

Prepared by:

DA: \_\_\_\_\_



Prepared for:



LGA:  
**PENRITH**  
CITY COUNCIL

| PLAN INDEX                   |                                    |     |
|------------------------------|------------------------------------|-----|
| No.                          | PLAN                               | REV |
| PRELIMINARIES                |                                    |     |
| DA 000                       | COVER SHEET                        | A   |
| DA 001                       | GENERAL LAYOUT NOTES AND LEGEND    | A   |
| DA 002                       | DEMOLITION PLAN                    | A   |
| SEDIMENT & EROSION CONTROL   |                                    |     |
| DA 100                       | SEDIMENT AND EROSION CONTROL PLAN  | A   |
| DA 101                       | SEDIMENT AND EROSION CONTROL NOTES | A   |
| ENGINEERING & ROADWORKS      |                                    |     |
| DA 200                       | ENGINEERING PLAN                   | A   |
| DA 210                       | SITE SECTIONS SHEET 01 OF 02       | A   |
| DA 211                       | SITE SECTIONS SHEET 02 OF 02       | A   |
| STORMWATER DRAINAGE & BASINS |                                    |     |
| DA 400                       | CATCHMENT PLAN                     | A   |



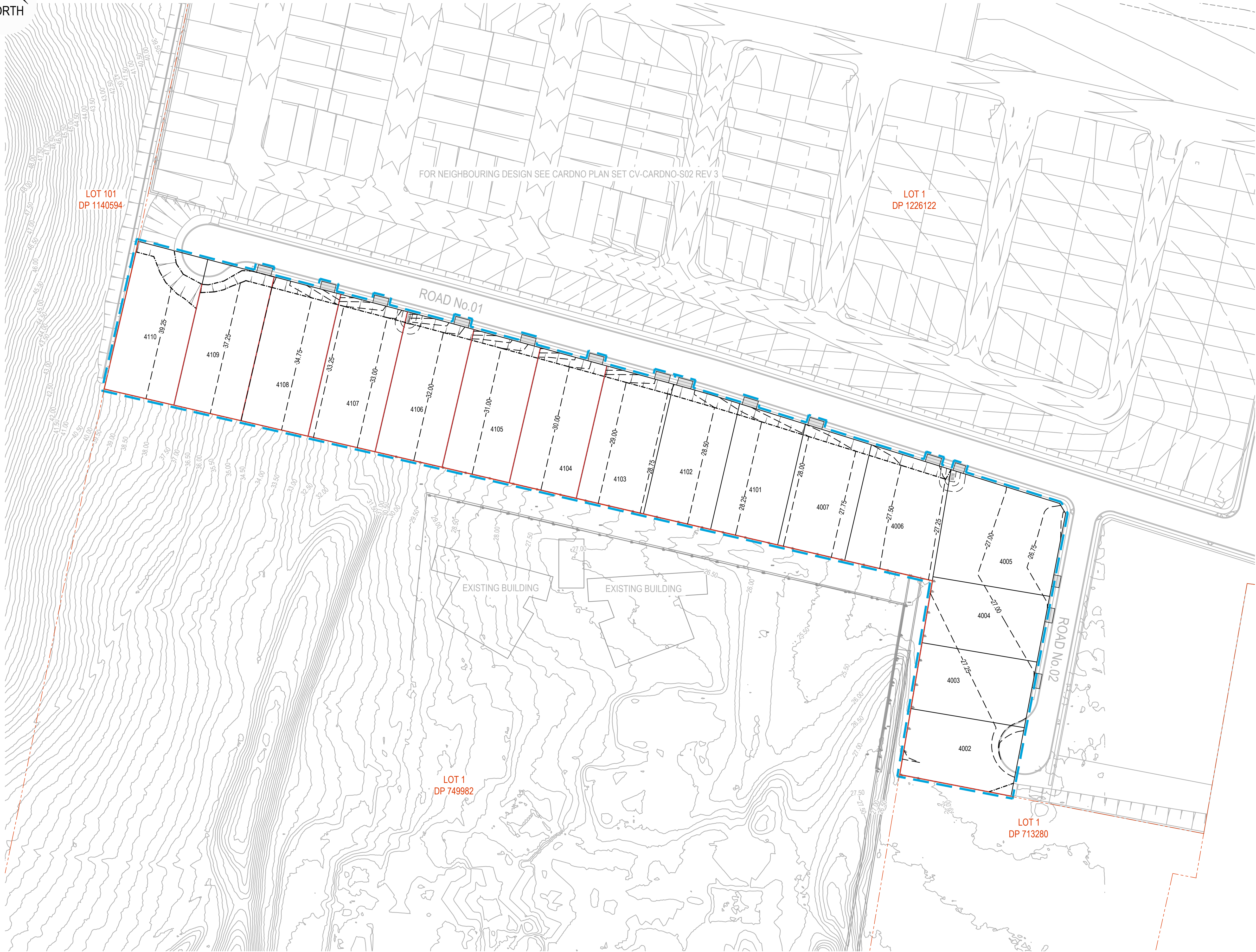
SITE / LOCATION (Image courtesy of Nearmap 07.03.2022)

LOT 1 DP 1226122

# 16 CHAPMAN STREET WERRINGTON ROAD AND DRAINAGE DESIGN

ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

Project No. 22-0055 Set No. 02 Milestone DA Plan 000 Revision A



## LEGEND

|                                                                                  | EXISTING | PROPOSED    | FUTURE |
|----------------------------------------------------------------------------------|----------|-------------|--------|
| UTILITY - ELECTRICITY<br>GAS<br>SEWER<br>WATER<br>TELECOMS<br>NBN<br>OPTIC FIBRE | E        | E           | E      |
|                                                                                  | G        | G           | G      |
|                                                                                  | S        | S           | S      |
|                                                                                  | W        | W           | W      |
|                                                                                  | T        | T           | T      |
|                                                                                  | NBN      | NBN         | NBN    |
| CONTOUR LINE & LABEL                                                             | ---      | ---         | ---    |
|                                                                                  | ---      | ---         | ---    |
| LOT NUMBER & BOUNDARY                                                            | LOT #    | LOT #       | LOT #  |
|                                                                                  | LOT #    | LOT #       | LOT #  |
| APPROXIMATE LIMIT OF WORKS                                                       |          |             |        |
|                                                                                  |          |             |        |
| ROAD, NUMBER, CONTROL LINE,<br>CHAINAGE & CHAINAGE MARK                          | ROAD     | ROAD        | ROAD   |
|                                                                                  | ROAD     | ROAD        | ROAD   |
| COUNCIL STANDARD KERB &<br>GUTTER                                                |          | K&G         |        |
|                                                                                  |          | K&G         |        |
| VEHICLE CROSSING TO COUNCIL<br>STANDARDS<br>(SHOWN INDICATIVELY)                 |          | VC          |        |
|                                                                                  |          | VC          |        |
| STORMWATER DRAINAGE PIPE<br>AND STRUCTURE                                        |          |             |        |
|                                                                                  |          |             |        |
| STORMWATER DRAINAGE PIPE<br>AND STUB                                             |          |             |        |
|                                                                                  |          |             |        |
| EASEMENT (REFER LEGEND)                                                          |          | (A) (B) (C) |        |
|                                                                                  |          | (A) (B) (C) |        |
| RETAINING WALL                                                                   |          | RW1         |        |
|                                                                                  |          | RW1         |        |
| BATTER                                                                           |          |             |        |
|                                                                                  |          |             |        |
| TREE - TO BE REMOVED                                                             |          |             |        |
|                                                                                  |          |             |        |

## GENERAL NOTES

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE PENRITH CITY COUNCIL'S WORKS SPECIFICATION CIVIL (CURRENT EDITION) AND/OR AS DIRECTED BY THEIR REPRESENTATIVE.
- THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST WHERE NECESSARY.
- COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL.
- DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS. CLARIFICATION OF DIMENSIONS SHALL BE SOUGHT FROM THE SUPERINTENDENT OR REFERRED TO THE DESIGNER.
- ALL NEW WORK IS TO MAKE A SMOOTH JUNCTION WITH THE EXISTING CONDITIONS.

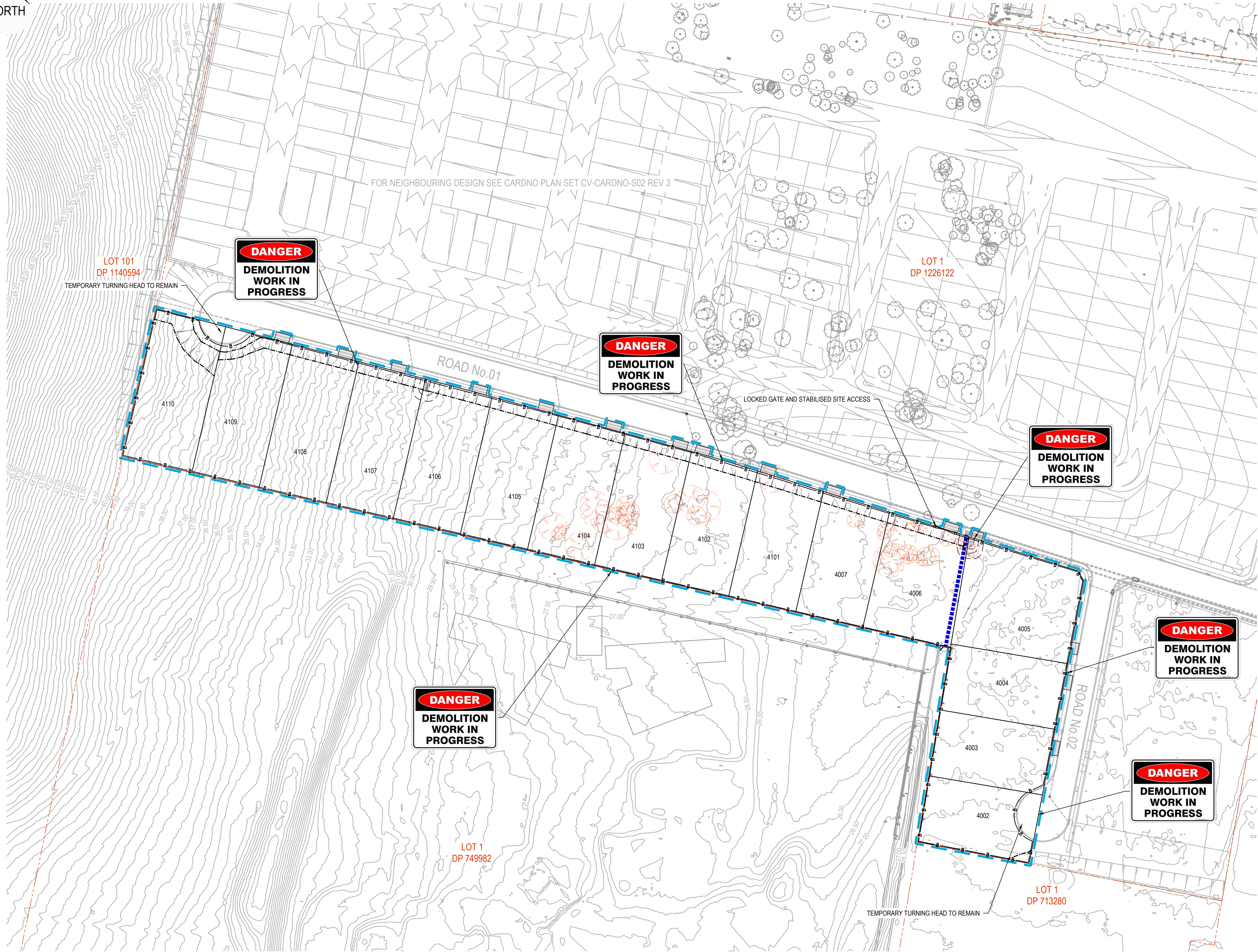
UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.



ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

|     |       |        |       |       |            |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                                 |  |                                                                                               |  |                                                                                                                                                                                                        |  |                                                                       |  |                                  |  |                 |  |             |  |               |  |
|-----|-------|--------|-------|-------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------|--|----------------------------------|--|-----------------|--|-------------|--|---------------|--|
|     |       |        |       |       |            | Disclaimer and Copyright:<br>ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.<br>USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.<br>THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD |  | Scale:<br> |  | For:<br> |  | By:<br><br>ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au |  | Project:<br>16 CHAPMAN STREET<br>WERRINGTON<br>ROAD & DRAINAGE DESIGN |  | Title:<br>GENERAL LAYOUT<br>PLAN |  |                 |  |             |  |               |  |
| Rev | Drawn | Design | Check | Appd. | Date       | Revision Description                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                 |  |                                                                                               |  |                                                                                                                                                                                                        |  | Project No.<br>22-0055                                                |  | Set No.<br>02                    |  | Milestone<br>DA |  | Plan<br>001 |  | Revision<br>A |  |
| A   | NZ    | NZ     | MG/NG | NG    | 11/03/2022 | ISSUED FOR APPROVAL                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                 |  |                                                                                               |  |                                                                                                                                                                                                        |  |                                                                       |  |                                  |  |                 |  |             |  |               |  |



## LEGEND

EXISTING TREES TO BE REMOVED



EXISTING CONTOURS

60.0

SITE SECURITY FENCE

6

1. CONTRACTOR TO ESTABLISH EXTENT OF ALL EXISTING SERVICES WITHIN THE EXTENT OF WORKS.
2. CONTRACTOR TO GAIN ALL NECESSARY APPROVALS & PERMITS TO DEMOLISH, CAP OR REMOVE EXISTING SERVICES AS REQUIRED.
3. CONTRACTOR TO ALLOW FOR THE DEMOLITION OF ALL EXISTING STRUCTURES & FEATURES (ABOVE & BELOW GROUND) ON THE SITE REQUIRED, INCLUDING BUILDINGS, FENCES, EXISTING PAVEMENT, DRAINAGE, SIGNS ETC.
4. ALL DEMOLITION WORKS SHALL COMPLY WITH THE PROVISIONS OF AS2601:2001 THE DEMOLITION OF STRUCTURES.
5. REMOVAL OF EXISTING ELECTRICAL INFRASTRUCTURE TO BE COMPLETED IN ACCORDANCE ELECTRICAL CONSULTANTS SPECIFICATIONS & DRAWINGS.
6. EXISTING SERVICES TO BE LOCATED FROM DBYD PLANS AND ONSITE SERVICES LOCATION.
7. TREE REMOVAL SHALL BE IN ACCORDANCE WITH THE PENRITH CITY COUNCIL'S REQUIREMENTS AND SPECIFICATIONS.



### SIGNS:

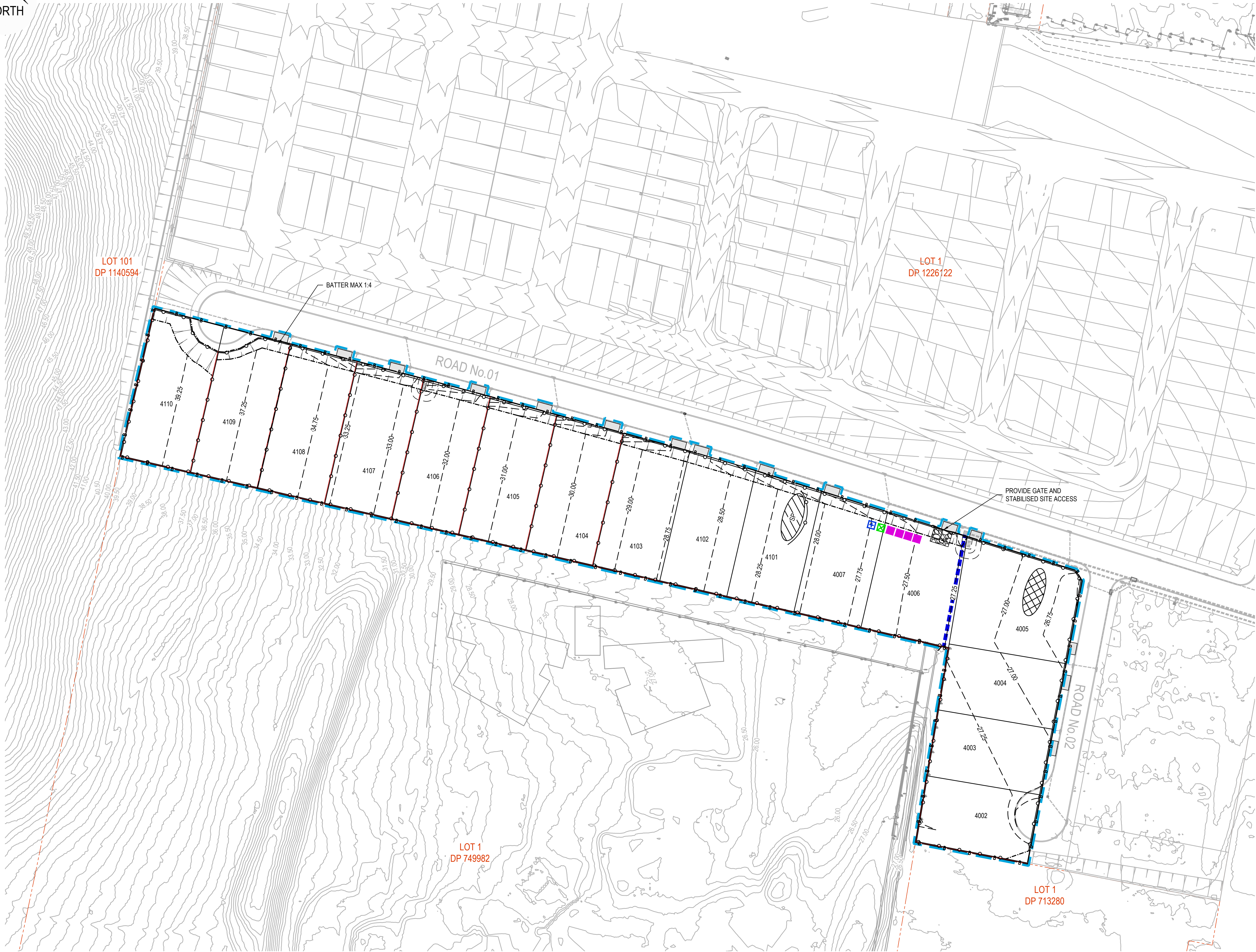
"DANGER - DEMOLITION IN PROGRESS", OR SIMILAR MESSAGE SHALL BE MAINTAINED ON THE FENCING AT APPROPRIATE PLACES TO WARN THE PUBLIC.

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

|     |   |    |    |       |    |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                      |          |                                                                                                                   |                                   |                                                                       |                           |               |                 |             |               |
|-----|---|----|----|-------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------|---------------------------|---------------|-----------------|-------------|---------------|
|     |   |    |    |       |    | Disclaimer and Copyright:<br>ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.<br>USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.<br>THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD | Scale:<br>0 10 20 30 40 50 60 70 80 90 100<br>SCALE 1:1000 (A1)<br>SCALE 1:2000 (A3) | For:<br> | By:<br><br>ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au | <br>JAS-ANZ<br>www.jas-anz.org.au | Project:<br>16 CHAPMAN STREET<br>WERRINGTON<br>ROAD & DRAINAGE DESIGN | Title:<br>DEMOLITION PLAN |               |                 |             |               |
| Rev | A | NZ | NZ | MG/NG | NG | 11/03/2022                                                                                                                                                                                                                                                                                                                                                                                         | ISSUED FOR APPROVAL                                                                  |          |                                                                                                                   |                                   |                                                                       | Project No.<br>22-0055    | Set No.<br>02 | Milestone<br>DA | Plan<br>002 | Revision<br>A |
|     |   |    |    |       |    | Revision Description                                                                                                                                                                                                                                                                                                                                                                               |                                                                                      |          |                                                                                                                   |                                   |                                                                       |                           |               |                 |             |               |



| LEGEND                                                                                     |           |
|--------------------------------------------------------------------------------------------|-----------|
| CONTOURS                                                                                   | 10.0 20.0 |
| STABILIZED SITE ACCESS                                                                     |           |
| POSSIBLE STOCKPILE LOCATION                                                                |           |
| POSSIBLE SEDIMENT BASIN LOCATION                                                           |           |
| SITE SECURITY FENCE                                                                        |           |
| SEDIMENT FENCE                                                                             |           |
| PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)                                             |           |
| GREEN WASTE BIN (1 x 2.5 x 2.5m)                                                           |           |
| MASONRY WASTE BIN (1 x 2.5 x 2.5m)                                                         |           |
| WASTE BINS x 4 - 1 x MIXED MATERIAL, 1 x PAPER / CARDBOARD, 1 x METAL & 1 x TREATED TIMBER |           |

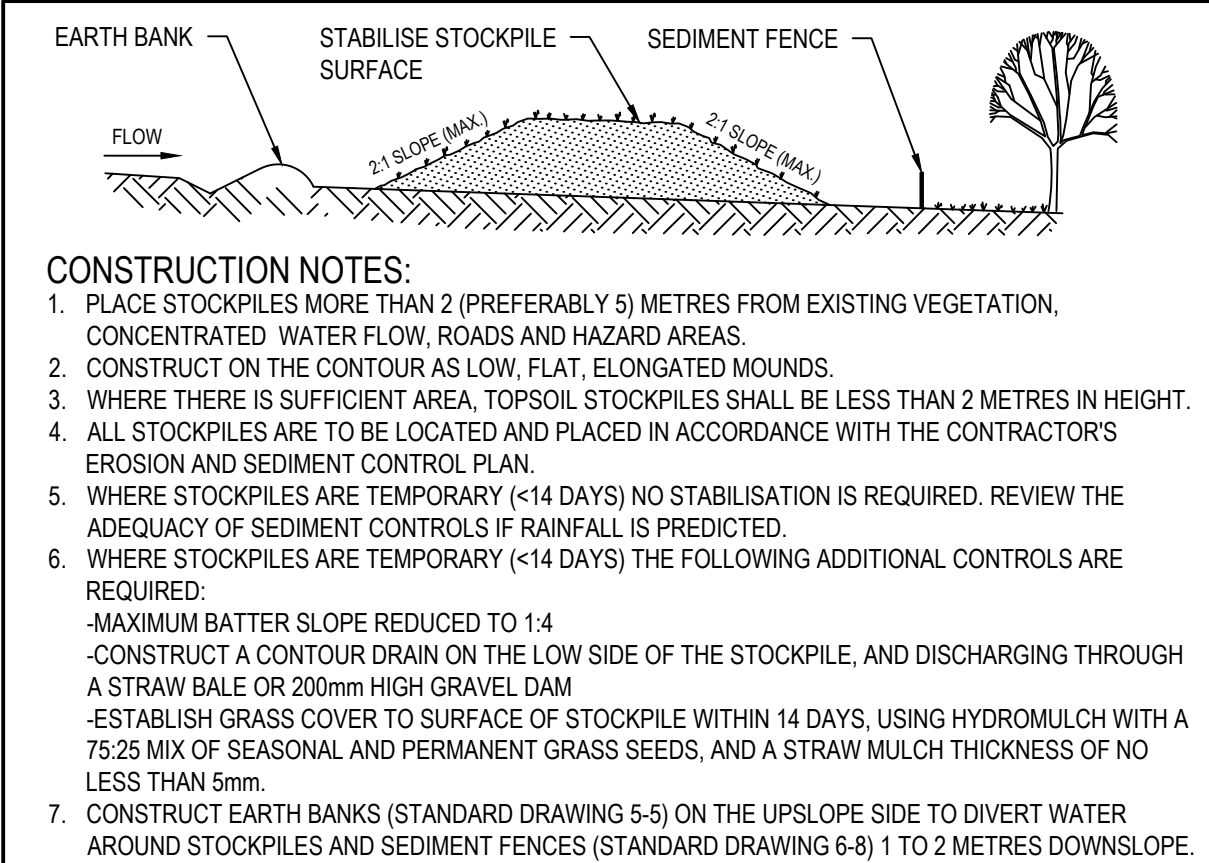
ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

|             |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
|-------------|---|----|----|-------|----|------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|--|----------|--|-------------------------------------------------------------------------------------------------------------------|--|-----------------------------------|--|-----------------------------------------------------------------------|--|----------------------------------------------|--|
|             |   |    |    |       |    |            |                     | Disclaimer and Copyright:<br>ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.<br>USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.<br>THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD |  | Scale:<br>0 10 20 30 40 50 60 70 80 90 100<br>SCALE 1:1000 (A1)<br>SCALE 1:2000 (A3) |  | For:<br> |  | By:<br><br>ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au |  | <br>JAS-ANZ<br>www.jas-anz.com.au |  | Project:<br>16 CHAPMAN STREET<br>WERRINGTON<br>ROAD & DRAINAGE DESIGN |  | Title:<br>SEDIMENT & EROSION CONTROL<br>PLAN |  |
| Rev         | A | NZ | NZ | MG/NG | NG | 11/03/2022 | ISSUED FOR APPROVAL |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Drawn       |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Design      |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Check       |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Appd.       |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Date        |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Revision    |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |
| Description |   |    |    |       |    |            |                     |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                      |  |          |  |                                                                                                                   |  |                                   |  |                                                                       |  |                                              |  |

SEDIMENT & EROSION CONTROL NOTES

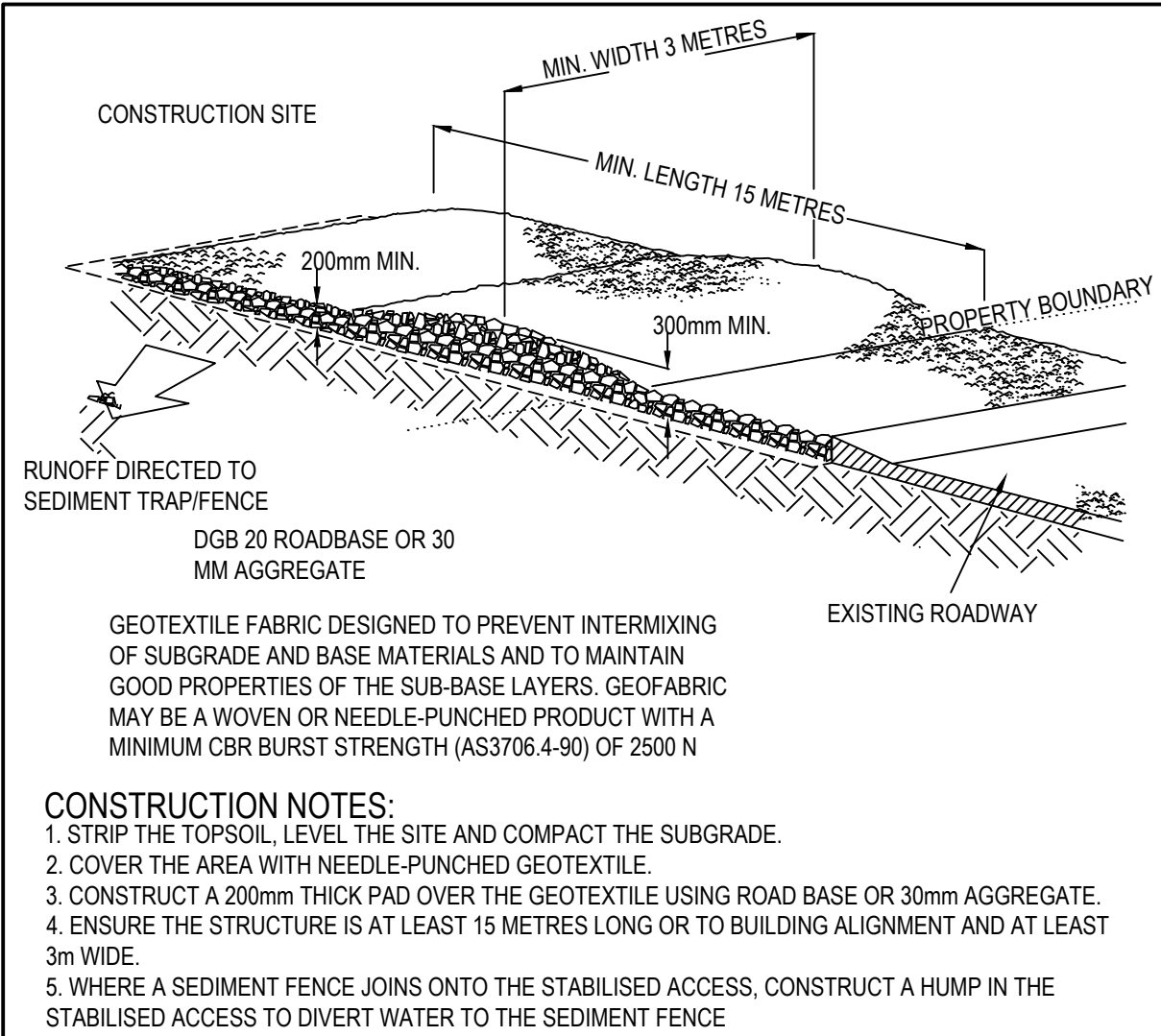
1. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF ANY WORKS BEING CARRIED OUT. ALL SOIL AND EROSION MEASURES SHALL BE MAINTAINED AND KEPT IN PLACE FOR THE FULL DURATION OF THE WORKS AND SHALL ONLY BE REMOVED AT FINAL STABILIZATION OF THE WORKS. WHERE IT IS NECESSARY TO UNDERTAKE STRIPPING IN ORDER TO CONSTRUCT A SEDIMENT CONTROL DEVICE ONLY SUFFICIENT GROUND SHALL BE STRIPPED TO ALLOW CONSTRUCTION.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED & MAINTAINED AS INDICATED ON THESE DRAWINGS. LOCATION AND EXTENT OF SOIL & WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT.
3. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ANY NECESSARY CONTROL IS IN PLACE EVEN THOUGH SUCH CONTROL MAY NOT BE SHOWN ON THE PLAN.
4. THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS & ALL EMPLOYEES OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION & POLLUTION TO DOWNSTREAM AREAS
5. APART FROM SEDIMENT BASINS, THE CONTRACTOR SHALL REGULARLY MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES & DESILT SUCH STRUCTURES PRIOR TO THE REDUCTION IN CAPACITY OF 30% DUE TO ACCUMULATED SEDIMENT. THE SEDIMENT SHALL BE DISPOSED OF ON SITE IN A MANNER APPROVED BY THE ENGINEER.
6. THE CONTRACTOR SHALL TEMPORARILY REHABILITATE WITHIN TEN (10) DAYS ANY DISTURBED AREAS PROVIDING A MINIMUM 60% COVER. FINAL REHABILITATION IS TO BE PROVIDED WITHIN A FURTHER 60 DAYS WITH A MINIMUM 70% COVER.
7. THE CONTRACTOR SHALL PROVIDE WATERING OF THE VEGETATED BATTERS FOR MAINTENANCE PERIOD. PLANT, MACHINERY AND VEHICLES SHALL NOT BE DRIVEN OVER GRASSED AREAS UNLESS ON AN APPROVED HAULAGE ROUTE.
8. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS QUICKLY AS POSSIBLE TO MINIMISE RISK OF EROSION.
9. SITE ACCESS SHALL BE RESTRICTED TO THE NOMINATED POINTS. THE CONTRACTOR SHALL PROVIDE STABILISED SITE ACCESS.
10. DUST AND SITE DISTURBANCE MUST BE KEPT TO A MINIMUM. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS MUST BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO REDUCE WIND EROSION. ERECT BARRIER FENCING TO MINIMISE LAND DISTURBANCE BY PREVENTING VEHICULAR AND PEDESTRIAN ACCESS TO AREAS BEING REHABILITATED AND LANDS THAT DO NOT NEED TO BE DISTURBED BY THIS PROJECT.
11. STOCKPILE TOPSOILS, SUBSOILS AND OTHER MATERIALS SEPARATELY.
12. TOPSOIL SHALL BE STORED IN LOW MOUNDS NO MORE THAN 2 METRES HIGH AND RE-USED WITHIN TWO MONTHS TO MAINTAIN ACTIVE POPULATIONS OF BENEFICIAL SOIL MICROBES & SEED.
13. PLACE ALL STOCKPILES AT LEAST FIVE METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS, ESPECIALLY EARTH BANKS AND ROADS. IF NECESSARY, EARTH BANKS OR DRAINS WILL BE CONSTRUCTED TO DIVERT LOCALISED RUN-ON.
14. TURN TOPSOIL STOCKPILES OVER TO AERATE THEM AT MONTHLY INTERVALS. ENSURE VEGETATION IS NOT INCORPORATED INTO THE SOIL.

15. AVOID REVERSING THE SOIL PROFILE MATERIALS DURING FILL OPERATIONS - REPLACE DISTURBED SOILS IN THEIR ORIGINAL ORDER.
16. ON COMPLETION OF MAJOR EARTHWORKS AND BEFORE ADDING TOPSOIL, LEAVE DISTURBED LANDS WITH A LOOSE SURFACE. ALTERNATELY, DISTURBED AREAS PREVIOUSLY COMPACTED BY CONSTRUCTION WORKS WILL BE RIPPED TO MORE THAN 200mm ALONG THE CONTOUR BEFORE APPLYING TOPSOIL.
17. PROVIDING MATERIALS ARE AVAILABLE, SPREAD TOPSOIL TO A MINIMUM DEPTH OF 75mm IN REVEGETATION AREAS ON SLOPES OF 4(H):1(V) OR LESS AND TO A DEPTH OF 40 TO 60mm IN REVEGETATION AREAS STEEPER THAN 4:1.
18. LEAVE TOPSOIL IN A SCARIFIED OR ROUGH CONDITION ONCE REPLACED TO HELP MOISTURE INFILTRATION AND REDUCE SOIL EROSION.
19. ENSURE SOIL IS THOROUGHLY SOAKED TO A DEPTH OF 75mm (RAIN OR IRRIGATION) IMMEDIATELY BEFORE PLANTING.
20. HANDLE TOPSOIL ONLY WHEN IT IS MOIST (NOT WET OR DRY) TO AVOID DECLINE OF SOIL STRUCTURE
21. THE CONTRACTOR SHALL MAINTAIN A LOG BOOK DETAILING:  
- RECORDS OF ALL RAINFALL  
- CONDITION OF SOIL AND WATER MANAGEMENT STRUCTURES  
- ANY APPLICATION OF FLOCCULATING AGENTS TO SEDIMENT BASIN  
- VOLUMES OF ALL WATER DISCHARGED FROM SEDIMENT BASINS  
- ANY ADDITIONAL REMEDIAL WORKS REQUIRED.
22. THE LOG BOOK SHALL BE MAINTAINED ON A WEEKLY BASIS AND BE MADE AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. THE ORIGINAL LOG BOOK SHALL BE ISSUED TO THE PROJECT MANAGER AT THE COMPLETION OF WORKS
23. ALL ROAD EMBANKMENTS TO BE STABILISED AS PER LANDSCAPE ARCHITECTS DETAILS.
24. A SELF AUDITING PROGRAM SHOULD BE ESTABLISHED BASED ON A CHECK SHEET DEVELOPED FOR THE SITE. A SITE INSPECTION USING THE CHECK SHEET SHOULD BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE AND IMMEDIATELY FOLLOWING RAINFALL EVENTS THAT CAUSE RUNOFF.
25. UNDERTAKE THE SELF AUDIT BY:  
- WALKING AROUND THE SITE SYSTEMATICALLY (E.G. CLOCKWISE)  
- RECORDING THE CONDITION OF EVERY BMP EMPLOYED  
- RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH BMP  
- RECORDING THE SITE WHERE SEDIMENT IS DISPOSED  
- FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER/SITE OPERATOR FOR THEIR INFORMATION
26. IN PARTICULAR, INSPECT:  
- LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE  
- ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES, ENSURING THEY ARE OPERATING CORRECTLY  
- AREAS THAT MIGHT SHOW WHETHER SEDIMENT OR OTHER POLLUTANTS ARE LEAVING THE SITE OR HAVE POTENTIAL TO DO SO  
- ALL DISCHARGE POINTS, TO ASSESS WHETHER THE EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO THE RECEIVING WATERS
27. A SITE INSPECTION USING THE CHECK SHEET WILL BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE, AND IMMEDIATELY FOLLOWING RAINFALL EVENTS GREATER THAN 5mm IN 24 HOURS.



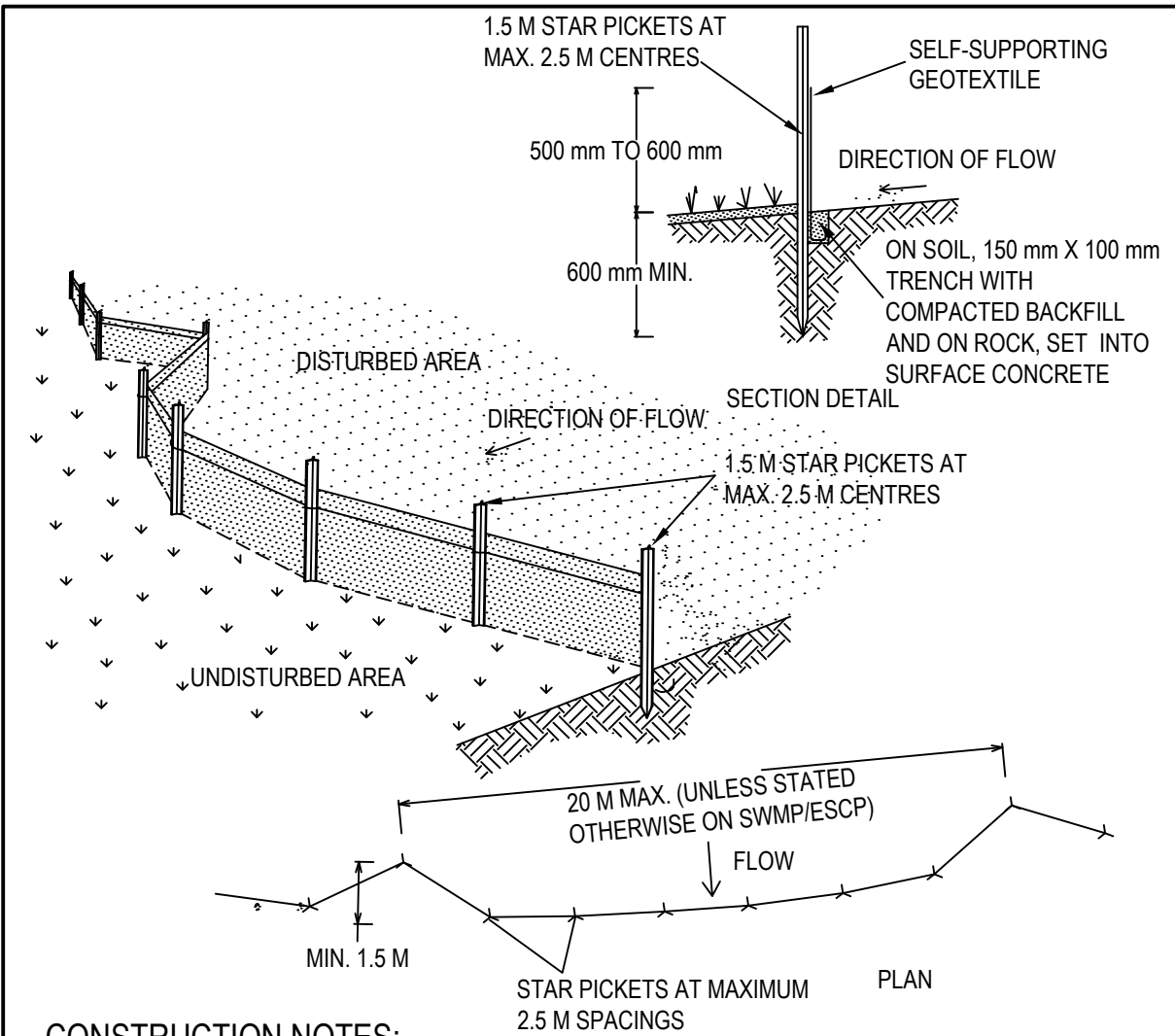
STOCKPILES

SD 4-1



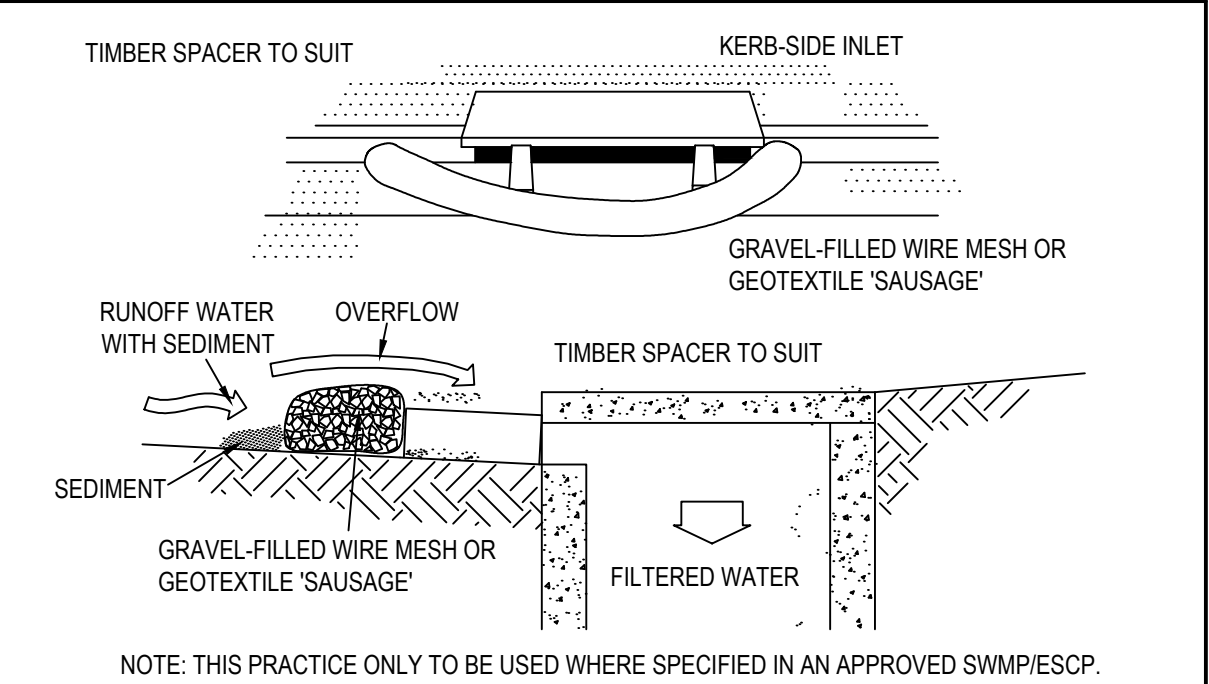
STABILISED SITE ACCESS

SD 6-14



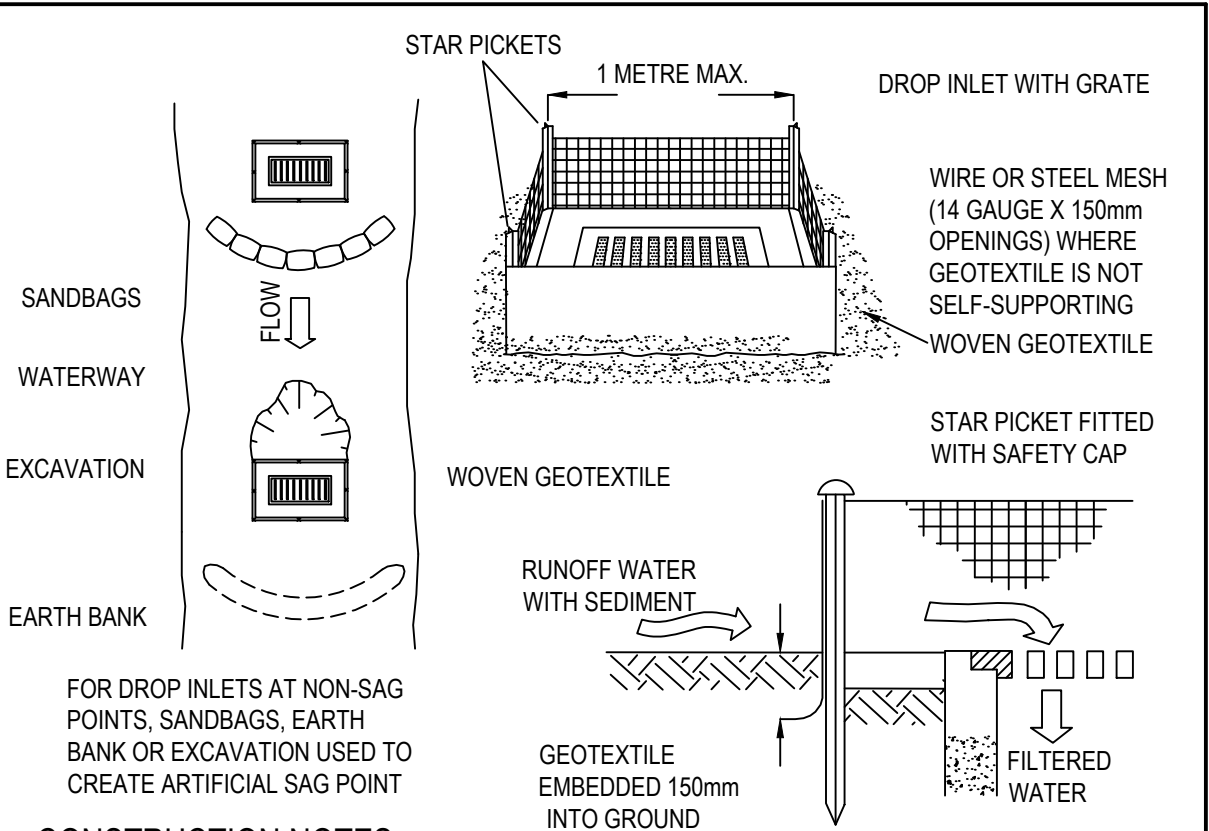
SEDIMENT FENCE

SD 6-8



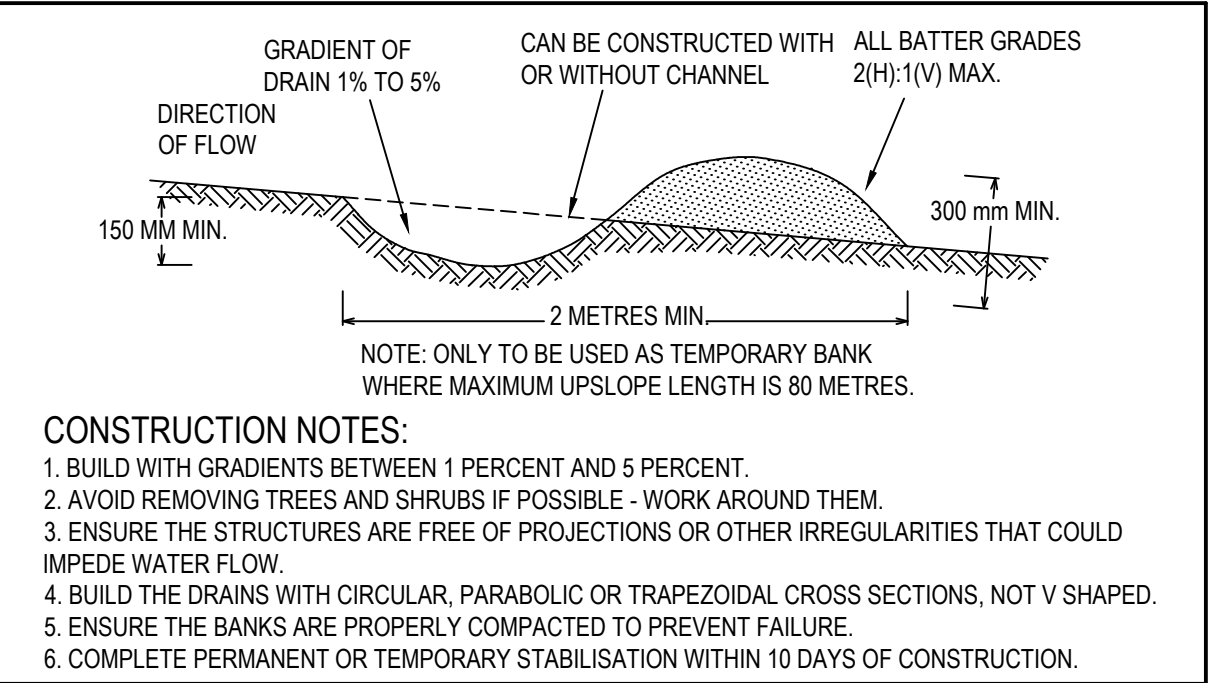
MESH AND GRAVEL INLET FILTER

SD 6-11



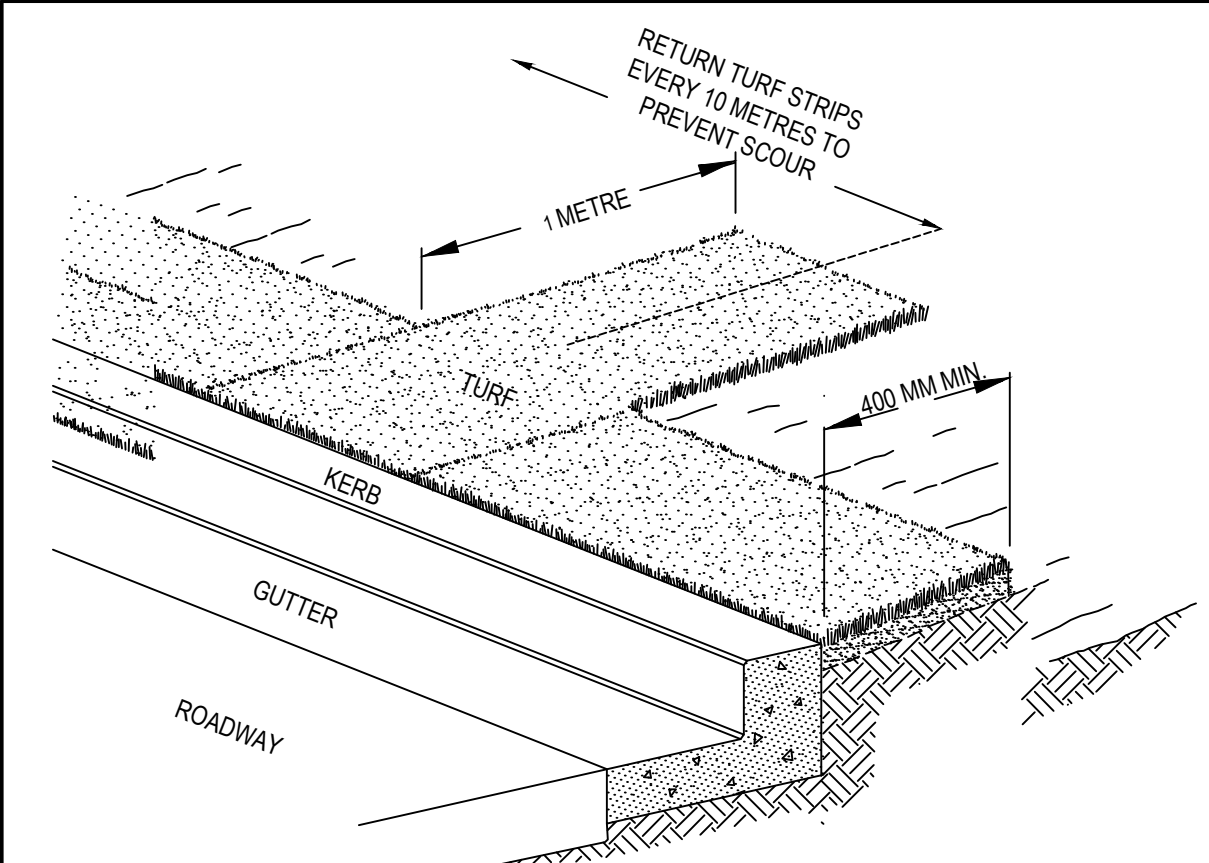
GEOTEXTILE INLET FILTER

SD 6-12



EARTH BANK (LOW FLOW)

SD 5-5



KERBSIDE TURF STRIP

SD 6-13

|                                              |                              |
|----------------------------------------------|------------------------------|
| <b>1. Erosion Hazard and Sediment Basins</b> |                              |
| Site Name:                                   | 16 Chapman Street Werrington |
| Site Location:                               | 16 Chapman Street Werrington |
| Precinct/Stage:                              |                              |
| Other Details:                               |                              |

| Site area                     | Sub-catchment or Name of Structure | Notes |
|-------------------------------|------------------------------------|-------|
| Total catchment area (ha)     | 3.9                                |       |
| Disturbed catchment area (ha) | 3.9                                |       |

| Soil analysis (enter sediment type if known, or laboratory particle size data) |        |  |  |  |  |  |  |  |                                                                   |
|--------------------------------------------------------------------------------|--------|--|--|--|--|--|--|--|-------------------------------------------------------------------|
| Sediment Type (C, F or D) if known:                                            |        |  |  |  |  |  |  |  |                                                                   |
| % sand (fraction 0.02 to 2.00 mm)                                              | 25     |  |  |  |  |  |  |  | From Appendix C (if known)                                        |
| % silt (fraction 0.002 to 0.02 mm)                                             | 25     |  |  |  |  |  |  |  | Enter the percentage of each soil fraction. E.g. enter 10 for 10% |
| % clay (fraction finer than 0.002 mm)                                          | 50     |  |  |  |  |  |  |  | E.g. enter 10 for dispersion of 10%                               |
| Dispersion percentage                                                          | 17.0   |  |  |  |  |  |  |  | See Section 6.3.3(e). Auto-calculated                             |
| % of whole soil dispersible                                                    | 10.625 |  |  |  |  |  |  |  | Automatic calculation from above                                  |
| Soil Texture Group                                                             | D      |  |  |  |  |  |  |  |                                                                   |

| Rainfall data                           |      |  |  |  |  |  |  |  |                                                                        |
|-----------------------------------------|------|--|--|--|--|--|--|--|------------------------------------------------------------------------|
| Design rainfall depth (no of days)      | 5    |  |  |  |  |  |  |  | See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25. |
| Design rainfall depth (percentile)      | 80   |  |  |  |  |  |  |  |                                                                        |
| x-day, y-percentile rainfall event (mm) | 27.4 |  |  |  |  |  |  |  |                                                                        |
| Rainfall R-factor (if known)            |      |  |  |  |  |  |  |  | Only need to enter one or the other here                               |
| IFD: 2-year, 6-hour storm (if known)    | 8.78 |  |  |  |  |  |  |  |                                                                        |

| RUSLE Factors                       |       |     |     |     |     |     |     |     |                                                          |
|-------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|----------------------------------------------------------|
| Rainfall erosivity (R-factor)       | 1770  |     |     |     |     |     |     |     | Auto-filled from above                                   |
| Soil erodibility (K-factor)         | 0.038 |     |     |     |     |     |     |     |                                                          |
| Slope length (m)                    | 150   |     |     |     |     |     |     |     |                                                          |
| Slope gradient (%)                  | 2.5   |     |     |     |     |     |     |     | RUSLE LS factor calculated for a high hill/sloped ratio. |
| Length/gradient (LS-factor)         | 0.69  |     |     |     |     |     |     |     |                                                          |
| Erosion control practice (P-factor) | 1.3   | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |                                                          |
| Ground cover (C-factor)             | 1     | 1   | 1   | 1   | 1   | 1   | 1   | 1   |                                                          |

| Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins) |      |   |   |   |   |   |   |   |                                      |
|------------------------------------------------------------------------------------------|------|---|---|---|---|---|---|---|--------------------------------------|
| Storage (soil) zone design (no of months)                                                | 2    | 2 | 2 | 2 | 2 | 2 | 2 | 2 | Minimum is generally 2 months        |
| Cv (Volumetric runoff coefficient)                                                       | 0.39 |   |   |   |   |   |   |   | See Table F2, page F-4 in Appendix F |

| Calculations and Type D/F Sediment Basin Volumes         |     |  |  |  |  |  |  |  |                                        |
|----------------------------------------------------------|-----|--|--|--|--|--|--|--|----------------------------------------|
| Soil loss (t/ha/yr)                                      | 61  |  |  |  |  |  |  |  |                                        |
| Soil Loss Class                                          | 1   |  |  |  |  |  |  |  | See Table 4.2, page 4-13               |
| Soil loss (m <sup>3</sup> /ha/yr)                        | 47  |  |  |  |  |  |  |  | Conversion to cubic metres             |
| Sediment basin storage (soil) volume (m <sup>3</sup> )   | 30  |  |  |  |  |  |  |  | See Sections 6.3.4(i) for calculations |
| Sediment basin settling (water) volume (m <sup>3</sup> ) | 417 |  |  |  |  |  |  |  | See Sections 6.3.4(i) for calculations |
| Sediment basin total volume (m <sup>3</sup> )            | 447 |  |  |  |  |  |  |  |                                        |

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

ISSUED FOR DEVELOPMENT APPLICATION  
NOT FOR CONSTRUCTION

16 CHAPMAN STREET  
WERRINGTON  
ROAD & DRAINAGE DESIGN

SEDIMENT & EROSION CONTROL  
DETAILS

|             |         |           |      |          |
|-------------|---------|-----------|------|----------|
| Project No. | Set No. | Milestone | Plan | Revision |
| 22-0055     | 02      | DA        | 101  | A        |

The Bathla Group

Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au



Project:

Title:

Disclaimer and Copyright:

ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE. THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD

Scale:

For:

By:

Project:

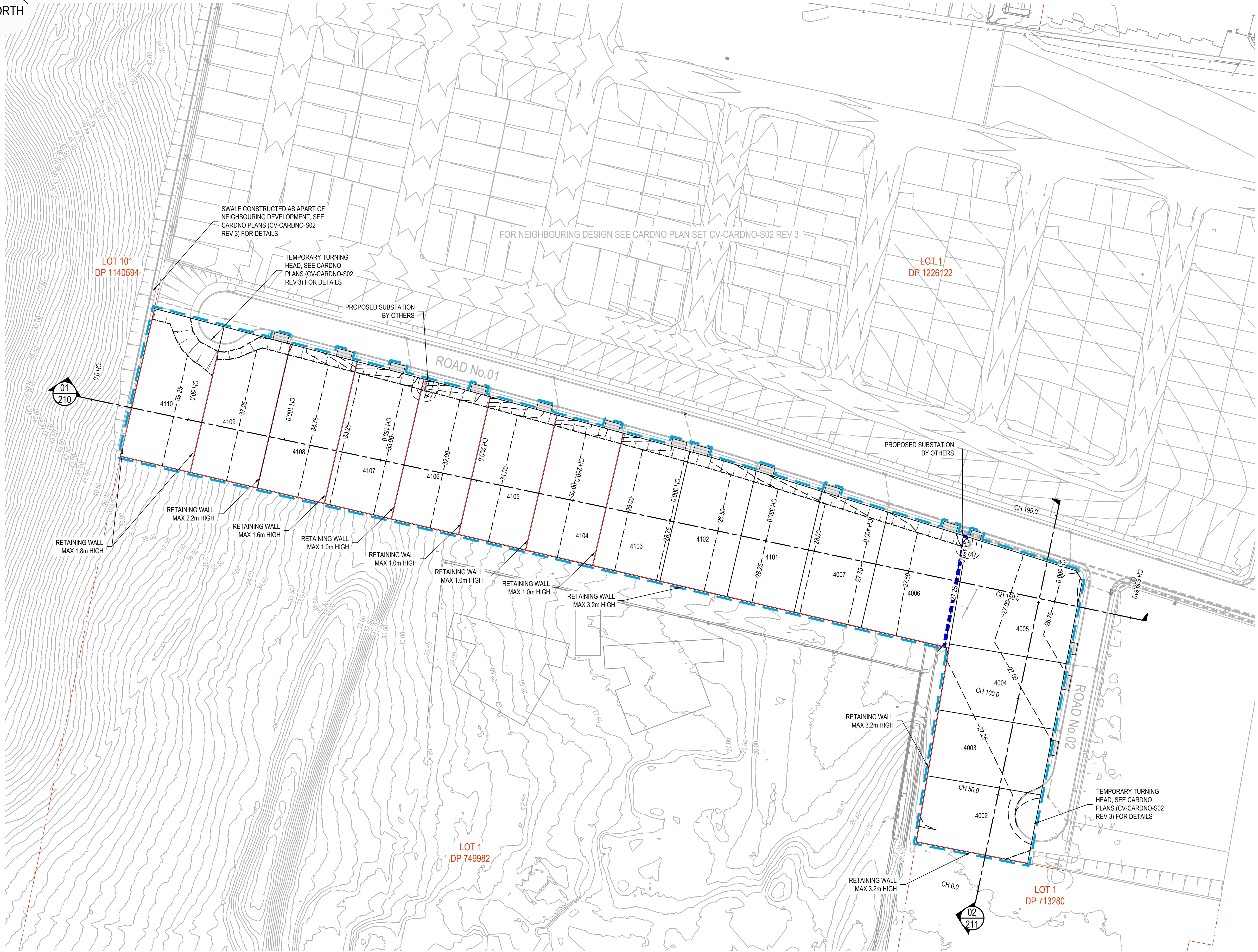
Title:



LEGEND

DENOTES EASEMENT FOR SERVICES

(A/)



ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

| Rev | Drawn | Design | Check | Appd. | Date       | Revision Description |
|-----|-------|--------|-------|-------|------------|----------------------|
| A   | NZ    | NZ     | MG/NG | NG    | 11/03/2022 | ISSUED FOR APPROVAL  |

Disclaimer and Copyright:  
ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.  
USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.  
THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD

Scale:  
0 10 20 30 40 50 60 70 80 90 100  
SCALE 1:1000 (A1)  
SCALE 1:2000 (A3)



ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

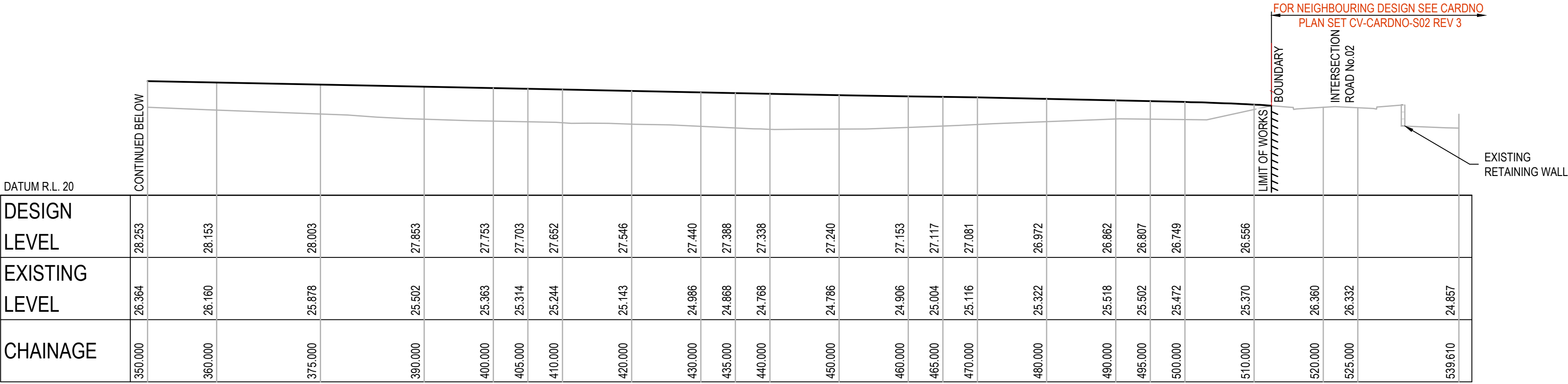


Project:  
16 CHAPMAN STREET  
WERRINGTON  
ROAD & DRAINAGE DESIGN

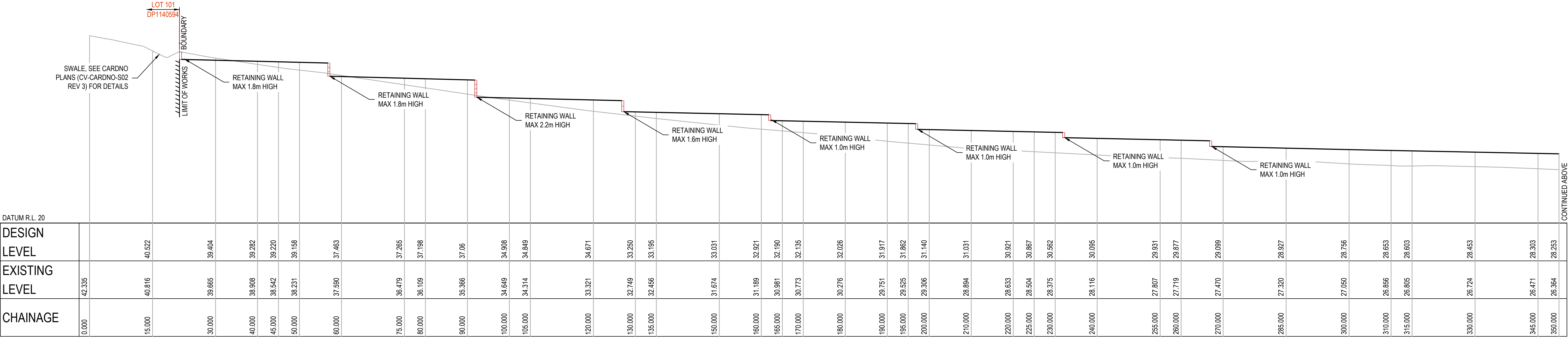
Title:  
ENGINEERING PLAN

|             |         |           |      |          |
|-------------|---------|-----------|------|----------|
| Project No. | Set No. | Milestone | Plan | Revision |
| 22-0055     | 02      | DA        | 200  | A        |

| LEGEND           |  |
|------------------|--|
| DESIGN SURFACE   |  |
| EXISTING SURFACE |  |



SITE SECTION 01  
SCALE: 1:500 (H)  
SCALE: 1:250 (V)



SITE SECTION 01  
SCALE: 1:500 (H)  
SCALE: 1:250 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

|     |       |        |       |       |      |                      |                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                                                            |  |                 |  |                                                                                                                   |  |                                         |  |                                                                       |  |                                           |  |
|-----|-------|--------|-------|-------|------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------|--|-----------------|--|-------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|--|-----------------------------------------------------------------------|--|-------------------------------------------|--|
|     |       |        |       |       |      |                      | Disclaimer and Copyright:<br>ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.<br>USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.<br>THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD |  | Scale:<br>0 5 10 15 20 25 30 35 40 45 50<br>SCALE 1:500 (A1)<br>0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25<br>SCALE 1:250 (A1) |  | For:<br>        |  | By:<br><br>ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au |  | <br>JAS-ANZ<br>www.jas-anz.org/REGISTER |  | Project:<br>16 CHAPMAN STREET<br>WERRINGTON<br>ROAD & DRAINAGE DESIGN |  | Title:<br>SITE SECTIONS<br>SHEET 01 OF 02 |  |
| Rev | Drawn | Design | Check | Appd. | Date | Revision Description | Project No.<br>22-0055                                                                                                                                                                                                                                                                                                                                                                             |  | Set No.<br>02                                                                                                              |  | Milestone<br>DA |  | Plan<br>210                                                                                                       |  | Revision<br>A                           |  |                                                                       |  |                                           |  |

| LEGEND           |                                                                                   |
|------------------|-----------------------------------------------------------------------------------|
| DESIGN SURFACE   |  |
| EXISTING SURFACE |  |

---

---



SCALE: 1:500 (H)  
SCALE: 1:250 (V)

02

DATUM R.L. 20

CHAINAGE

ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.  
USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.  
THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD



The **Bathla**  
Group



Orion Consulting



**SUSTAINABLE**  
CERTIFICATION  
✓ ISO 9001  
✓ ISO 45001



Project:

16 CHAPMAN STREET

SITE SECTIONS  
SHEET 02 OF 02

|             |         |           |      |          |
|-------------|---------|-----------|------|----------|
| Project No. | Set No. | Milestone | Plan | Revision |
| 22-0055     | 02      | DA        | 211  | A        |



LEGEND

CATCHMENT NAME,  
DIRECTION OF FALL & AREA

DESIGN

CONTOURS (EXISTING & DESIGN)

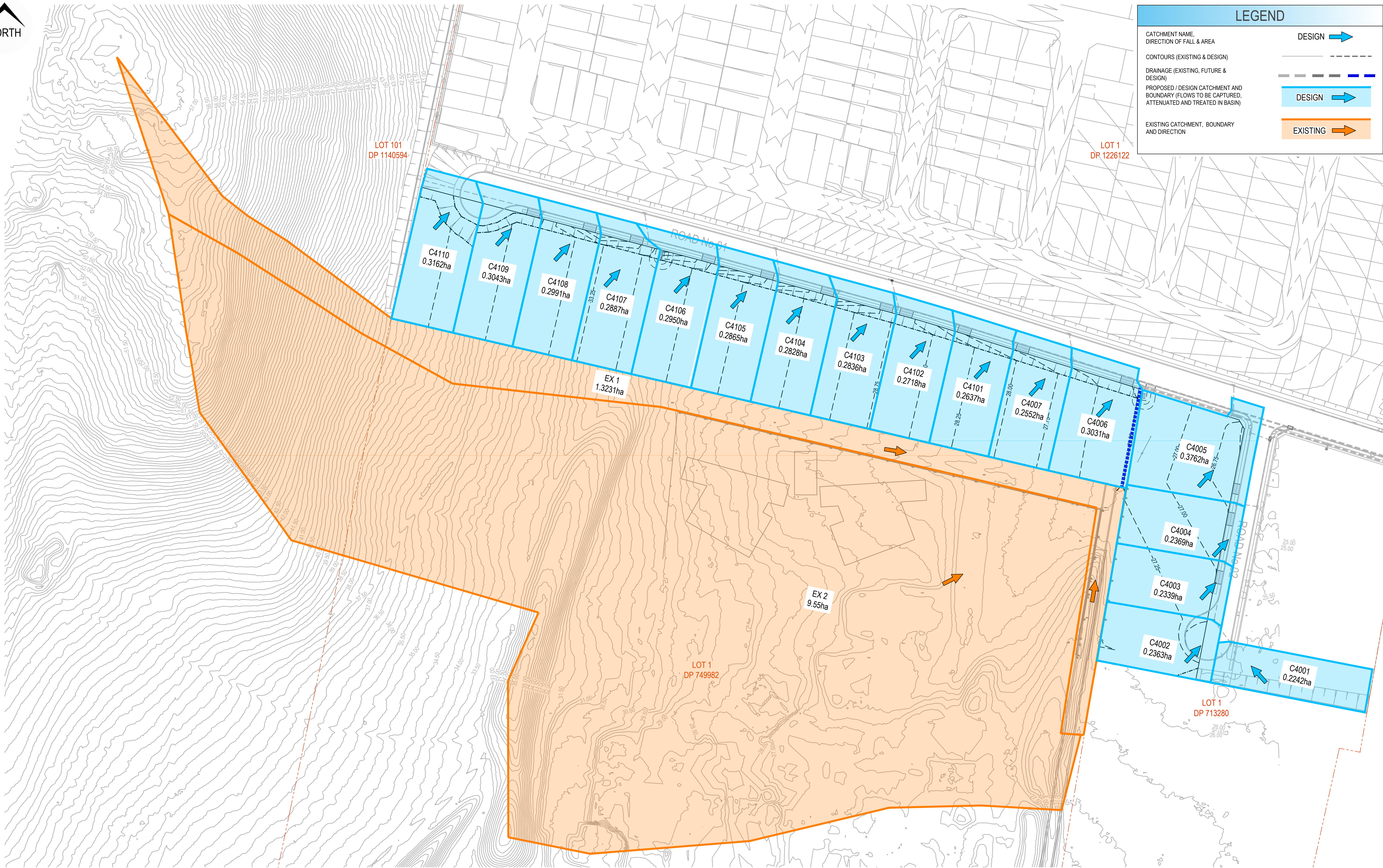
DRAINAGE (EXISTING, FUTURE &  
DESIGN)

PROPOSED / DESIGN CATCHMENT AND  
BOUNDARY (FLOWS TO BE CAPTURED,  
ATTENUATED AND TREATED IN BASIN)

DESIGN

EXISTING CATCHMENT, BOUNDARY  
AND DIRECTION

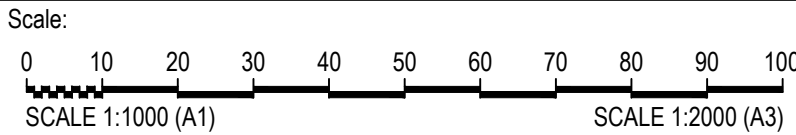
EXISTING



ISSUED  
FOR **DEVELOPMENT APPLICATION**  
NOT FOR CONSTRUCTION

| Rev | Drawn | Design | Check | Appd. | Date       | Revision Description |
|-----|-------|--------|-------|-------|------------|----------------------|
| A   | NZ    | NZ     | MG/NG | NG    | 11/03/2022 | ISSUED FOR APPROVAL  |

Disclaimer and Copyright:  
ALL DIMENSIONS TO BE CHECKED ON SITE BY THE  
CONTRACTOR PRIOR TO CONSTRUCTION.  
USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.  
THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE  
COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING  
ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED  
OR COPIED WHOLLY OR IN PART WITHOUT THE  
PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD



By:

Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

SUSTAINABLE

JAS-ANZ

Project:  
16 CHAPMAN STREET  
WERRINGTON  
ROAD & DRAINAGE DESIGN

| Title: STORMWATER CATCHMENT PLAN |               |                 |             |               |
|----------------------------------|---------------|-----------------|-------------|---------------|
| Project No.<br>22-0055           | Set No.<br>02 | Milestone<br>DA | Plan<br>400 | Revision<br>A |