

## PROPOSED STORMWATER DRAINAGE PLANS

Proposed 2 Storeų Duplex Development 36 Alcoomie Street Villawood 2163

Reference

Client Dvųne Design

# 20220133-CDC-SW-DWG-02

Architect Dvųne Design



### Drawing Register

| Number | Name                              | Revision |
|--------|-----------------------------------|----------|
| S100   | Cover Sheet                       | 02       |
| S101   | Specifications Sheet              | 02       |
| S200   | Ground Floor Plan                 | 02       |
| S201   | First Floor Plan                  | 02       |
| S202   | Roof Plan                         | 02       |
| \$300  | Details Sheet                     | 02       |
| S400   | Erosion and Sediment Control Plan | 02       |

Australia, NSW code of practice and the to the relevant service codes. 2. These drawings shall be read in conjunction with all architectural and other consultants' before proceeding with the work.

obtained by scaling of these drawings. Use figured dimensions only. 4. Benchmarks have been established where indicated on the drawings. All levels are to ensure that the works are constructed to design line and level.

5. Setting out dimensions and levels shown on the drawings shall be verified by the contractor. by-laws and ordinances of the relevant building authorities. requirements and other relevant authority safety requirements.

superintendent. 9. Where new works abut existing the contractor shall ensure that a smooth even profile,

free from abrupt changes is obtained. 10. All works shall be carried out in accordance with the details shown on the drawings and these specifications.

11. Design levels given are to finished surface level and inclusive of topsoil. (topsoil depth varies)

12. The contractor shall arrange all survey set out to be carried out by a registered surveyor.

14. The locations of underground services shown on the drawing have been plotted from authorities own use and may not necessarily be updated or accurate. 15. The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment after installation. 16. Deboke Engineering Consultants do not guarantee that the services information shown on

17. It is the contractor's responsibility to obtain from the utility services authorities a current

expense. to do so will forfeit any claim for not being aware of conditions affecting the tender. 19. The contractor shall prepare accurate work-as-executed drawings following the

completion of all works. 20. It is the contractor's responsibility to have in place & maintain traffic facilities at all times

during construction. Workshop drawings to be reviewed and approved by design engineer.

### **DBYD DECLARATION**



DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

### SERVICES NOTE

SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.

### ABBREVIATIONS

| Ø or DIA<br>CO<br>DDO<br>DP<br>e<br>FFL<br>GTD<br>GSIP<br>IL<br>KIP<br>NGL<br>OFP<br>OSD<br>RCP<br>RL<br>RWT<br>SW<br>SWP<br>SWRM<br>SWS<br>TOK<br>TOK | DIAMETER<br>CLEAR OUT<br>DISH DRAIN OUTLET<br>DOWNPIPE<br>EXISTING<br>FINISHED FLOOR LEVEL<br>GRATED TRENCH DRAIN<br>GRATED SURFACE INLET PIT<br>INVERT LEVEL<br>KERB INLET PIT<br>NATURAL GROUND LEVEL<br>OVERLAND FLOWPATH<br>ON-SITE DETENTION<br>REINFORCED CONCRETE PIPE<br>REDUCED LEVEL<br>RAINWATER TANK<br>STORMWATER TANK<br>STORMWATER PIT<br>STORMWATER RISING MAIN<br>STORMWATER SUMP<br>TOP OF KERB<br>TOP OF WALL |
|--|--|
|  |  |
| IOW<br>uPVC  | UNPLASTICISED  |
|  | POLYVINYL CHLORIDE   |
|  |  |

### Erosion and Sediment Control Notes

### place.

2. During the construction period, these control measures will need to be inspected & maintained regularly, especially after storm events, by the contractor. 3. All work is to be carried out to prevent erosion, contamination & sedimentation of the storage site, surrounding areas & drainage systems. 4. Minimize disturbed area covered with natural vegetation. Only those areas directly required for construction are to be disturbed. 5. Install erosion/sediment control measures prior to commencement of construction or excavation operations.

150mm below ground.

8. Do not stockpile excavated material on the roadway. 9. Divert clean water from undisturbed areas around the working areas. 10. Construction entry/exit shall be via the location noted on the drawing. Contractor shall

direction.

operation act (poeo 1997) and shall be approved by local council 12. Adopt temporary measures as may be necessary for erosion & sediment control, including but not limited to the following: -- Drains: temporary drains and catch drains.

- Spreader banks or other structures: to disperse concentrated runoff.

- Silt traps: construction and maintenance of silt traps to prevent discharge of scoured material to downstream areas.

13. After rain, inspect, clean, and repair if required, temporary erosion & sediment control measures. 14. Remove temporary erosion & sediment control measures when they are no longer

required. 15. Comply with the requirements of Landcom's Managing Urban Stormwater - Soil and

Construction 'The Blue Book' latest edition 16. The erosion & sediment control plan provided is only indicative. The contractor should prepare a detailed ESCP suitable for the specific site conditions



Project No. Drawing No. 20220133-CDC-SW-DWG-02 S101 Title

Specifications Sheet

Scale

| Rev. | Description   | Design | Date       |
|------|---|--------|------------|
| 02   | Issued For Compliant Development<br>Certificate (CDC) | PC     | 08-11-2022 |
| 01   | Issued For Compliant Development<br>Certificate (CDC) | PC     | 31-03-2022 |
|      |   |        |            |
|      |   |        |            |
|      |   |        |            |
|      |   |        |            |
|      |   |        |            |

### General Notes

- 1. All work shall be carried out in accordance with council's requirements, building code of
- drawings and specifications and with such other written instructions as may be issued during the course of the contract. All discrepancies shall be referred to the superintendent for decision
- 3. All dimensions shown on the drawings are in millimeters (u.n.o.). Dimensions shall not be
- Australian height datum A.H.D.). The contractor shall undertake all necessary survey work to
- 6. All materials shall be in accordance with the requirements of the relevant codes and the
- 7. It is the contractor's responsibility to provide all safety fences, warning signs, traffic diversions and the like during construction. All works to comply with work health and safety
- 8. No trees shall be removed, cutback or relocated without the written instruction from the
- 13. Care is to be taken when excavating near existing services. No mechanical excavations are to be undertaken over telecommunications or electrical services. Hand excavate in these areas.
- diagrams provided by service authorities. This information has been prepared solely for the
- the drawing shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.
- copy of underground services search for the location of all existing services prior to commencement of any work and notify any conflict with the drawings immediately. Clearance shall be obtained from the relevant regulatory authority. Contractor to keep copy of underground services search on site at all times. Any damages to services or services adjustments shall be carried out by the contractor or relevant authority at the contractor's
- 18. Visit the site before submitting the final tender price to assess 'on site' conditions. Failure
- 21. Contractor to provide workshop coordinated drawings prior to commencing works on site.
  - Before earthworks can commence the erosion & sediment control measures must be in
- 6. Provide silt fence/straw bale barriers to the low side of all exposed earth excavations. Tie
- sediment fencing material to cyclone wire security fence. Sediment control fabric shall be an approved material (eg. Humes propex silt stop) standing 300mm above ground & extending
- 7. Isolate existing stormwater pits with straw bales or silt traps to filter all incoming flows.
- ensure all droppable soil & sediment is removed prior to construction traffic exiting site. Contractor shall ensure all construction traffic entering and leaving the site do so in a forward
- 11. Treat the stormwater runoff with suspended solids so the discharge water quality to council stormwater drainage system has a maximum concentration of suspended solids that does not exceed 50 milligrams per litre in accordance with the protection of the environment

dvyne

design

Architect

- 1. Contractor must verify all dimensions & existing levels, services & structures on site prior to commencement of work.
- 2. Plans to be read in conjunction with approved Architectural, Landscape, Structural, Hudraulic, & other services drawings & specifications. If any discrepancies exist between the drawings, the builder shall report the discrepancies to the engineer prior to commencement of any works.
- 3. Where subsoil drainage lines pass under floor slabs & vehicular pavements, slotted uPVC sewer grade pipe shall be used.
- 4. Charged lines to be sewer grade & sealed.
- 5. All pipes to have min 150mm cover if located within property. 6. All pits in driveways to be concrete & all pits in landscaped areas may be plastic.
- 7. Pits less than 600mm deep may be brick, precast or concrete. 8. All balconies & roofs to be drained & to have safety overflows in accordance with relevant Australian standards.
- 9. All grates to have child proof locks.
- 10. All drainage works to avoid tree roots.
- 11. Council's issued footway design levels to be incorporated into the finished levels once issued by council.
- 12. All works shall be in accordance with NCC BCA 2019 & A.S.3500.3.
- 13. Care to be taken around existing sewer. Structural advice required for sewer protection against additional loading from new pits, pipes, retaining walls & OSD basin water levels.
- 14. All ø300 drainage pipes & larger shall be class 2 approved spigot & socket RCP pipes with rubber ring joints (U.N.O.). All drainage pipes up to & including o225 shall be sewer grade uPVC with solvent weld joints (U.N.O.).
- 15. All pipe junctions, bends & tapers up to & including ø450 shall be via purpose made fittings.
- 16. Contractor to supply & install all fittings including various pipe adaptors to ensure proper connection between dissimilar pipe work.
- 17. All connections to existing drainage pits shall be made in accordance with the NCC BCA 2019 and relevant Australian Standards. The internal wall of the pit at the point of entry shall be cement rendered to ensure a smooth finish.
- 18. Bedding shall be type H1 (U.N.O.), in accordance with current relevant Australian standards.
- 19. Where stormwater lines pass under floor slabs, sewer grade rubber ring joints are to be used.
- 20. All pipes in covered balconies to be ø65 uPVC cast in concrete slab.
- 21. Ø65 PVC @ min 1.0% Ø100 PVC @ min 1.0% Ø225 PVC @ min 0.5% Unless Noted Otherwise

Ø90 PVC @ min 1.0% Ø150 PVC @ min 1.0% Ø300 PVC @ min 0.4%

- 22. Contractor to provide a break / open void in rail / balustrade for stormwater emergency overflow.
- 23. All enclosed areas/planter boxes be fitted with floor wastes.
- 24. Downpipes to be checked by architect & plumber prior to construction.
- 25. Provide 3.0m length of ø100 subsoil drainage pipe wrapped in fabric sock, at upstream end of each pit.
- 26. All the cleaning eyes (or inspection eyes) for the underground pipes must be taken up to the finished ground level for easy identification & maintenance purposes.
- 27. All sub-soil drainage shall be provided with a filter sock. The subsoil drainage shall be installed in accordance with details to be provided by the landscape architect.
- 28. Prior to commencing any works, the builder shall ensure that the invert levels of where the site stormwater system connects into the council's kerb/drainage sustem matched the design levels. Any discrepancies shall be reported to the design engineer immediately.
- 29. For stormwater drainage pipes that exceed 1:5 grade, reinforced concrete anchor blocks shall be installed. Anchor blocks to be constructed to specifications set out in AS3500.3-2003 section 8.10
- 30. Existing services shown in approximate locations only. Confirm exact locations and depths on site prior to commencing work.
- 31. Coordinate the installation of new services with all new & existing services & structural provisions as determined on site.
- 32. All pipework is to be tested in accordance with the reouirements as set out in AS3500.3-2003. All in-ground pipework to be inspected by the superintendent under test conditions prior to backfilling. Backfilling and bedding to AS3500.3-2003.
- 33. Pipes shall be true to grades shown and aligned so that the centre of the inlet pipe intersects with the centre of the outlet pipe at the downstream face of the pit.
- 34. Lay and joint all pipes in accordance with the manufacturer's recommendations and AS3725-2007:'design for installation of buried concrete pipes'.
- 35. Allow to test all pipes and pits to local authority's reouirements.
- 36. Excavate trenches and stockpile all material for inspection with regard to reuse for trench backfill. Remaining material to be removed from site.
- 37. Backfill pipes with imported fill. Provide 200mm side support and 150mm overlay above pipe crown. Trench fill above the embedment zone to the underside of the road pavement or the footway shall be as follow:-

Project

Development

Application

Address

LGA

Council

dvyne

design

Client

Proposed 2 Storey Duplex

Compliant Development Certificate

36 Alcoomie Street Villawood 2163

CANTERBURY-BANKSTOWN

Under roadway Trench fill material shall consist of imported fill as specified herein of either high grade compaction sand or approved crushed road gravel conforming to TfNSW QA specification 3051 or similar.

Other than roadway

Stormwater Notes

- Trench material excavated shall consist of select fill as specified herein and shall not contain more than 20% of stones of size between 25mm and 75mm and none larger than 75mm. Prior to use of the excavated material it shall be inspected and approved by the engineer.
- 38. Compact bedding. Embedment and trench fill materials as follow:-
- Embedment:-For granular fill material (non-cohesive soil) e.g. Coarse aggregate fill, the density index (id) shall be not less than 70%. Trench fill:-
- For granular material (non cohesive soils). The density index (id) shall be not less than 70%. For non-granular fill material (cohesive soils), the dru density ratio (rd) shall be not less than 95%.
- 39. Existing services
- Utility information shown on the plans is not intended to depict more than the presence of any services. Actual locations should be verified by hand excavation prior to construction. 40. The contractor shall allow for the capping off, excavation and
- removal (if required) of all existing services in areas affected bų the works. 41. The contractor shall ensure that services to all buildings not
- affected by the works are not disrupted at all times. The contractor shall construct temporary services to maintain existing supply to buildings remaining where required. Once the works are complete and commissioned the contractor shall remove all such temporary services and make good all disturbed areas.
- 42. Existing pipes which form no part of the drainage sustem shall be removed or sealed as indicated on the plans. 43. Where downpipes pass under floor slabs, sewer grade uPVC
- with rubber ring joints are to be used. 44. Minimum grade to drainage pipes to be 1% (U.N.O.), min. Size
- 100mm diameter (U.N.O.). 45. Pipe installation under trafficable areas shall be in
- accordance with concrete pipe association of Australia publication "concrete pipe selection & installation" type HS3 support. 46. Equivalent strength FRC pipes may be used subject to
- authority approval. 47. Minimum pipe cover to be 600mm under trafficable areas and
- 300mm elsewhere (U.N.O.). 48. Contractor to supply and install all fittings and specials including various pipe adaptors to ensure proper connection
- between dissimilar pipework. 49. Provide cleaning eyes to all downpipes not directly connected
- to pits. 50. Stormwater drainage connections to council's system shall be to the requirements and the satisfaction of the local council.
- 51. Drainage pits Pits deeper than 1200mm to be fitted with step irons at 300 centres to AS1657-2013:'fixed platforms, walkways, stairways
- and ladders design, construction and installation'. 52. All exposed edges to be rounded with 20mm radius, or
- chamfered 20mm x 20mm. 53. Pit reinforcement - mesh SL82 lap to be 400mm min. Clear
- cover 40 mm. Cast against blinding or formwork. Corner returns may be fabric or equivalent bars.
- 54. Benching to be half outgoing pipe depth. Concrete for benching to be 20mpa mass concrete.
- 55. Approved precast pits may be used.
- 56. 100mm diameter hole for subsoil drainage outlet to be located 100mm above invert of all inlet pipes. Subsoil drainage to extend for a distance of 3m upstream of pit (at each inlet trench) with the upstream end sealed.
- 57. Pit grate, frames and solid covers shall be Class B in non traffic areas and Class D in trafficable areas in accordance with AS3996.
- 58. Maximum front entry pipe:a. Straight entry - Ø750

with the disabled access code

and approved by design engineer.

or similar in areas subject to direct rainfall.

PC

08-11-2022

08-11-2022

Discipline

Architect

Surveyor

Landscape

Geotechnical

Structural

Mechanical

Hydraulic/Fire

59. Subsoil drainage

provided.

Designed

Date

Date

Drawn

Reviewed

Approved

Andrew Arida

B.E Civil/Structural

MIEAust (NO: 5579488)

Professional Engineer (PRE0000268)

Design Practitioner (DEP0000455)

Skew entry 45° - Ø525

and groundwater presence as directed.

Subsoil pipes shall be laid at a min grade of 0.5% (U.N.O.). 60. Additional subsoil drainage shall be laid to suit site conditions

61. Subsoil pipes shall be laid behind kerbs in cut areas of the site. 62. Grates to pits in footpath areas shall be heel safe complying

63. Contractor to provide workshop coordinated drawings prior to commencing works on site. Workshop drawings to be reviewed

64. All external area to have a minimum 1% fall to outlets

65. Provide overflows to all areas to architect's specifications. 66. All rainwater outlets to open areas shall be SPS TRUFLO type TIA100F unless noted otherwise. Do not install balcony outlets

## ->--> RAINWATER TANK LINES — > — STORMWATER LINE - SSD - SSD SUBSOIL LINE — OF — OF — OVERFLOW LINE — G — G — AUTHORITY GAS LINE — UE — UE — —



\_\_\_/ \_\_\_\_\_/ \_\_\_\_\_

—SWRM——SWRM——STORMWATER RISING MAIN - HL - HL - HIGH LEVEL STORMWATER LINE e — EXISTING STORMWATER LINE AUTHORITY STORMWATER LINE — S — AUTHORITY SEWER LINE W — AUTHORITY WATER LINE - E - E - AUTHORITY ELECTRICITY LINE AUTHORITY UNDERGROUND ELECTRICITY LINE — FO — FO — AUTHORITY FIBRE OPTIC LINE - TEL ----- AUTHORITY COMMS LINE FENCE LINE GRATED SURFACE INLET PIT

**KERB INLET PIT** 

JUNCTION PIT

EXISTING KERB INLET PIT

EXISTING TELSTRA PIT

**EXISTING HYDRANT** 

EXISTING STOP VALVE

EXISTING POWER POLE

EXISTING SEWER MANHOLE

**OVERLAND FLOW PATH** 

RAINWATER OUTLET

CLEAR OUT POINT

CAPPING

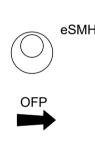
DOWNPIPE DROP

DOWNPIPE

SPOT LEVELS

BENCHMARK

|  |  | eSV |
|--|--|-----|



RWO

Ø

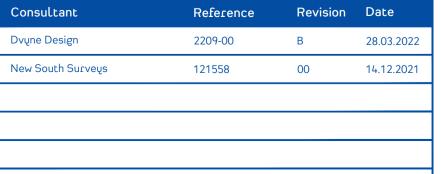
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ePP

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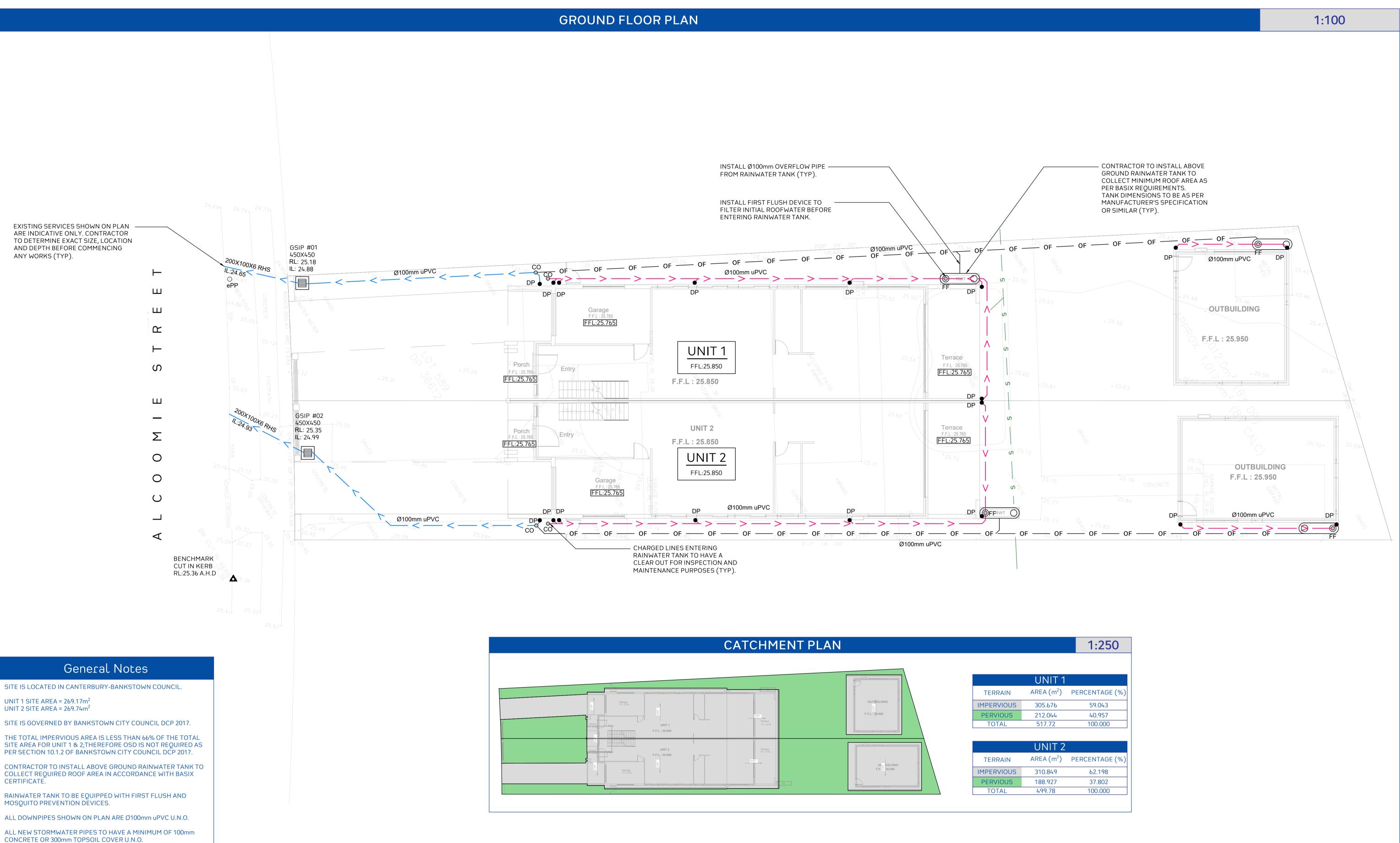




W deboke.com.au A 65 Blaxcell Street, Granville 2142 COPYRIGHT

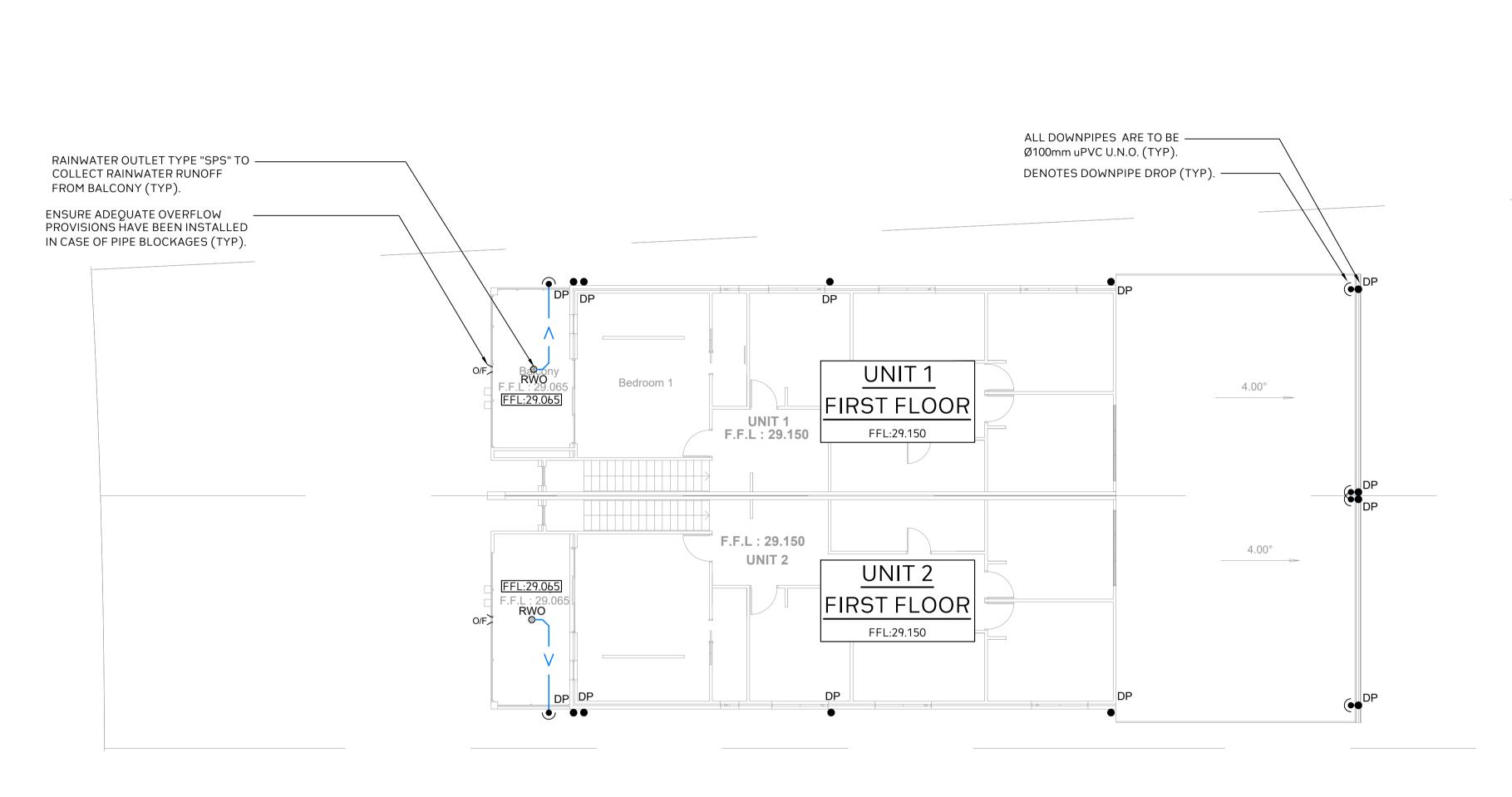
This drawing and the information shown hereon is the property of deboke engineering consultants and may not be used for any purposes than for which supplied.

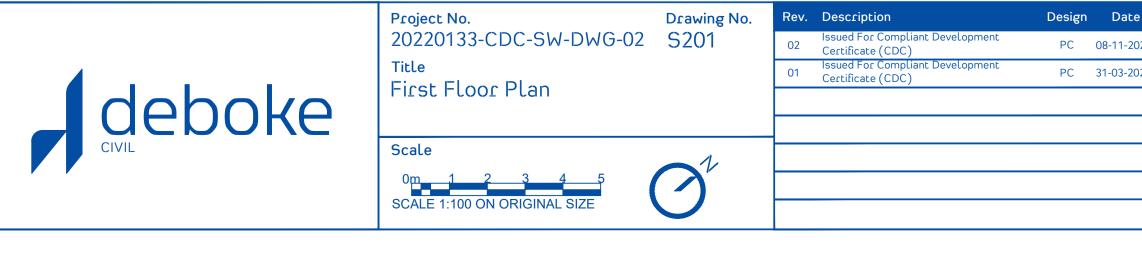
### Legend



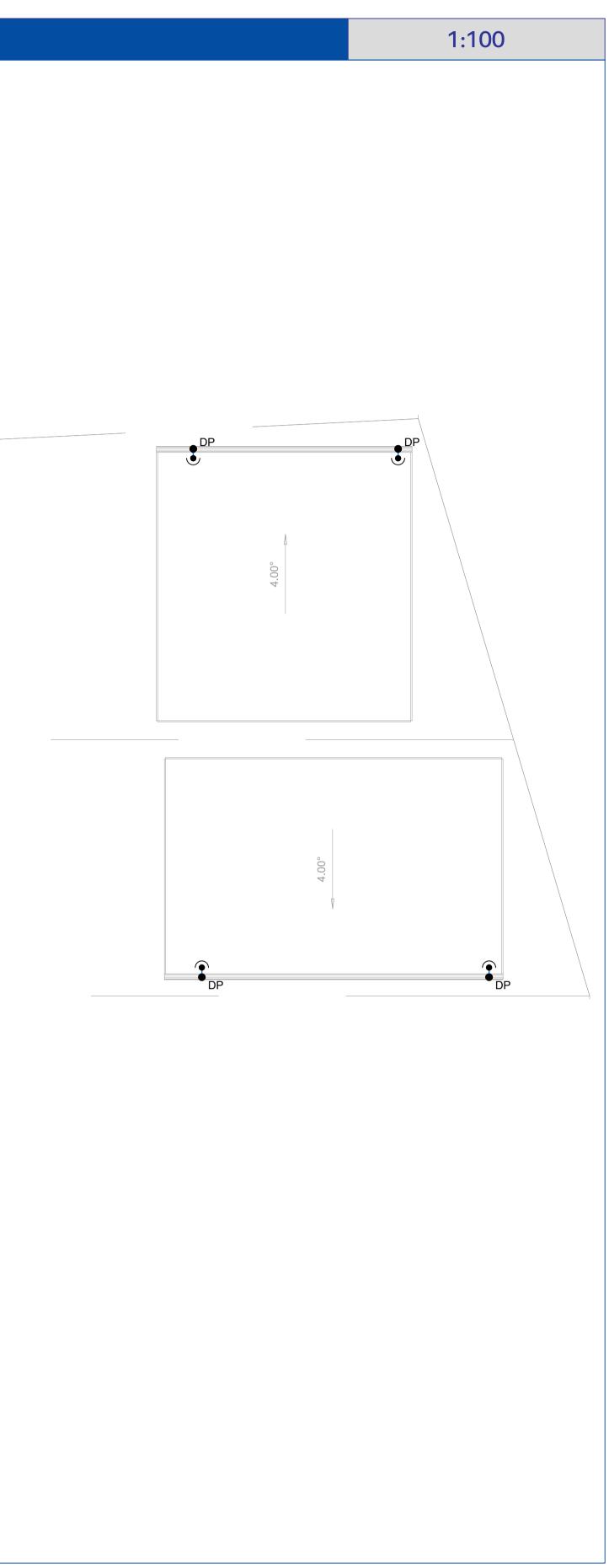
|        | Project No.                  | Drawing No. | Rev. | Description   | Design | Date     |
|--------|------------------------------|-------------|------|---|--------|----------|
|        | 20220133-CDC-SW-DWG-02       | S200        | 02   | Issued For Compliant Development<br>Certificate (CDC) | PC     | 08-11-20 |
|        | Title<br>Ground Floor Plan   |             | 01   | Issued For Compliant Development<br>Certificate (CDC) | PC     | 31-03-20 |
| deboke |                              |             |      |   |        |          |
|        | Scale                        |             |      |   |        |          |
|        | 0m 1 2 3 4 5                 |             |      |   |        |          |
|        | SCALE 1:100 ON ORIGINAL SIZE |             |      |   |        |          |
|        |                              |             |      |   |        |          |

|           |     |        | Project                                 | Drawn                       | JP       | Designed             | PC         | Discipline     | Consultant        | Reference | Revision | Date       |  |
|-----------|-----|--------|---|-----------------------------|----------|----------------------|------------|----------------|-------------------|-----------|----------|------------|--|
|           |     |        | Proposed 2 Storeų Duplex<br>Development |                             |          |                      |            | Architect      | Dvųne Design      | 2209-00   | В        | 28.03.2022 | _ deboke   |
|           |     |        | Application                             | Reviewed                    | JD       | Date                 | 08-11-2022 | Surveyor       | New South Surveys | 121558    | 00       | 14.12.2021 | ENGINEERING CONSULTANTS  |
|           |     |        | Compliant Development Certificate       | Approved                    | AA       | Date                 | 08-11-2022 | Landscape      |                   |           |          |            | E admin@deboke.com.au  |
| duo       |     | duuno  | Address                                 | Andrew Arida                | <u> </u> |                      | //         | Geotechnical   |                   |           |          |            | W deboke.com.au  |
| dvy       |     | dvyne  | 36 Alcoomie Street Villawood 2163       | B.E Civil/Stru              | uctural  |                      | the second | Structural     |                   |           |          |            | A 65 Blaxcell Street, Granville 2142   |
| des       | ign | design | LGA                                     | MIEAust (NC<br>Professional |          | +88)<br>er(PRE00002) | 68)        | Hųdraulic/Fire |                   |           |          |            | COPYRIGHT<br>This drawing and the information shown hereon is  |
| Architect |     | Client | CANTERBURY-BANKSTOWN<br>Council         |                             |          | (DEP0000455)         |            | Mechanical     |                   |           |          |            | the property of deboke engineering consultants<br>and may not be used for any purposes than for<br>which supplied. |





| ate    |           |        | Project                                 | Drawn                       | JP        | Designed     | PC         | Discipline     | Cor |
|--------|-----------|--------|---|-----------------------------|-----------|--------------|------------|----------------|-----|
| 1-2022 | â         | d      | Proposed 2 Storeų Duplex<br>Development |                             |           |              |            | Architect      | Dvų |
| 3-2022 |           |        | Application                             | Reviewed                    | JD        | Date         | 08-11-2022 | Surveyor       | New |
|        |           |        | Compliant Development Certificate       | Approved                    | AA        | Date         | 08-11-2022 | Landscape      |     |
|        | dyypo     | dyyyna | Address                                 | Andrew Arida                |           |              |            | Geotechnical   |     |
|        | dvyne     | dvyne  | 36 Alcoomie Street Villawood 2163       | B.E Civil/Stru              | ictural   | <u> </u>     | Hinda      | Structural     |     |
|        | design    | design |   | MIEAust (NC<br>Professional |           |              | (1000)     | Hųdraulic/Fire |     |
|        | Architect | Client | CANTERBURY-BANKSTOWN<br>Council         | Design Practi               | itioner ( | (DEP0000455) | )          | Mechanical     |     |



| onsultant       | Reference | Revision | Date       |
|-----------------|-----------|----------|------------|
| vųne Design     | 2209-00   | В        | 28.03.2022 |
| w South Surveys | 121558    | 00       | 14.12.2021 |
|                 |           |          |            |

### Roof Notes

DOWNPIPES SHOWN ON PLAN ARE TO BE Ø100mm uPVC U.N.O. (TYP).

PROPOSED DOWNPIPE LOCATIONS ARE NOMINAL AND TO BE CONFIRMED DURING CONSTRUCTION (TYP).

### Box Gutter Notes

THE FOLLOWING REQUIREMENTS MUST APPLY; - THE MINIMUM WIDTH ALLOWED FOR DOMESTIC PROJECTS IS 200MM. FOR COMMERCIAL PROJECTS THE MINIMUM ALLOWABLE WIDTH IS 300MM.

- BOX GUTTERS MUST BE STRAIGHT, (NO BENDS).
- SIDES MUST BE VERTICAL.
- CONSTANT WIDTH.
- MUST HAVE A CONSTANT SLOPE BETWEEN 1:40 AND 1:200.
- DOWN PIPE MUST BE VERTICAL FROM SUMP (NOT TO THE SIDE).
- MINIMUM SUMP LENGTH IS 400MM.

- IF THE SIDE OVERFLOW (SPITTER) LENGTH IS GREATER THAN 450MM, THE MINIMUM ALLOWABLE SLOPE FOR THE SPITTER IS 1:10.

| Box Gut                         | ter Maxir.<br>Leng           |                | wable                              |
|---------------------------------|------------------------------|----------------|------------------------------------|
| Material                        | Base Metal<br>Thickness (mm) | Max Length (m) | Minimum<br>Expansion<br>Space (mm) |
| ALUMINIUM                       | 0.90                         | 12             | 50                                 |
| COPPER                          | 0.60                         | 9              | 50                                 |
| COPPER                          | 0.80                         | 15             | 50                                 |
| COPPER                          | 1.00                         | 26             | 50                                 |
| STEEL<br>COLORBOND<br>ZINACLUME | 0.55                         | 20             | 50                                 |
| STEEL                           | 0.75                         | 25             | 50                                 |
| STAINLESS STEEL                 | 0.55                         | 20             | 50                                 |
| PVC                             | -                            | 10             | 30                                 |
| ZINC                            | 0.80                         | 10             | 50                                 |

VERTICAL DOWNPIPE IN BOX GUTTER — TO PENETRATE THROUGH WALL SO PIPE CAN RUN EXTERNALLY (TYP).

SUMP TO BE INSTALLED IN BOX GUTTER, OVERFLOW PROVISIONS TO BE INSTALLED. REFER TO DETAIL FOR FURTHER INFORMATION (TYP).

DENOTES HIGH POINT IN BOX GUTTER — (TYP).

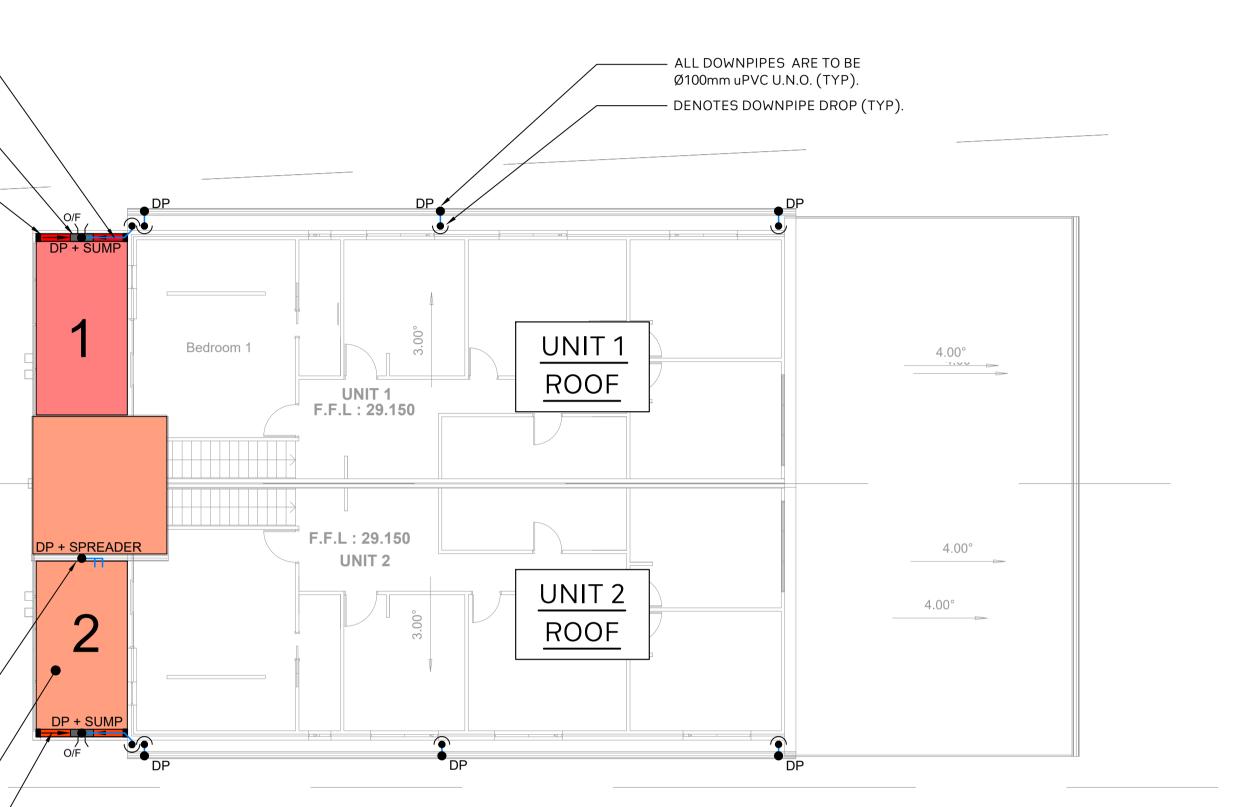
DOWNPIPE TO SPREAD RAINWATER ------TO LOWER ROOF.

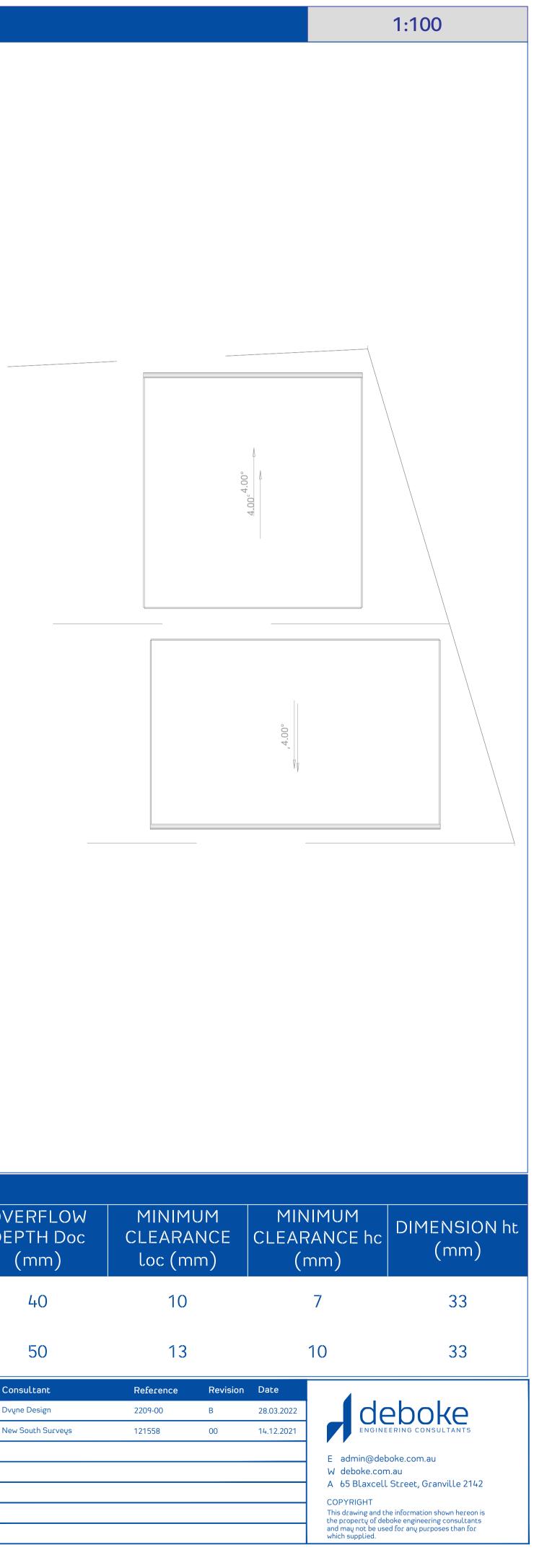
ROOF AREA DRAINING TO BOX GUTTER. — REFER TO TABLE FOR FURTHER DETAILS (TYP).

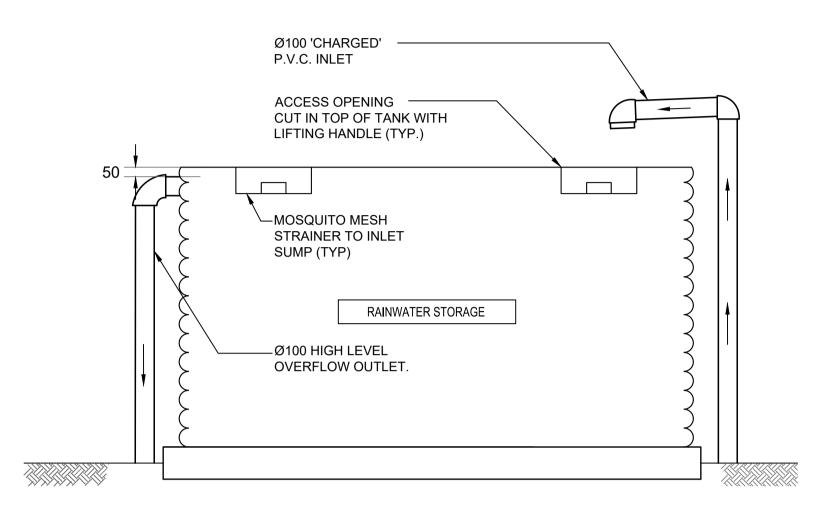
DENOTES DIRECTION OF FALL IN BOX GUTTER (TYP). BOX GUTTER DESIGNED WITH 1:100 FALL (TYP).

|           |           |                  |   |  |                                 | BOX G                           | UTTER DETA                      | ILS - SIDE O                    | VERFLOW                                |  |          |                                  |                |             |
|-----------|-----------|------------------|---|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|--|----------|----------------------------------|----------------|-------------|
| CATCHMENT | AREA (m2) | SLOPE<br>(DEG)   | TYPE  | RUNOFF (L/s)                                 | SUGGESTED<br>DP                 | BOX GUTTER<br>WIDTH Wbg<br>(mm) | BOX GUTTER<br>DEPTH Dbg<br>(mm) | RWH / SUMP<br>WIDTH Wbg<br>(mm) | RWH / SUMP<br>DEPTH hs<br>(mm)         | RWH/SU<br>LENGTH<br>(mm)                   | Wos      | OVERFL<br>WIDTH <i>V</i><br>(mm) | Voc DE         |             |
| 1         | 11.066    | 1.0              | BOX GUTTER AND SUMP<br>WITH SIDE OVERFLOW     | 1.10   | Ø100mm                          | 200                             | 80                              | 200                             | 50                                     | 400  |          | 200                              |                |             |
| 2         | 23.633    | 1.0              | BOX GUTTER AND SUMP<br>WITH SIDE OVERFLOW     | 1.80   | Ø100mm                          | 200                             | 93                              | 200                             | 50                                     | 400  |          | 200                              |                |             |
|           |           | Project<br>20220 | No. Drawin<br>0133-CDC-SW-DWG-02 <u>\$202</u> | <b>-</b>                                     | Design<br>nt Development PC 08- |                                 | d                               |                                 | d 2 Storeų Duplex                      | <b>Drawn</b> JP                            | Designed | PC                               |                | Con<br>Dvųr |
|           |           | Title            |   | 01 Certificate (CDC)<br>01 Certificate (CDC) | nt Development PC 31-           | -03-2022                        |                                 | Develop                         |  | Reviewed JD                                | Date     | 08-11-2022                       | Surveyor N     | lew         |
|           | eboke     | <b>R</b> oof     | Plan  |  |                                 |                                 |                                 |                                 | ant Development Certificate            | Approved AA                                | Date     | 08-11-2022                       | Landscape      | _           |
| CIVIL     |           | Scale            |   |  |                                 | dvyn                            | ne dv                           | yne Addres                      | <b>s</b><br>omie Street Villawood 2163 | Andrew Arida                               |          | //                               | Geotechnical   |             |
|           |           | Om               | 1 2 3 4 5                                     |  |                                 | desig                           |                                 | sign                            |  | B.E Civil/Structural<br>MIEAust (NO: 55794 |          | frida                            | Structural     |             |
|           |           | SCALE 1          | 1:100 ON ORIGINAL SIZE                        |  |                                 | Architect                       | Client                          |                                 | RBURY-BANKSTOWN                        | Professional Engine<br>Design Practitioner |          |                                  | Hųdraulic/Fire |             |
|           |           |                  | <u> </u>                                      |  |                                 | Architect                       | Client                          | Council                         |  | Design i racticioner                       |          |                                  | Mechanical     |             |

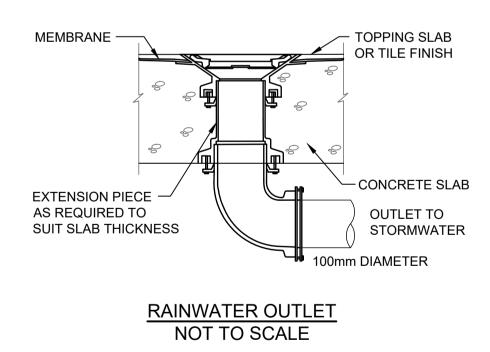
### **ROOF PLAN**







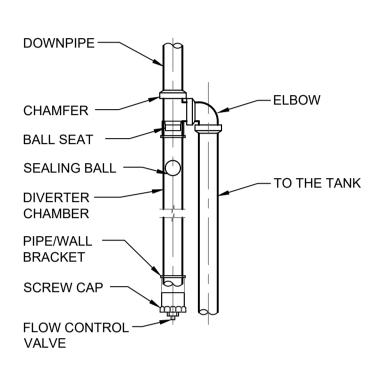
TYPICAL ABOVE GROUND RAINWATER TANK NOT TO SCALE



|        | Project No.   | Drawing No. | Rev. | Description   | Design | Dat     |
|--------|---|-------------|------|---|--------|---------|
|        | 20220133-CDC-SW-DWG-02                                | S300        | 02   | Issued For Compliant Development<br>Certificate (CDC) | PC     | 08-11-2 |
| deboke | Title<br>Details Sheet                                |             | 01   | Issued For CompLiant Development<br>Certificate (CDC) | PC     | 31-03-2 |
| CIVIL  | Scale   |             | -    |   |        |         |
|        | 0m 0.2 0.4 0.6 0.8 1.0<br>SCALE 1:20 ON ORIGINAL SIZE |             |      |   |        |         |

HEAVY DUTY GALV STEEL----GRATE AND FRAME

STEEL



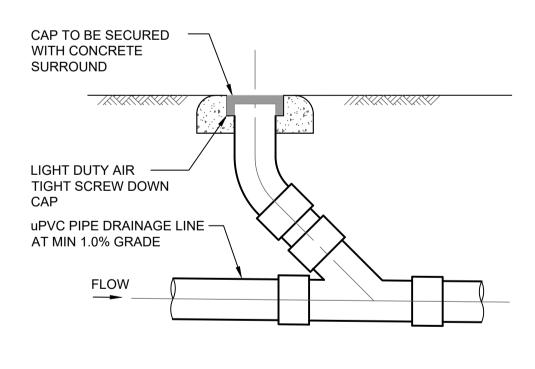
FIRST FLUSH DIVERTER

SCALE 1:20

LEGEND: BACKGROUND IS YELLOW TEXT IS WHITE ON BLACK BACKGROUND

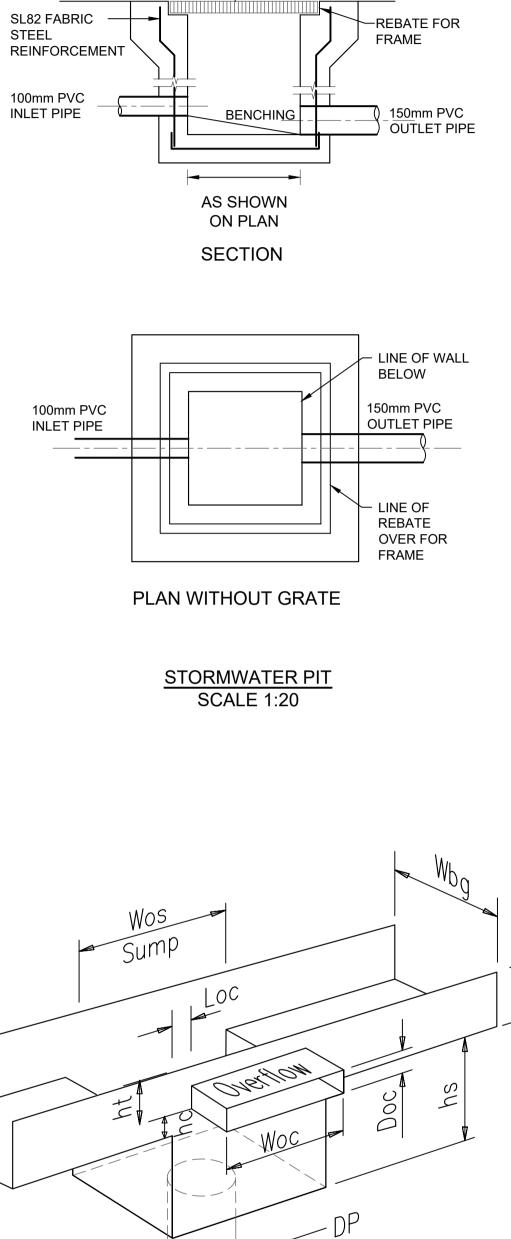


RAINWATER SIGN SCALE 1:10



CLEANING EYE SCALE 1:20



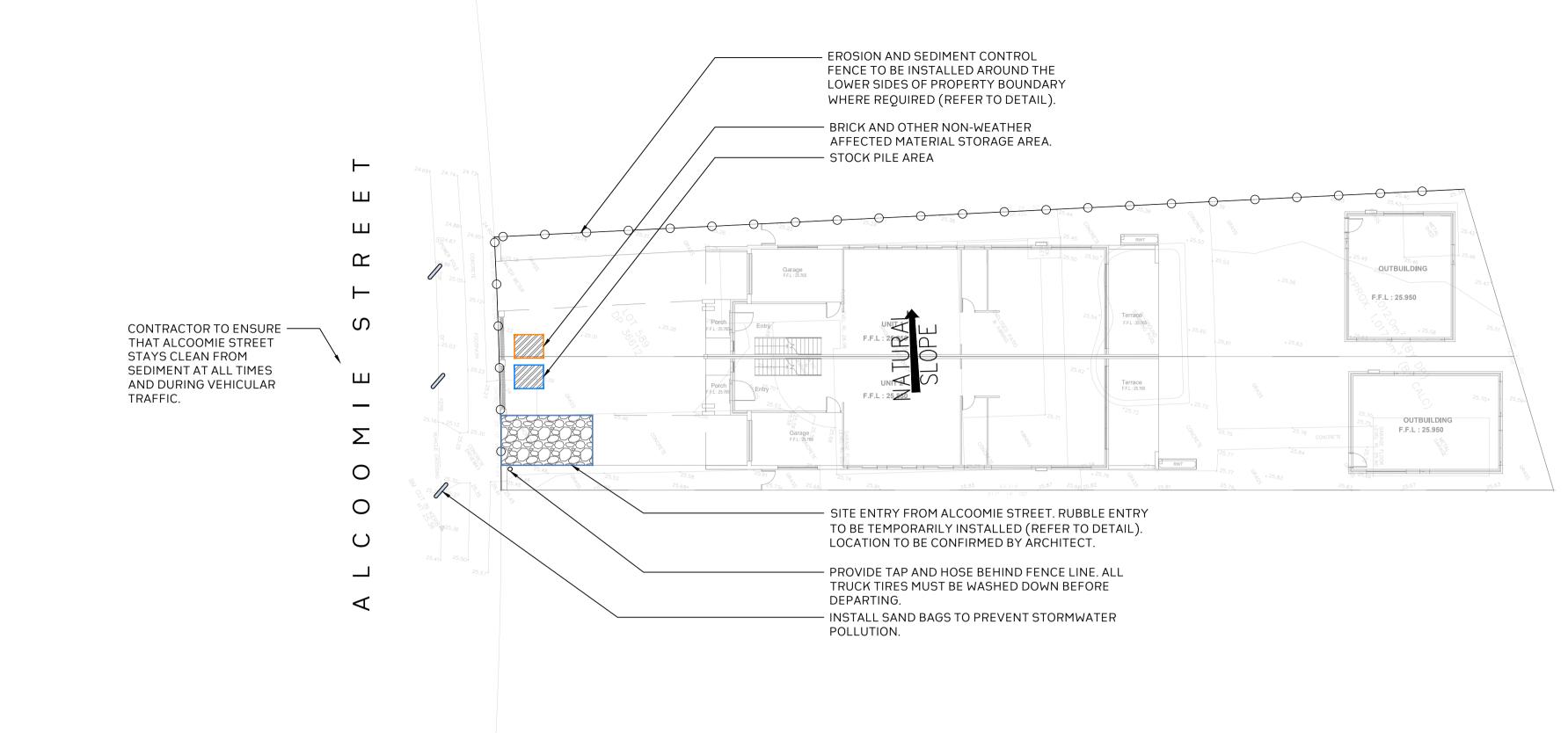


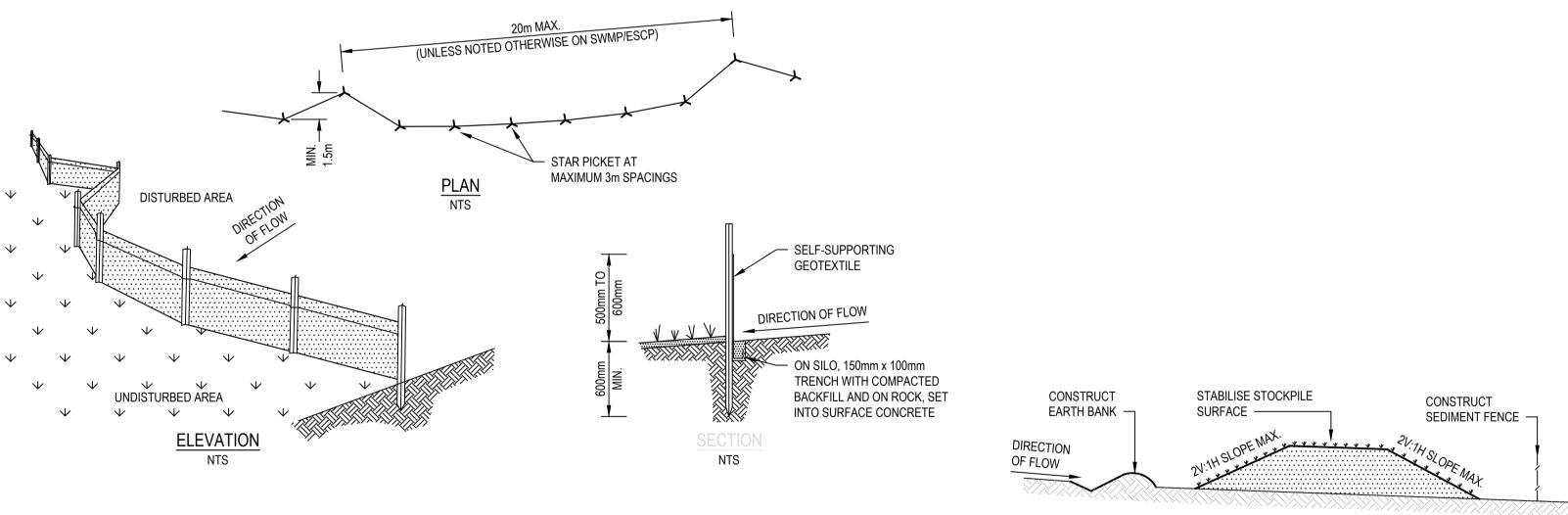
BOX GUTTER WITH SUMP & SIDE OVERFLOW NOT TO SCALE

| Consultant        | Reference | Revision | Date       |
|-------------------|-----------|----------|------------|
| Dvųne Design      | 2209-00   | В        | 28.03.2022 |
| Vew South Surveys | 121558    | 00       | 14.12.2021 |
|                   |           |          |            |

Dog

### **EROSION & SEDIMENT CONTROL PLAN**





### GENERAL CONSTRUCTION NOTES

- 1. CONSTRUCTION SEDIMENT FENCES AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE
- 2. DIVE 1.5m LONG STAR PICKETS INTO GROUND, 3m APART
- 3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED
- 4. BACKFILL TRENCH OVER BASE OF FABRIC
- 5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE
- MANUFACTURER 6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP

### SEDIMENT FENCE NTS



Project No. Drawing No. 20220133-CDC-SW-DWG-02 S400 Title **Erosion and Sediment** 

Scale

SCALE 1:200 ON ORIGINAL SIZE

| Control Dion | 01 Issued For Compliant Develop<br>Certificate (CDC) |
|--------------|--|
| Control Plan |  |
|              |  |
|              |  |
|              |  |
|              |  |

02

Rev. Description

sued For Compliant

Certificate (CDC)

| DIRECTION  |  |
|------------|--|
| <u>INN</u> |  |

### GENERAL CONSTRUCTION NOTES ROADS AND HAZARD AREAS

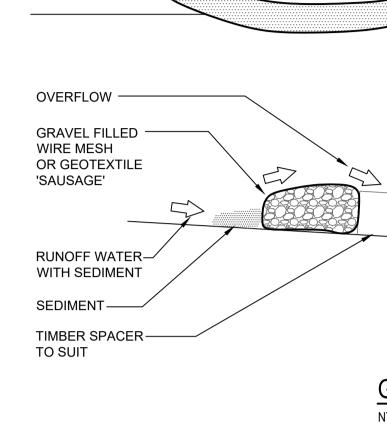
- 4. REHANILITATE IN ACCORDANCE WITH THE SWMP/ESCP

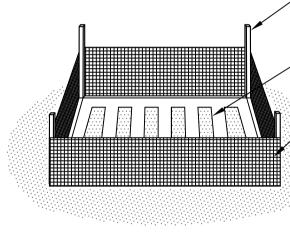
Design Date

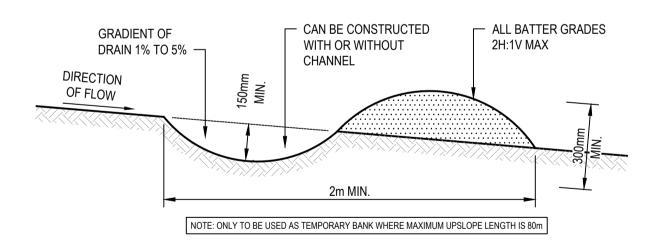
PC 08-11-2022

PC 31-03-2022

### 1:200







1. LOCATE STOCKPILE AT LEAST 5m FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS,

2. CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND

3. WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LASS THAN 2m IN HEIGHT

5. CONSTRUCT EARTH BANK ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE 1 TO 2m DOWNSLOPE OF STOCKPILE

### STOCKPILES NTS

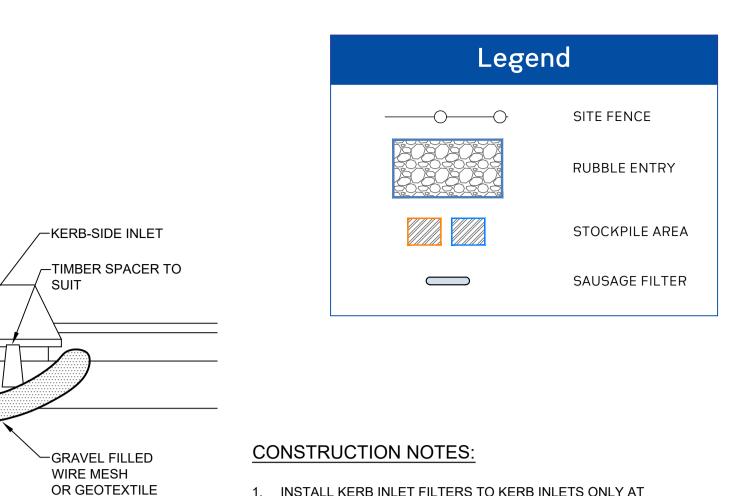
### GENERAL CONSTRUCTION NOTES

- 1. CONSTRUCT WITH GRADIENT OF 1% TO 5%
- 2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE
- 3. DRAINS TO BE CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED
- 4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE
- 5. PERMANENT OR TEMPORARY STABILISATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION
- 6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR
- DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED
- 8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS
- EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDED 9 NORMAL FLOW

### EARTH BANK (LOW FLOW)

NTS

|    |           |                                   | Project                                 | Drawn   | JP         | Designed   | PC         | Discipline     | Consultant        | Reference | Revision | Date       |
|----|-----------|-----------------------------------|---|---|------------|------------|------------|----------------|-------------------|-----------|----------|------------|
| 22 |           |                                   | Proposed 2 Storeų Duplex<br>Development |   |            |            |            | Architect      | Dvųne Design      | 2209-00   | В        | 28.03.2022 |
| 22 |           |                                   | Application                             | Reviewed  | JD         | Date       | 08-11-2022 | Surveųor       | New South Surveys | 121558    | 00       | 14.12.2021 |
|    |           | Compliant Development Certificate | Approved                                | AA  | Date       | 08-11-2022 | Landscape  |                |                   |           |          |            |
|    | dvyne     | duuno                             | Address                                 | Andrew Arida  | drew Arida |            | //         | Geotechnical   |                   |           |          |            |
|    |           | dvyne                             | 36 Alcoomie Street Villawood 2163       | B.E Civil/Structura   |            | ructural   |            | Structural     |                   |           |          |            |
|    | design    | design                            |   | MIEAust (NO: 5579488)<br>Professional Engineer (PRE0000268)<br>Design Practitioner (DEP0000455) |            |            | T          | Hųdraulic/Fire |                   |           |          |            |
|    | Architect | Client                            | CANTERBURY-BANKSTOWN<br>Council         |   |            |            | Mechanical |                |                   |           |          |            |



1. INSTALL KERB INLET FILTERS TO KERB INLETS ONLY AT SAG POINTS OR AS SHOWN ON PLAN 2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE

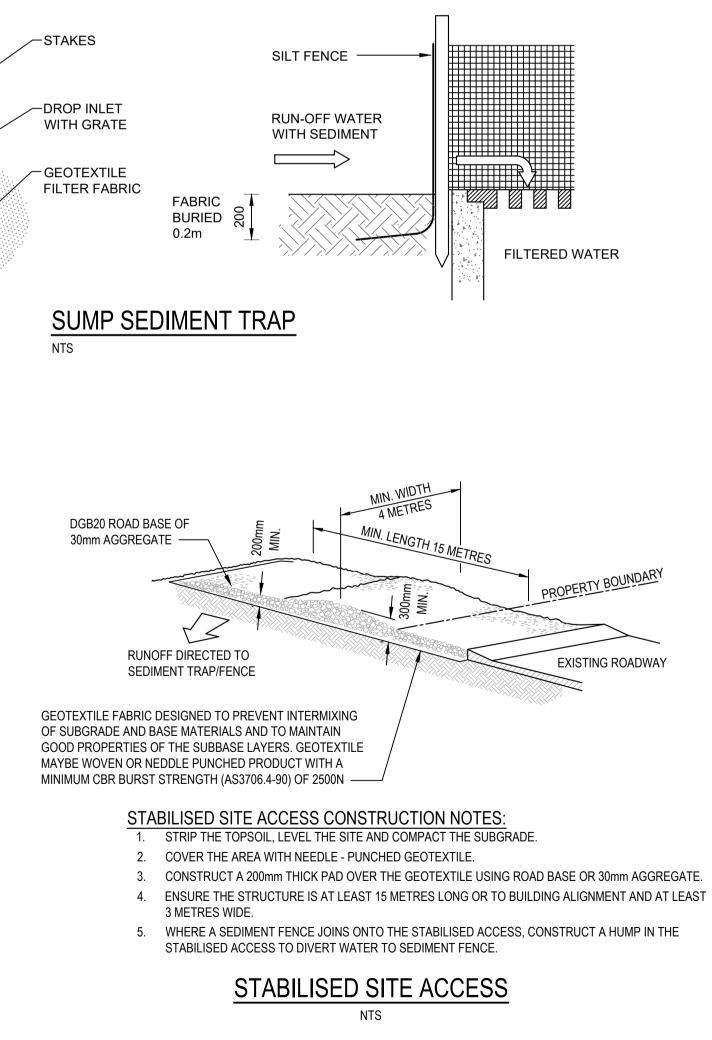
- MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
- PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
- FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
- SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

### **GRAVEL INLET FILTER (SANDBAG)**

FILTERED WATER



'SAUSAGE'





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