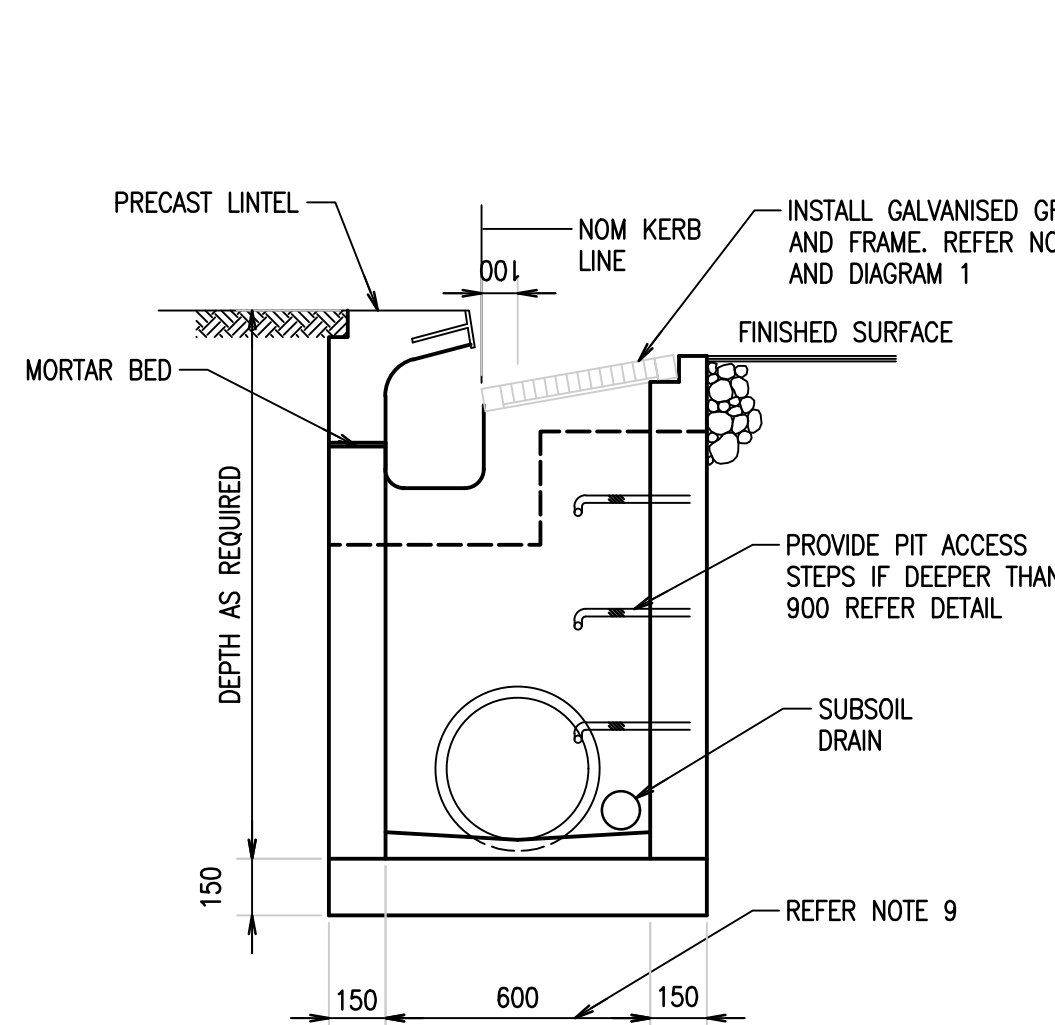


#### NOTES:

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  $\pm 8$ mm IN EACH PIT.

PIT STEP IRON DETAILS  
NTS

SECTION



SECTION B  
SCALE 1:20

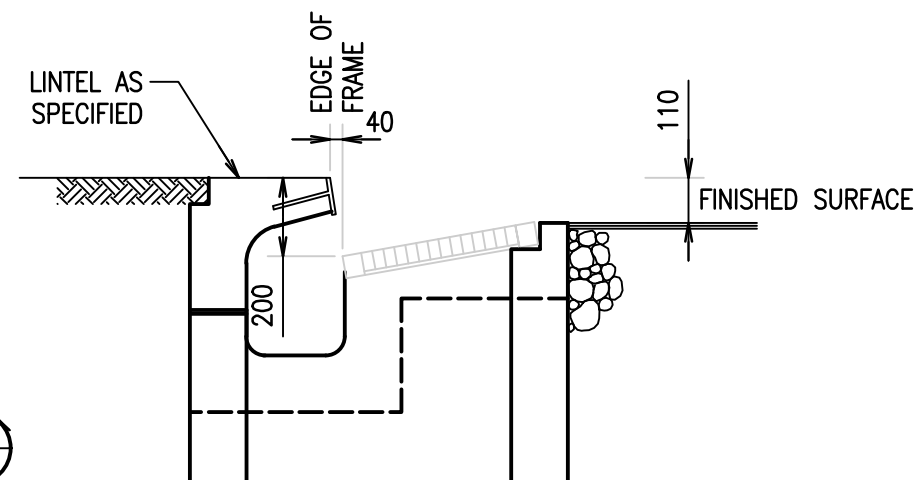
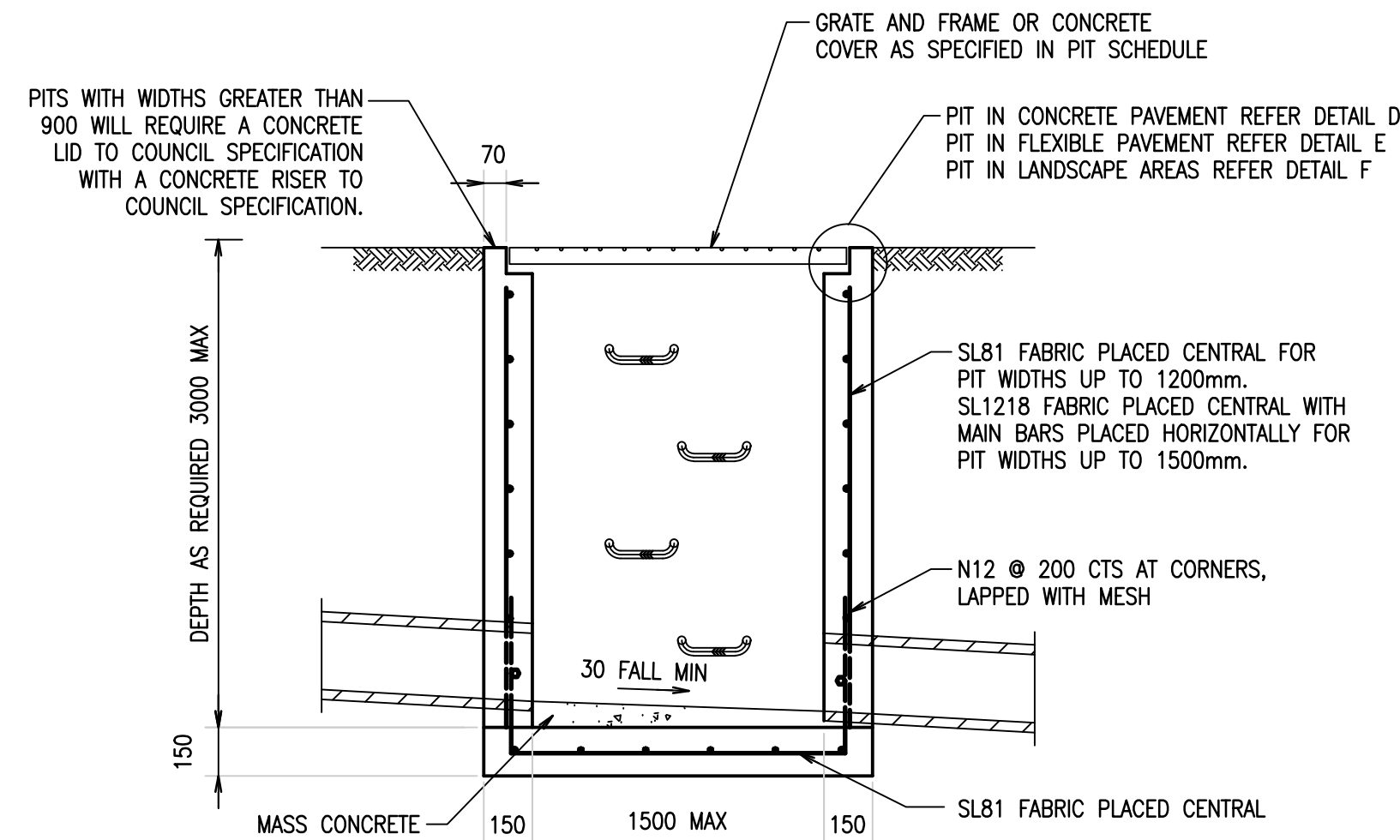
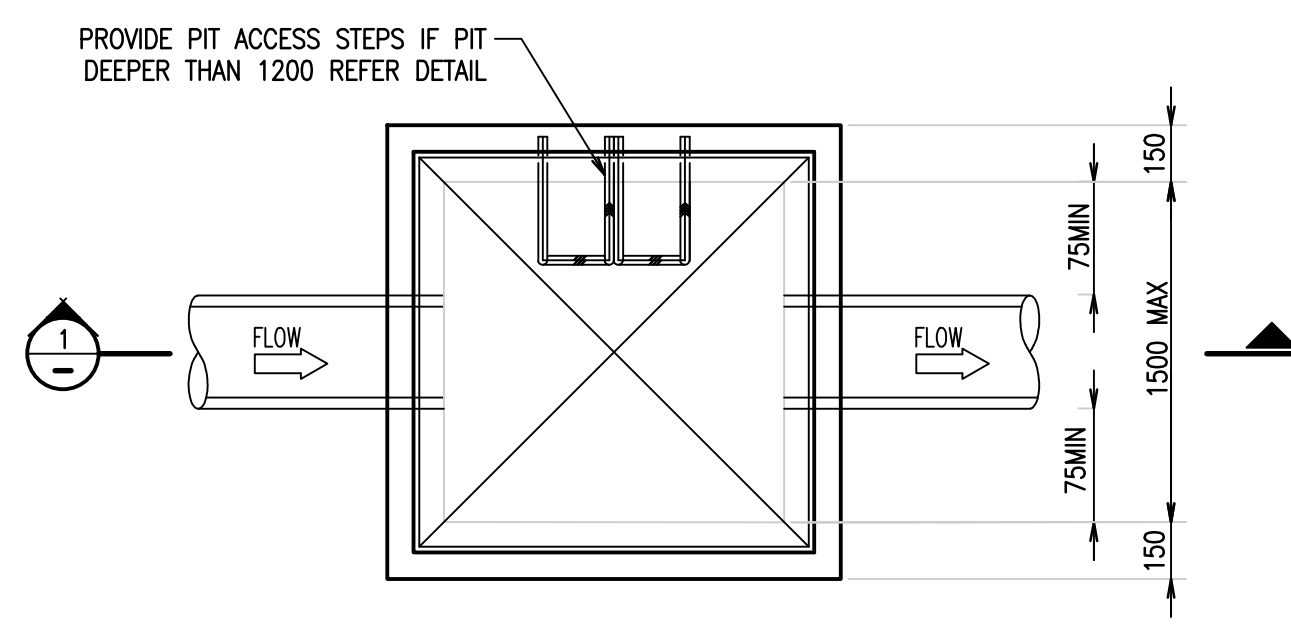


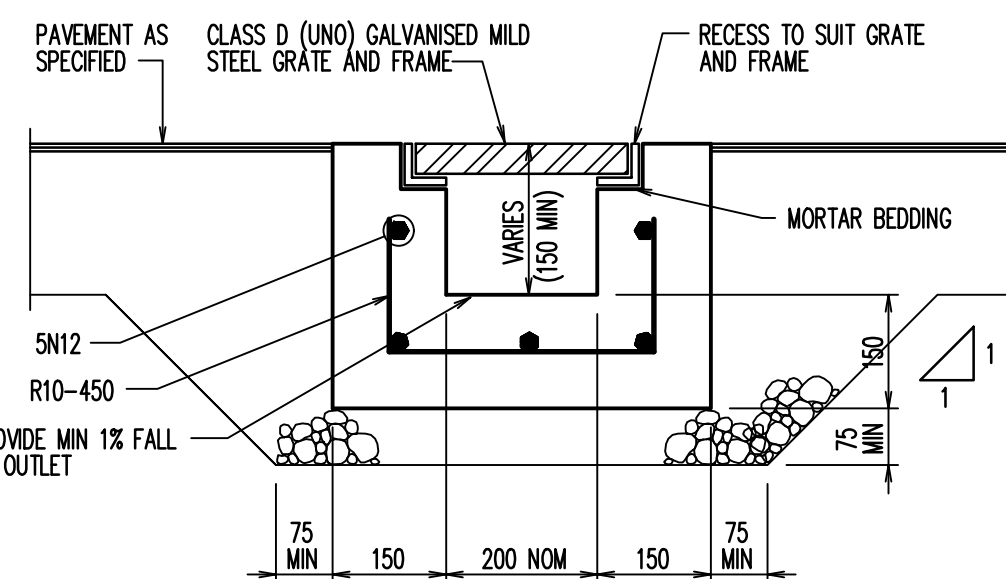
DIAGRAM 1  
SCALE 1:20



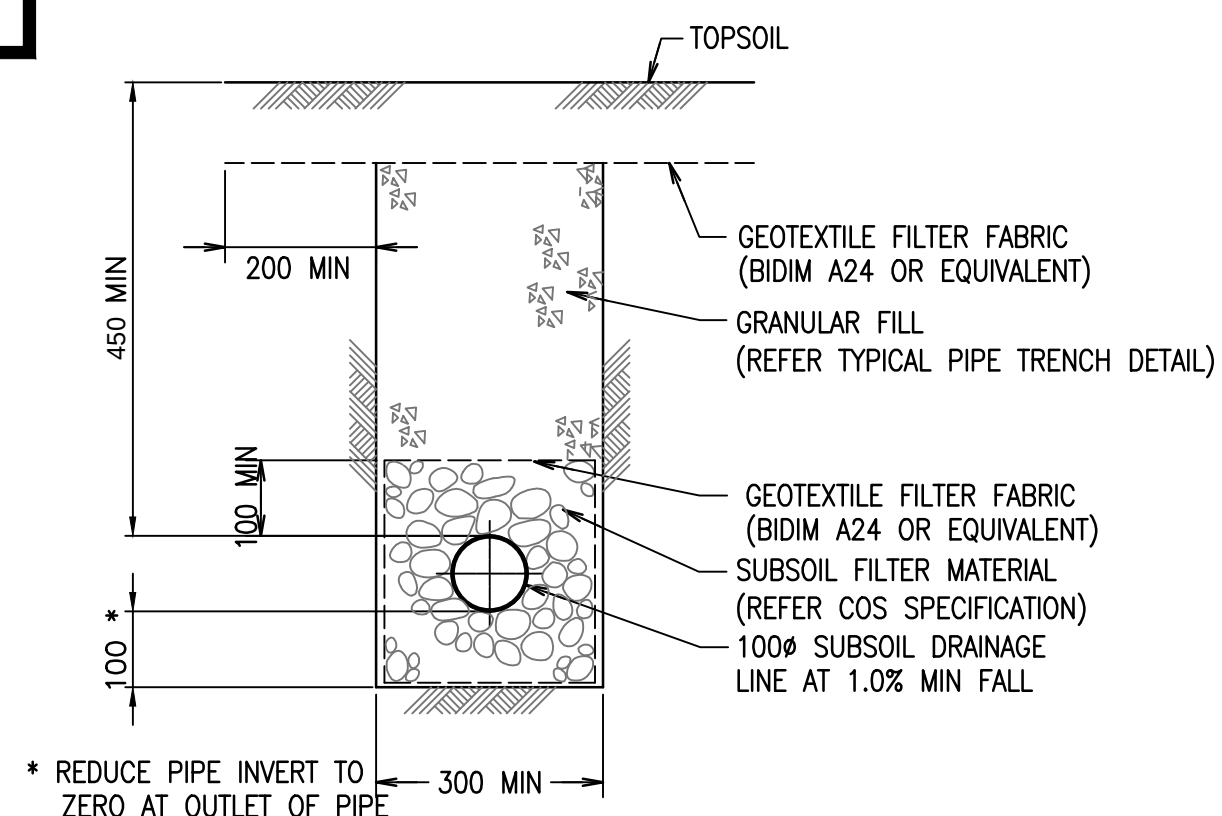
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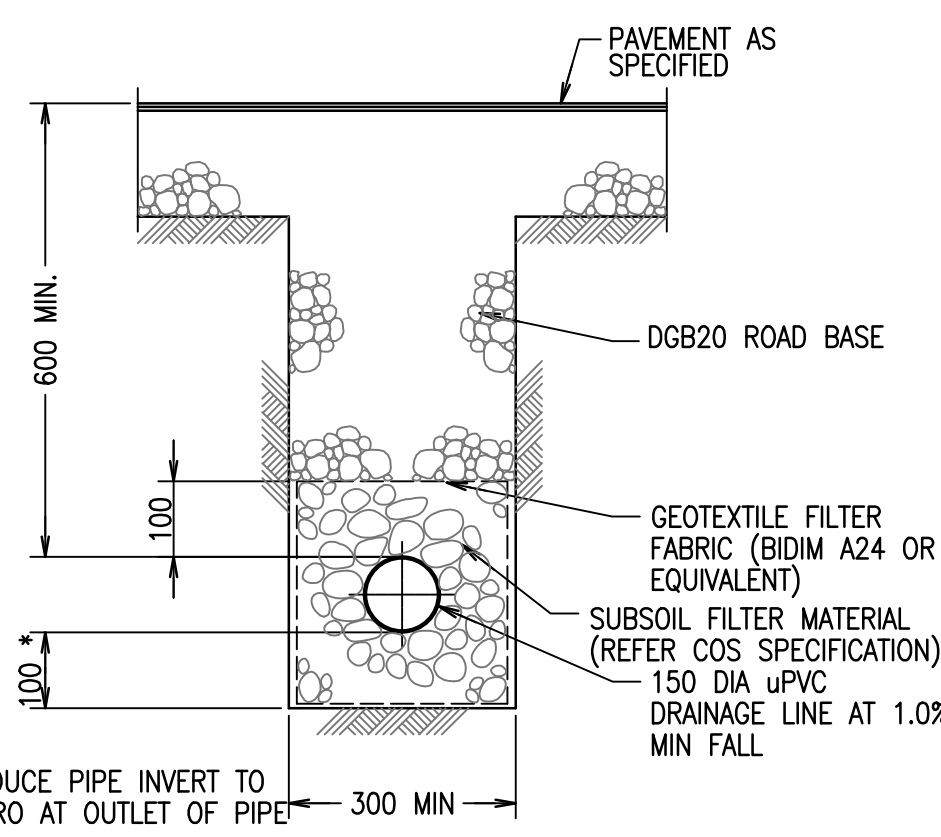
JUNCTION PIT DETAIL  
SCALE 1:20



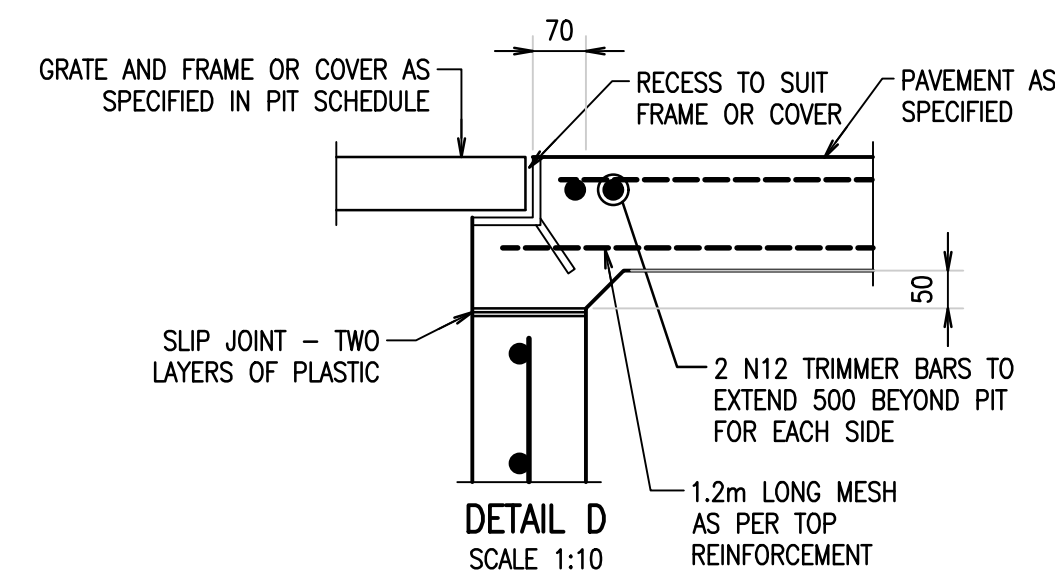
GRADED DRAIN  
SCALE 1:10



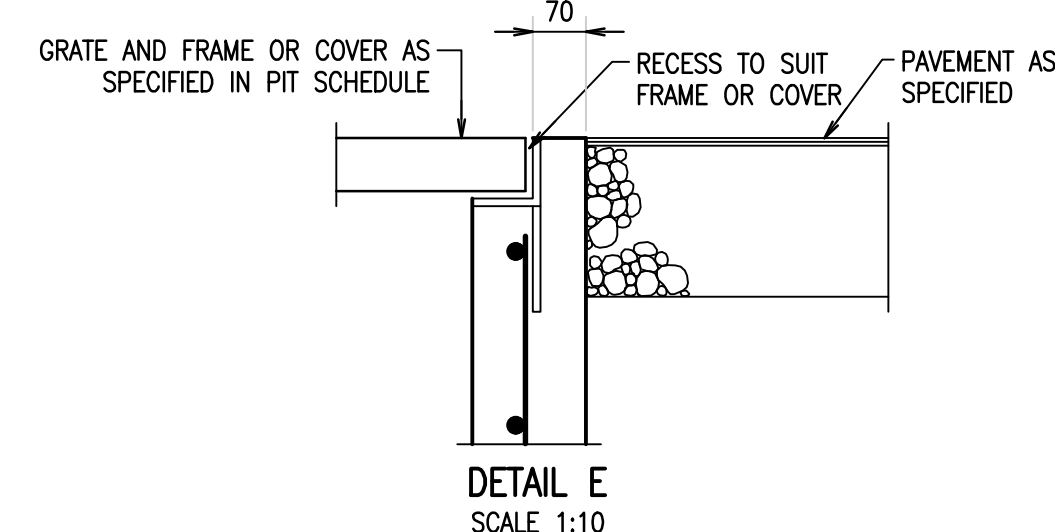
SUBSOIL DRAINAGE IN LANDSCAPE AREAS  
NTS



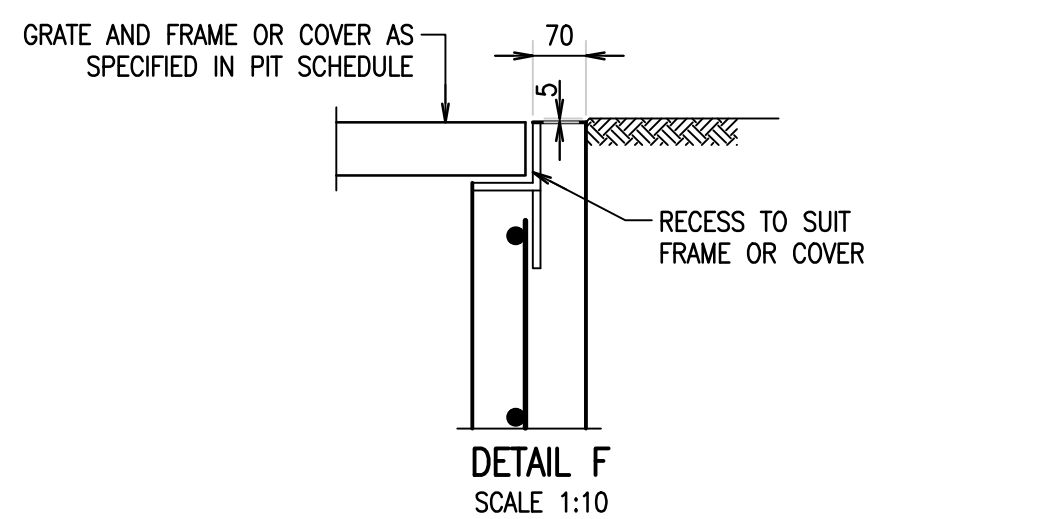
SUBSOIL DRAINAGE IN PAVED AREAS  
NTS



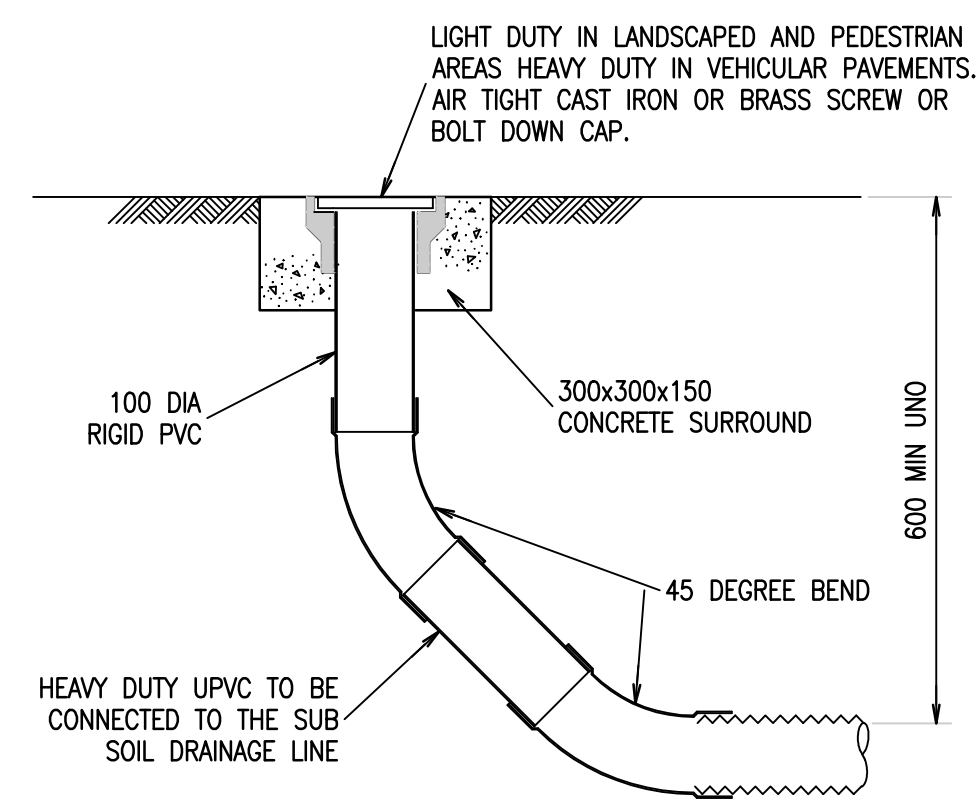
DETAIL D  
SCALE 1:10



DETAIL E  
SCALE 1:10



DETAIL F  
SCALE 1:10



FLUSHING POINT (FP)  
SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED

#### NOTES:

1. CONCRETE TO BE 25MPa AT 28 DAYS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE
3. BACKFILL ADJACENT TO PITS TO BE APPROVED GRANULAR MATERIAL.
4. A 3000 LENGTH OF APPROVED "FILTER FABRIC" WRAPPED 100 SUB-SOIL DRAIN OR EQUIVALENT IS TO BE PROVIDED AND CONNECTED TO THE UPSTREAM PIT WALL.
5. PIT GRATE AND FRAME TO BE "WELDLOK" G651-D GULLY WITH SKIRTED BASE OR EQUIVALENT FOR ALL ROADS, FITTED WITH A LOCKABLE "J" BOLT OR EQUIVALENT.
6. APPROVED STEP IRONS SHALL BE PROVIDED WHERE THE PIT EXCEEDS 1200 IN DEPTH. THEY SHALL BE LOCATED AS DIRECTED AND STAGGERED TO GIVE 300 SPACING VERTICALLY AND 300 SPACING HORIZONTALLY.
7. FLOOR OF PIT TO BE BENCHED TO MID POINT OF OUTLET PIPE WHERE OUTLET PIPE GREATER THAN 600 DIAMETER.
8. CONTRACTOR TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE.
9. WHERE DEPTH OF PIT IS GREATER THAN 1200 INTERNAL WIDTH OF PIT TO BE INCREASED TO 900x900 FOR FULL DEPTH BELOW PAVEMENT.
10. LIFTING LUGS TO BE FILLED AFTER INSTALLATION.

| 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 | RC | CR  | 21.02.20 |
| 7   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

| Rev | Revision Description               | By | App | Date     |
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| 6   | ISSUED FOR DEVELOPMENT APPLICATION | RC | CR  | 21.02.20 |
| 7   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

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ACN 010 580 248

**TOGA**

Client

Title  
**STORMWATER DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
12.02.20

Drawn  
S.MANANDHAR  
Designer  
R.ATHERTON

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

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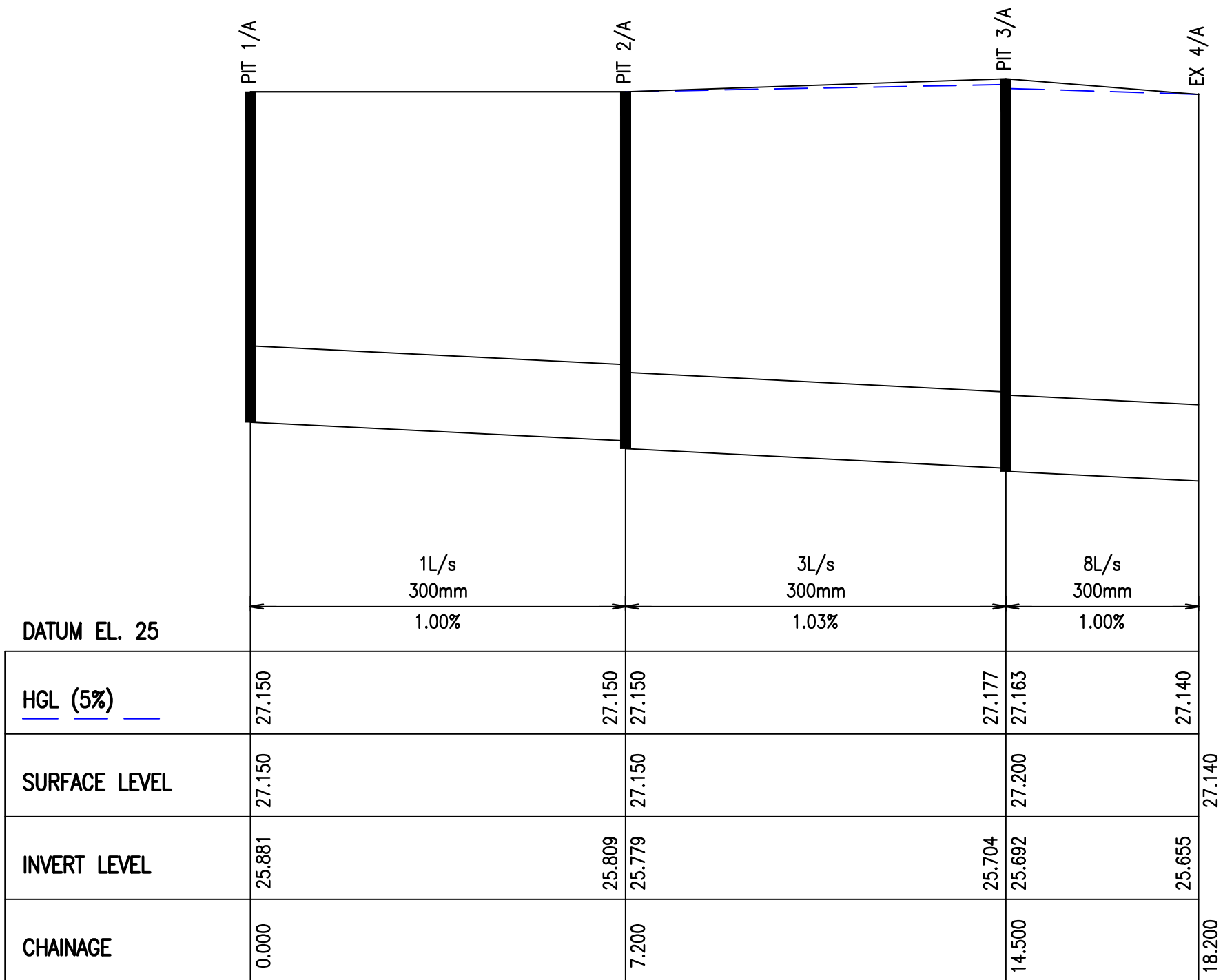
Drawing Number  
**C6-10**

Revision  
**7**

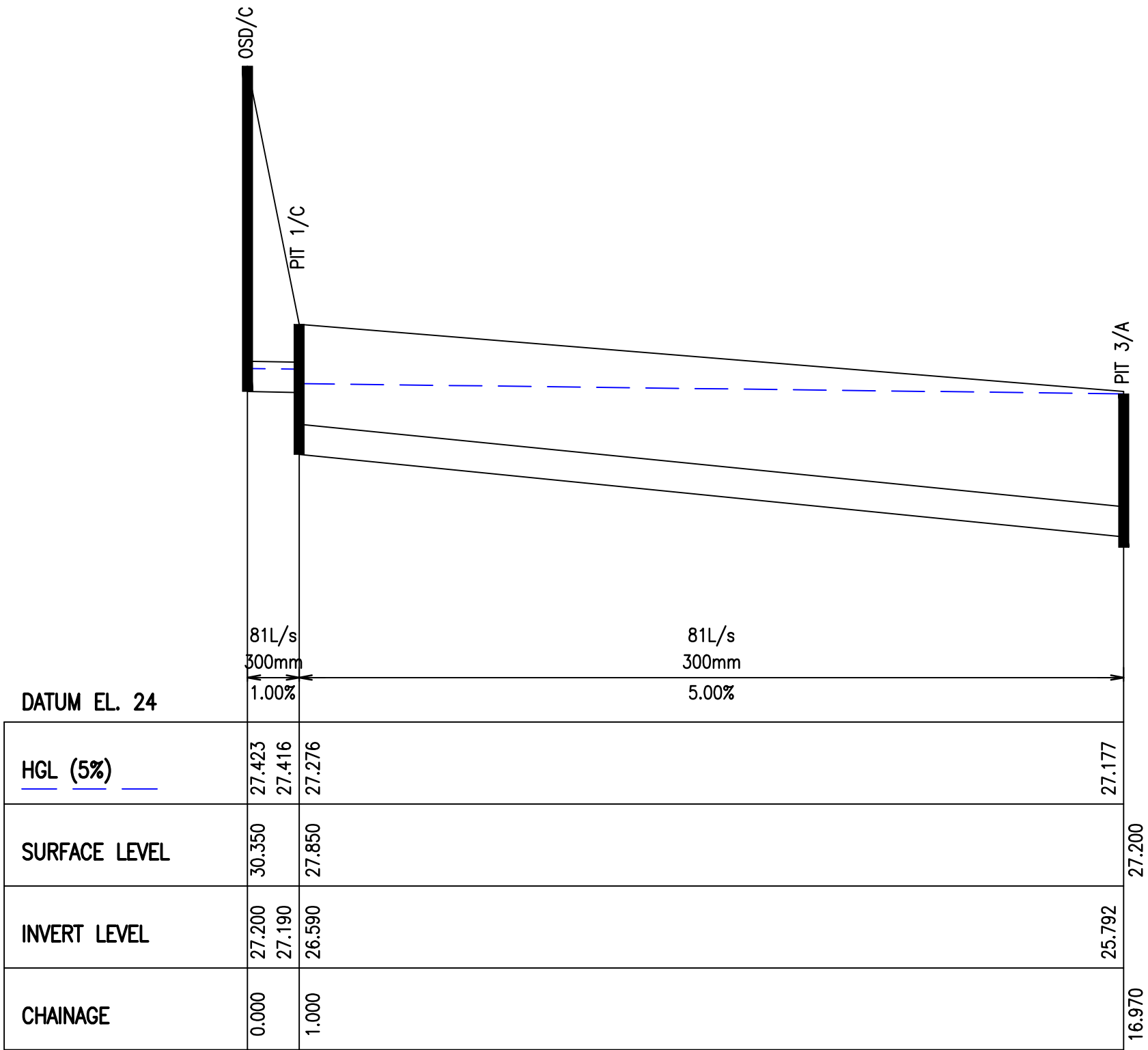
MINIMUM INTERNAL DIMENSIONS FOR  
STORMWATER AND INLET PITS

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

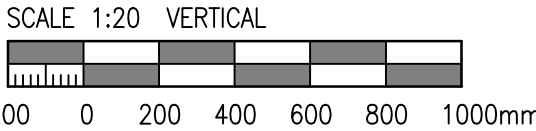
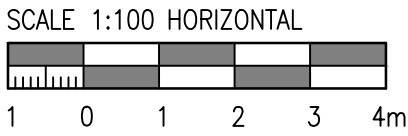
- NOTES:
- PIT DEPTHS > 1200 REQUIRE STEP IRONS.
  - PIPE SUPPORT HS3 TYPE IN ACCORDANCE WITH AS3725.
  - ALL PIPES TO BE RCP UNLESS NOTED OTHERWISE.
  - ALL RCP PIPE CLASSES AS NOTED IN BRACKETS ON THE LONGSECTION.
  - MINIMUM COVER OF 400mm DURING CONSTRUCTION.
  - ALL COVERS TO BE IN ACCORDANCE WITH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



LINE A



LINE B



| 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 |
| 8   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

| Rev | Revision Description               | By | App | Date     |
|-----|------------------------------------|----|-----|----------|
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| 6   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CR  | 05.05.19 |
| 7   | ISSUED FOR DEVELOPMENT APPLICATION | MC | CW  | 21.02.20 |
| 8   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248



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**

**FOR APPROVAL NOT FOR CONSTRUCTION**

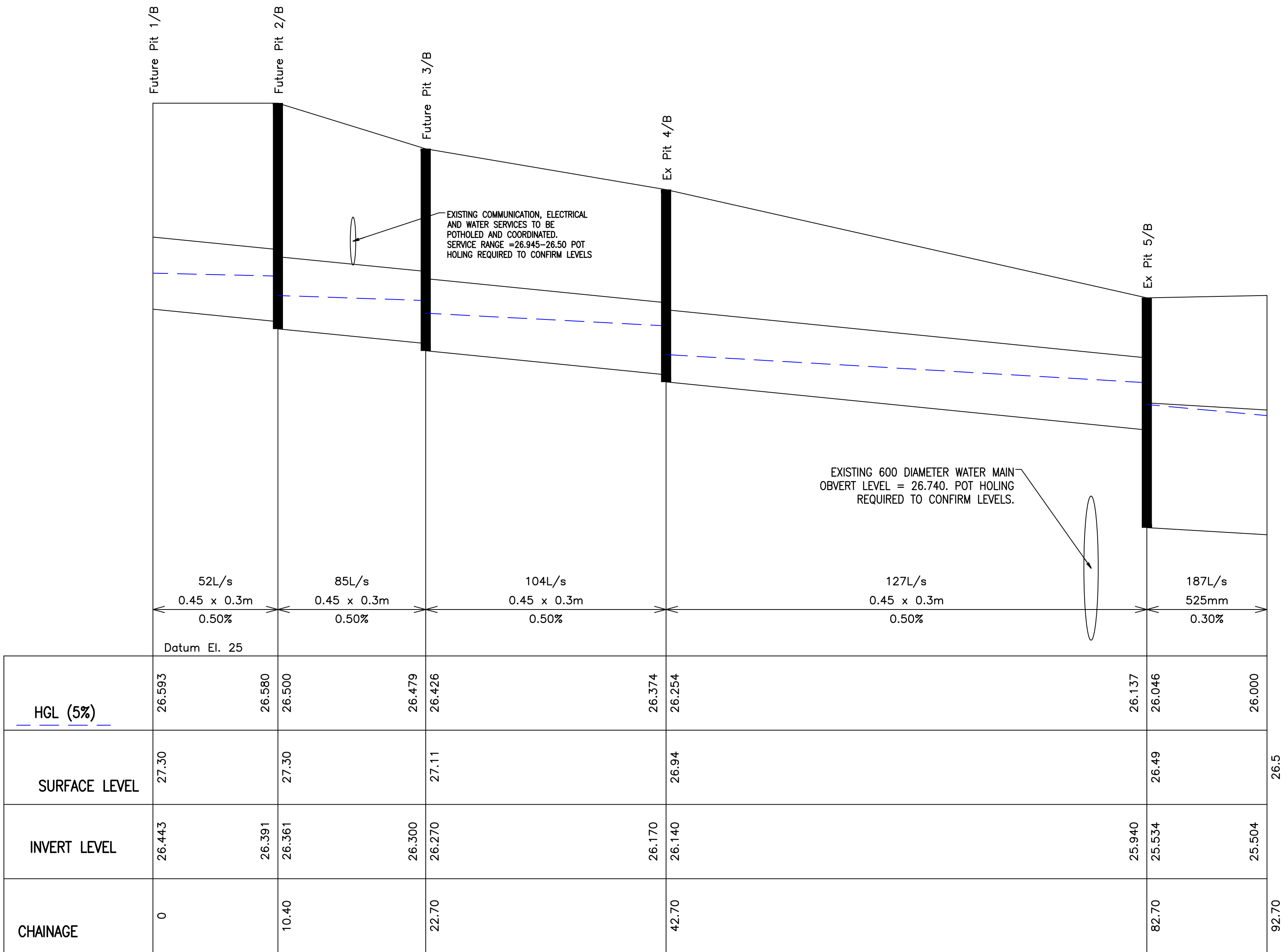
Drawing Number  
**C6-20**

Revision  
**8**

MINIMUM INTERNAL DIMENSIONS FOR  
STORMWATER AND INLET PITS

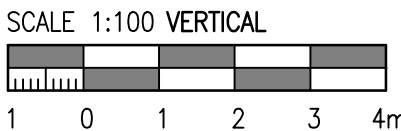
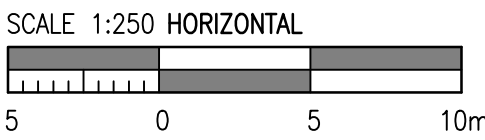
| DEPTH TO<br>INVERT OF<br>OUTLET | MINIMUM INTERNAL<br>DIMENSIONS (mm) |        |
|---------------------------------|-------------------------------------|--------|
|                                 | RECTANGULAR                         |        |
|                                 | WIDTH                               | 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



| 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 |
| 5   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

| 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 |
| 5   | ISSUED FOR APPROVAL                | RG | CW  | 05.10.21 |

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ACN 010 580 248



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

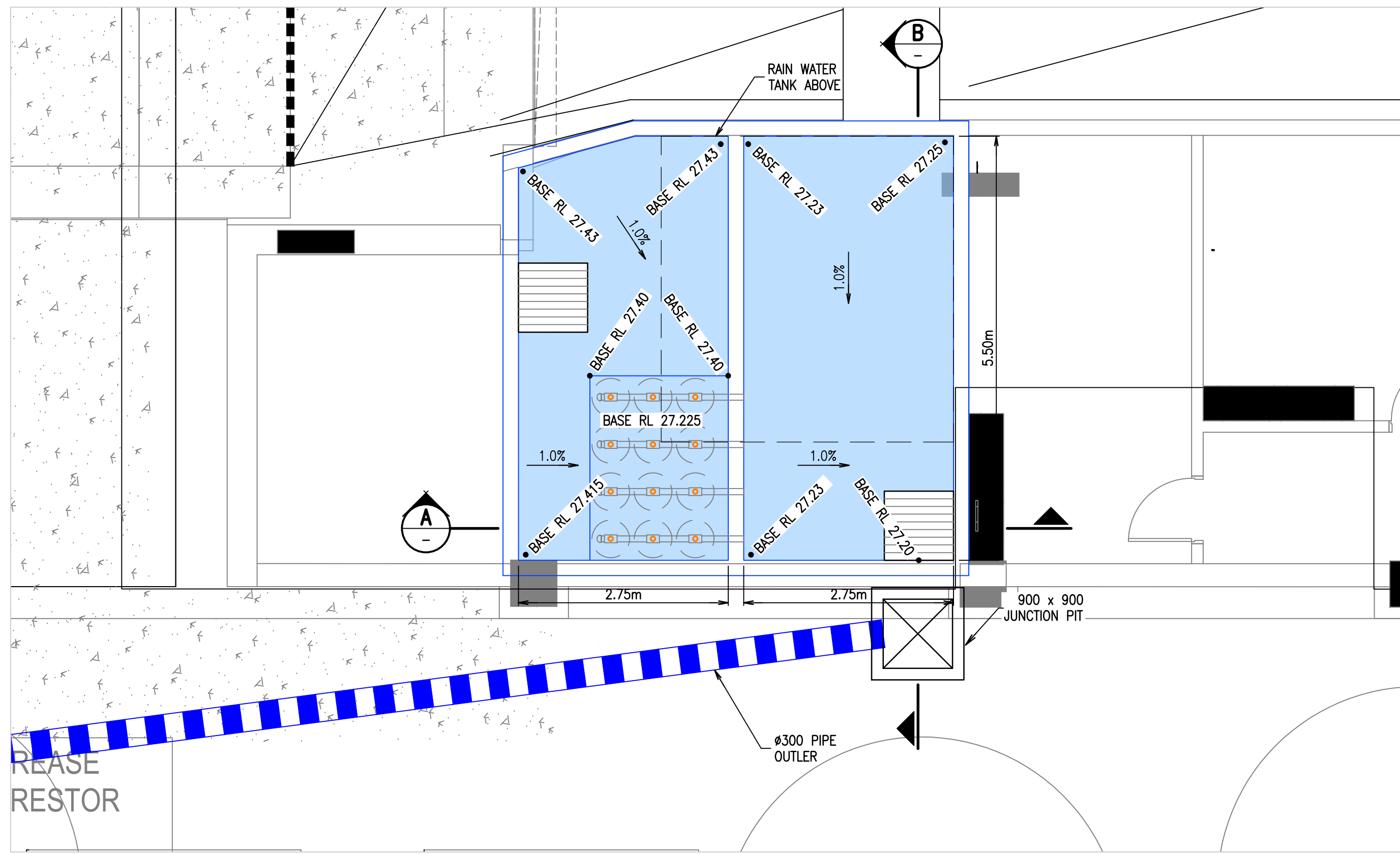
Design Checker  
C.ROPE  
Approved  
C.WAITE  
Job Number  
17665C

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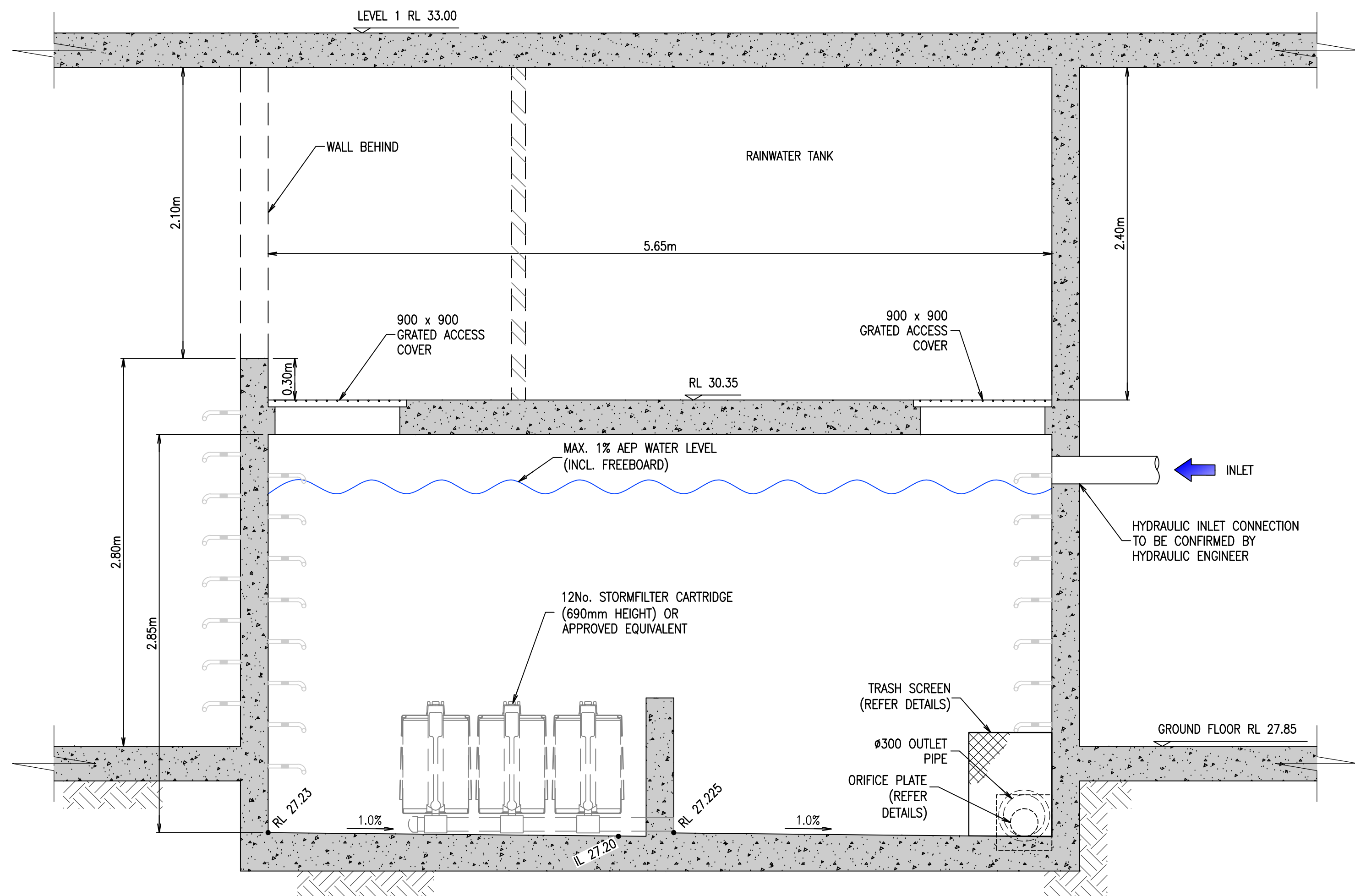
Drawing Number  
**C6-22**

Revision  
**5**



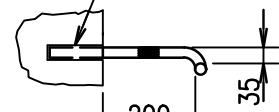


ON SITE DETENTION TANK PLAN  
SCALE 1:50



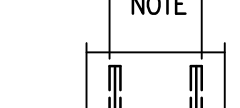
ON SITE DETENTION TANK SECTION  
SCALE 1:25

DRILL 30mm DIA HOLE x 120mm DEEP AND EPOXY INTO WALL WITH EPOXY MORTAR EQUAL TO EPIREZ 633 (NON SAG) - IN PRECAST PITS, DEPTH OF EMBEDMENT IS TO BE IN ACCORDANCE WITH PIT MANUFACTURER'S DETAILS



SIDE ELEVATION

REFER NOTE

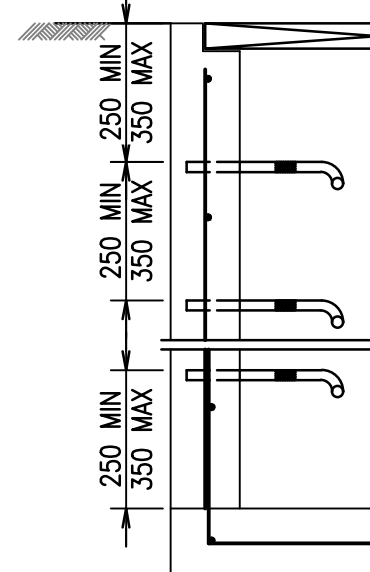


PLAN

24 DIA GALVANISED MILD STEEL



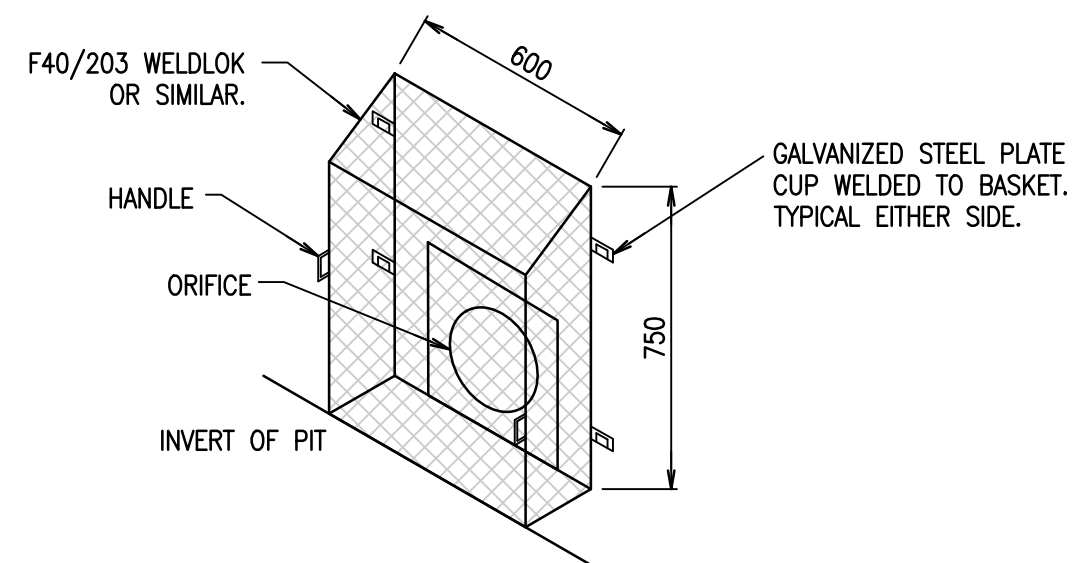
FRONT ELEVATION



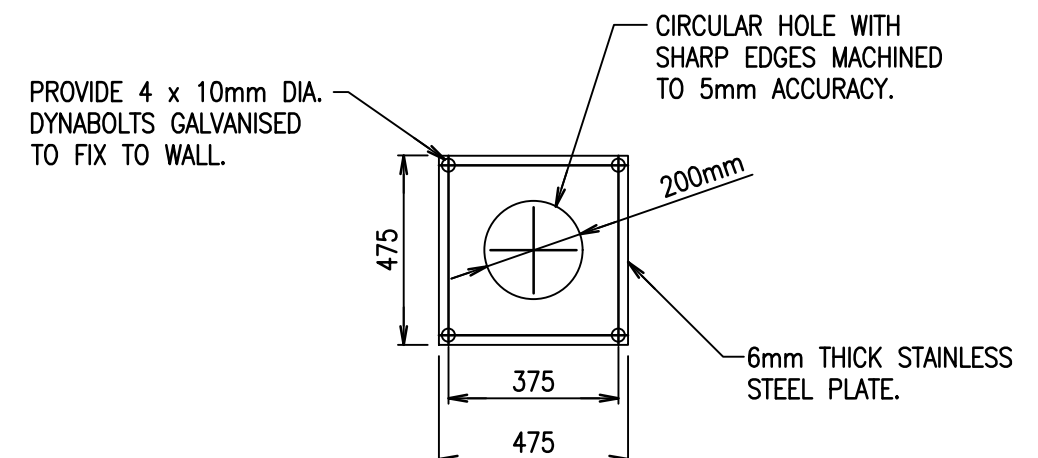
SECTION

PIT STEP IRON DETAIL  
SCALE 1:20

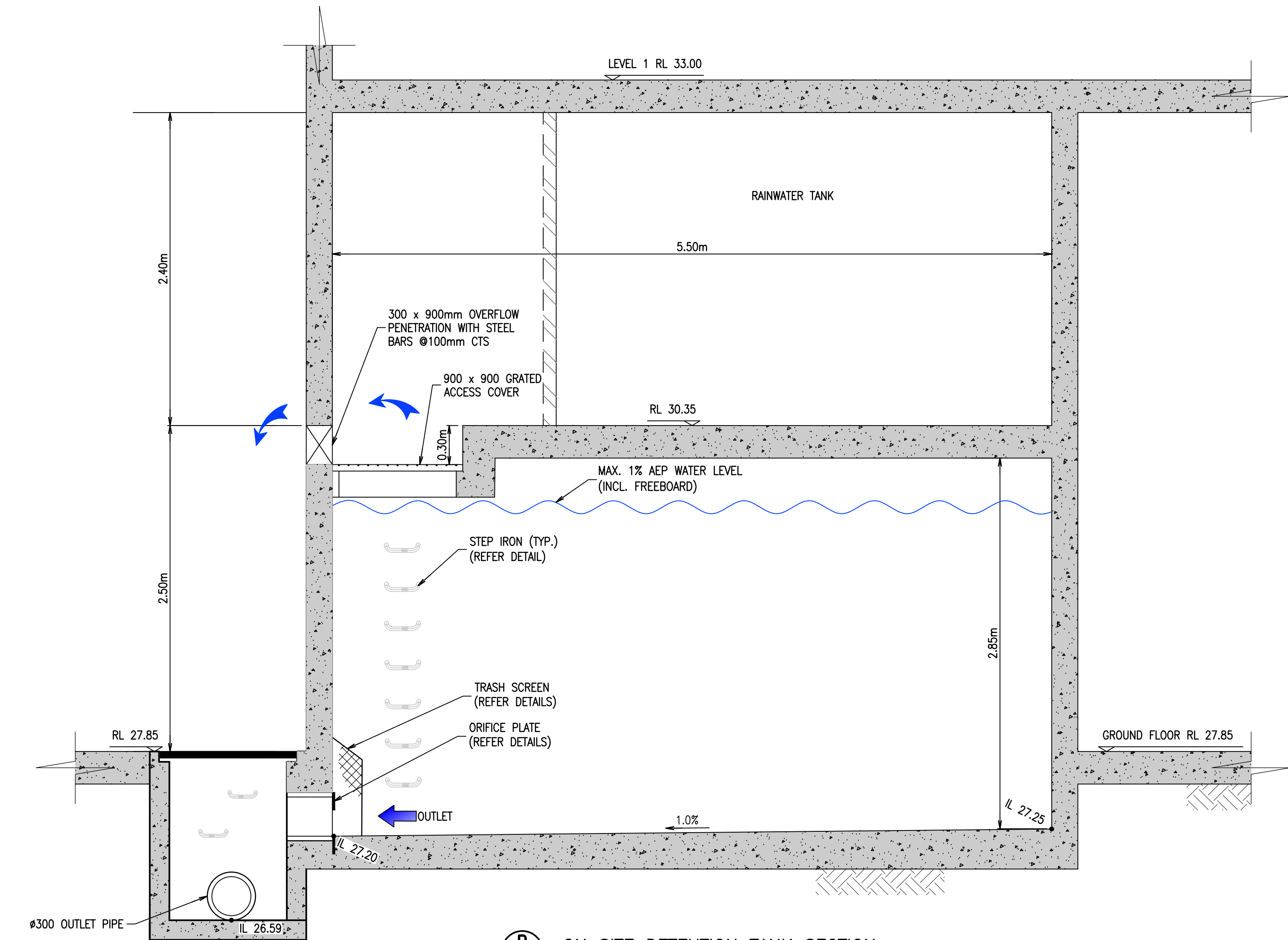
- NOTES:
1. WHEN POSITIONED IN STRAIGHT ALIGNMENT, STEP TO BE 400 WIDE.
  2. STAGGERED STEPS TO BE 200 WIDE, STEPS TO BE STAGGERED 200 CENTRE TO CENTRE FOR ALTERNATE STEPS.
  3. SPACING OF STEPS TO BE UNIFORM TO WITHIN  $\pm 8$ mm IN EACH PIT.



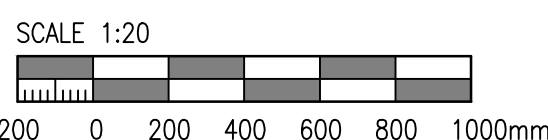
TRASH SCREEN DETAIL  
SCALE 1:20



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 |
| 8   | ISSUED FOR APPROVAL                 | RC | CW  | 05.10.21 |

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| 4   | ISSUED FOR DEVELOPMENT APPLICATION  | SM | CW  | 28.05.18 |
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| 8   | ISSUED FOR APPROVAL                 | RC | CW  | 05.10.21 |

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ACN 010 580 248



Client

**ON SITE DETENTION TANK TYPICAL DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
21.02.20

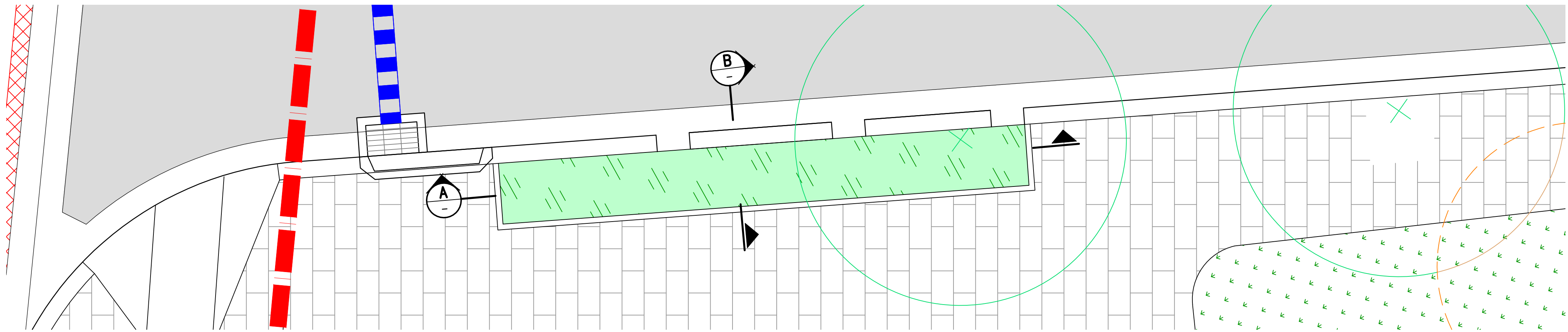
Drawn  
M.CLAVEL  
Designer  
M.CLAVEL

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

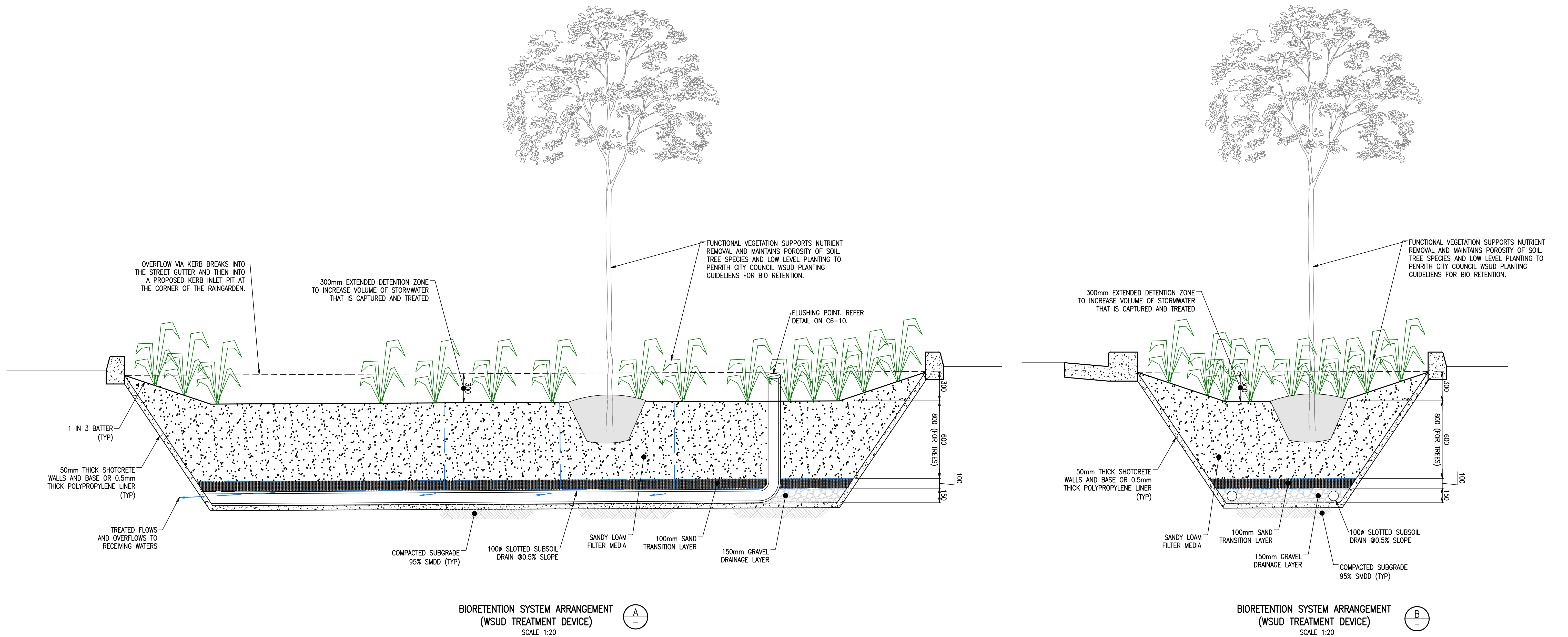
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Drawing Number  
**C6-26**

Revision  
**8**



WSUD RAINGARDEN  
PLAN VIEW  
SCALE 1:50



SCALE 1:20  
200 0 200 400 600 800 1000mm

| Rev | Revision Description               | By | App | Date     |
|-----|------------------------------------|----|-----|----------|
| 1   | ISSUED FOR DEVELOPMENT APPLICATION | SM | CW  | 15.03.18 |
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| 7   | ISSUED FOR APPROVAL                | RC | CW  | 05.10.21 |

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Structural, Civil & Construction  
Engineering Consultant

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Client

Title  
**BIORETENTION SYSTEM TYPICAL  
ARRANGEMENT DETAILS**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
06.05.19

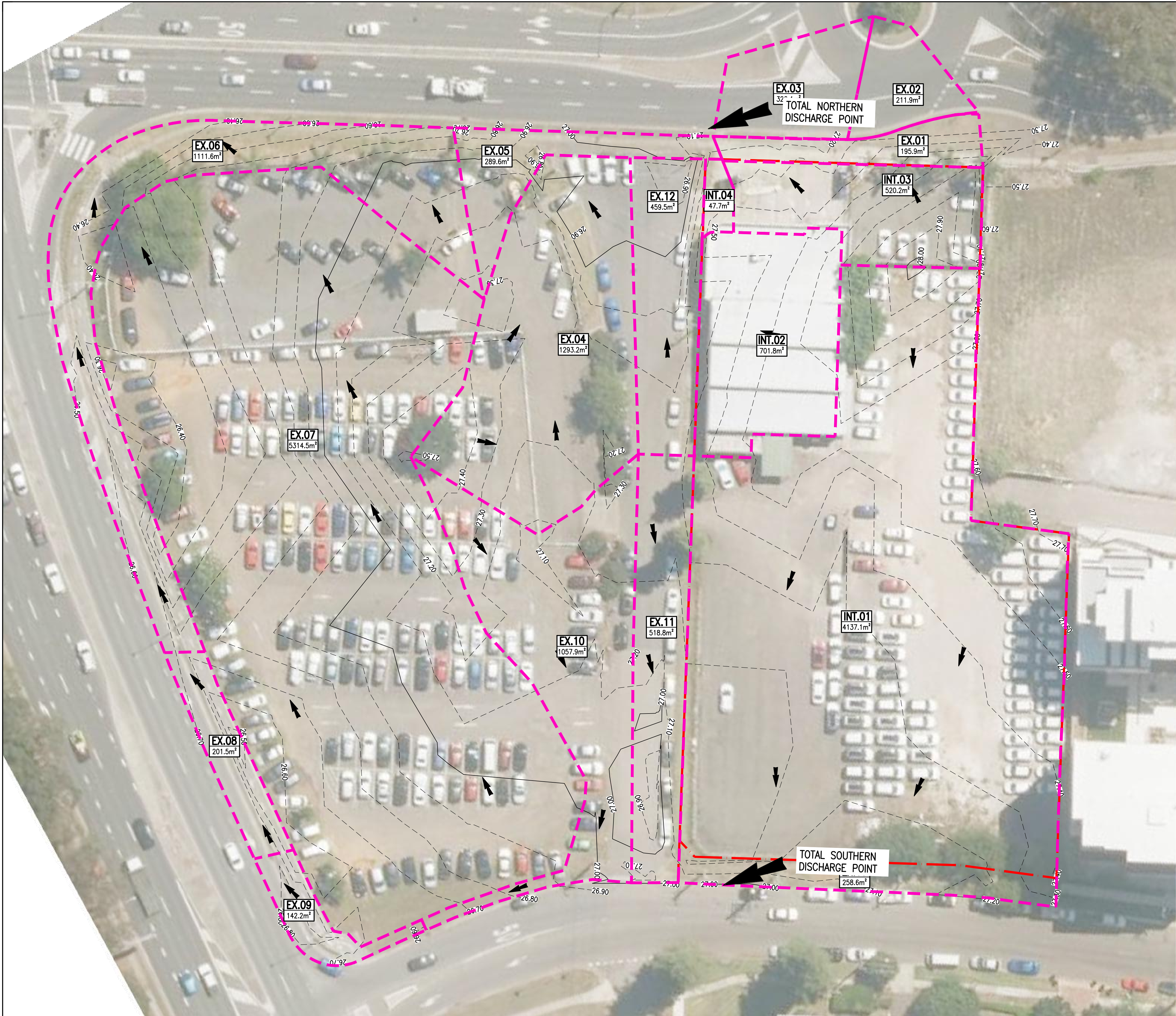
Drawn  
S.MANANDHAR  
Designer  
Z.JONES

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C6-30**

Revision  
**7**



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

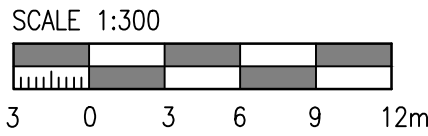
CATCHMENT LABEL

EX.01

195.9m²

CATCHMENT AREA

| PRE DEVELOPMENT CATCHMENT SUMMARY |        |              |                            |          |
|-----------------------------------|--------|--------------|----------------------------|----------|
| CATCHMENT                         | Area   | % IMPERVIOUS | Discharge (l/s)<br>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     |



| Rev | Revision Description                | By | App | Date     |
|-----|-------------------------------------|----|-----|----------|
| 1   | ISSUED FOR PRELIMINARY COORDINATION | 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 | CR  | 19.06.18 |
| 6   | ISSUED FOR DEVELOPMENT APPLICATION  | SM | CR  | 05.05.19 |
| 7   | ISSUED FOR DEVELOPMENT APPLICATION  | RG | CR  | 21.02.20 |
| 8   | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

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| 6   | ISSUED FOR DEVELOPMENT APPLICATION  | SM | CR  | 05.05.19 |
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| 8   | ISSUED FOR APPROVAL                 | RG | CW  | 05.10.21 |

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ACN 010 580 248



Client

Title  
**PRE-DEVELOPMENT CATCHMENT  
PLAN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

Drawn  
M.CLAVEL  
Designer  
R.ATHERTON

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

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C6-51**

Revision  
**8**



LEGEND

EXISTING SITE BOUNDARY

DETAINED CATCHMENT AREA (AND DETAINED)

TREATED CATCHMENT AREA (NOT DETAINED)

BYPASS CATCHMENT AREA (EXTERNAL TO SITE)

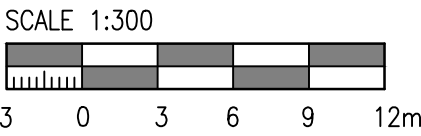
PROPOSED SURFACE FLOW RUNOFF

1/A

23m<sup>2</sup>

CATCHMENT LABEL

CATCHMENT AREA



| Rev | Revision Description                | By | App | Date     |
|-----|-------------------------------------|----|-----|----------|
| 1   | ISSUED FOR PRELIMINARY COORDINATION | RA | CW  | 06.03.18 |
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| 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  | RC | CR  | 21.02.20 |
| 9   | ISSUED FOR APPROVAL                 | RC | CW  | 05.10.21 |

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| 8   | ISSUED FOR DEVELOPMENT APPLICATION  | RC | CR  | 21.02.20 |
| 9   | ISSUED FOR APPROVAL                 | RC | CW  | 05.10.21 |

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Client

Title  
**POST-DEVELOPMENT CATCHMENT  
PLAN**

Project  
**HIGH STREET PENRITH**

Scale at A1  
AS SHOWN  
Date  
05.10.21

Drawn  
S.MANADHAR  
Date  
Z.JONES

Design Checker  
C.ROPE  
Approved  
C.WAITE

Job Number  
17665C

**FOR APPROVAL NOT FOR CONSTRUCTION**

Drawing Number  
**C6-56**

Revision  
**9**