# PROPOSED CHARLESTOWN HEALTHCARE FACILITY

## 31-33 SMITH STREET, CHARLESTOWN
## DEVELOPMENT APPLICATION


LOCALITY PLAN

| DRAWING LIST | |
|---|---|
| DWG NO | DRAWING TITLE |
| DA-C01.01 | COVER SHEET, DRAWING LIST AND LOCALITY PLAN |
| DA-C02.01 | EROSION AND SEDIMENT CONTROL PLAN |
| DA-C02.11 | EROSION AND SEDIMENT CONTROL DETAILS SHEET 1 |
| DA-C02.12 | EROSION AND SEDIMENT CONTROL DETAILS SHEET 2 |
| DA-C03.00 | BULK EARTHWORKS CUT AND FILL PLAN |
| DA-C03.01 | CIVIL WORKS PLAN LEVEL 1 |
| DA-C03.02 | CIVIL WORKS PLAN LEVEL 2 |
| DA-C03.03 | CIVIL WORKS PLAN LEVEL 3 |
| DA-C09.01 | OSD SCHEMATIC |
| DA-C09.02 | DRIVEWAY LONGITUDINAL SECTIONS |

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

**NOT FOR CONSTRUCTION**

| REVISION | DESCRIPTION | ISSUED | VER'D | APP'D | DATE |
|---|---|---|---|---|---|
| 1 | ISSUED FOR INFORMATION | RW | | CP | 14.07.22 |
| A | ISSUED FOR DA APPROVAL | RW | CP | KS | 05.09.22 |
| B | ISSUED FOR DA APPROVAL | RW | | CS | 21.11.22 |
| C | ISSUED FOR DA APPROVAL | JB | | CS | 19.04.23 |
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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

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

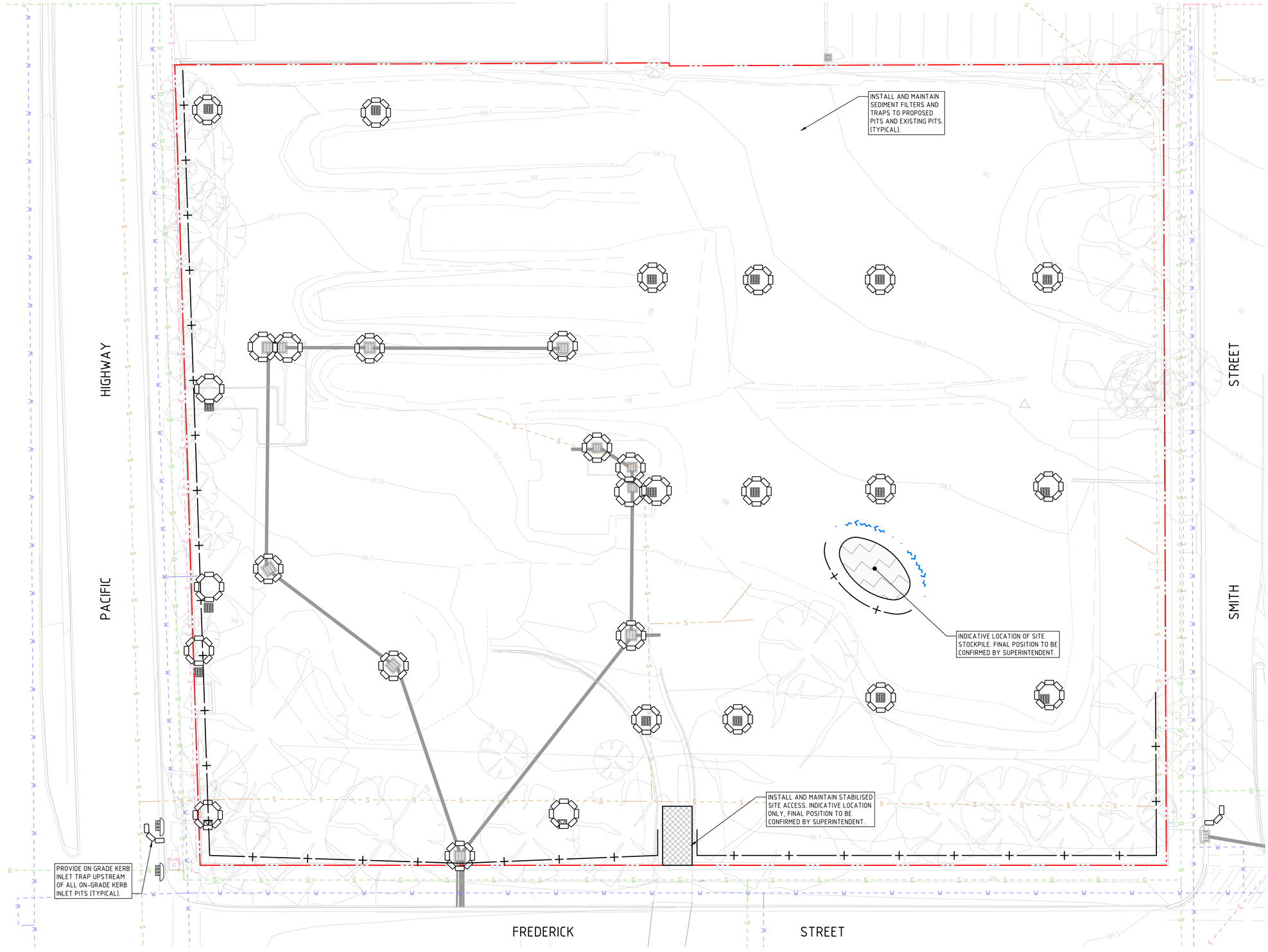
JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C01.01**

REVISION **C**

DRAWING SHEET SIZE = A1

Date : 19.04.2023 4:58 PM Plotted By : JBOOTHBY Found : Y:\YEAR 2021 Jobs\NL211248 - Charlestown Private Hospital\0 - Drawings\CIVIL\03-CAD\01-DA\NL211248-DA C01.01 COVER.dwg




## LEGEND

- SITE BOUNDARY LINE
- SEDIMENT FENCE
- SANDBAG SEDIMENT FILTER
- DIVERSION DRAIN (CLEAN)
- STABILISED SITE ACCESS
- STOCKPILES
- EXISTING CONTOURS
- EXISTING GAS
- EXISTING TELECOMMUNICATIONS
- EXISTING WATER
- EXISTING SEWER

## SEDIMENT BASIN SIZING CALCULATION:

THE SITE IS LOCATED WITHIN THE GATESHEAD SOIL LANDSCAPE AND PRIMARILY CONSISTS OF SANDY CLAY (AS PER NSW eSPADE CLASSIFICATION), WHICH HAS THE FOLLOWING PROPERTIES (IN ACCORDANCE WITH TABLE C17 OF THE "BLUE BOOK"):

| SITE PARAMETERS | |
|---|---|
| CONSTRAINT | VALUE |
| SEDIMENT TYPE | F (DISPERSIBLE SOILS) |
| SOIL HYDROLOGY GROUP | C |
| K = SOIL ERODIBILITY (K-FACTOR) | 0.020 |
| R = RAINFALL EROSIVITY (R-FACTOR) | 2120 |
| S = 2 YEAR, 6 HOUR STORM INTENSITY | 9.76mm/hr |
| LS = SLOPE LENGTH/GRADIENT | 1.19 (70m SLOPE @ 6% GRADE) |
| P = EROSION CONTROL PRACTICE (P-FACTOR) | 1.3 (TYPICAL) |
| C = GROUND COVER (C-FACTOR) | 1.0 (TYPICAL FOR STRIPPED SITE) |
| SOIL LOSS (RUSLE METHOD) (tonnes/ha/yr) | 66.0 |
| SOIL LOSS (RUSLE METHOD) ($m^3$/ha/yr) | 50 |
| EROSION HAZARD (TABLE 4.2 BLUE BOOK) | VERY LOW |

THE AVERAGE ANNUAL SOIL LOSS FROM THE TOTAL AREA OF LAND DISTURBANCE IS LESS THAN 150 $m^3$ PER HECTRE PER YEAR, THE BUILDING OF A SEDIMENT BASIN IS UNNECESSARY IN ACCORDANCE WITH SECTION 6.3.2 OF THE "BLUE BOOK".

DRAWN: B. DUGGAN
DESIGNED: R. WRIGHT
JOB MANAGER: C. SMITH
VERIFIER:

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SCALE 1:200@ A1 — 0 2 4 6 8 10m

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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**EROSION AND SEDIMENT CONTROL PLAN**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C02.01** REVISION **B**

DRAWING SHEET SIZE = A1

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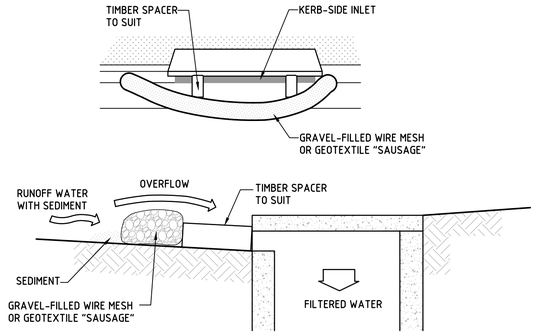
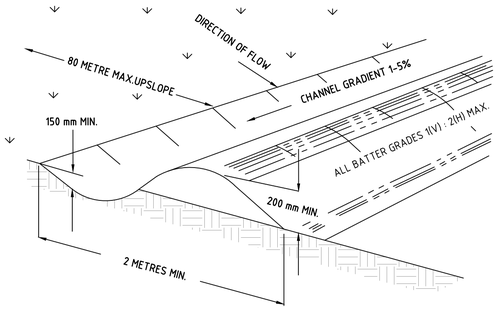



## MESH AND GRAVEL INLET FILTER CONSTRUCTION NOTES:

1. 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.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
4. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
5. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY CAN FIRMLY ABUT EACH OTHER AND SEDIMENT / LADEN WATERS CANNOT PASS BETWEEN.

## MESH AND GRAVEL INLET FILTER

SCALE N.T.S.



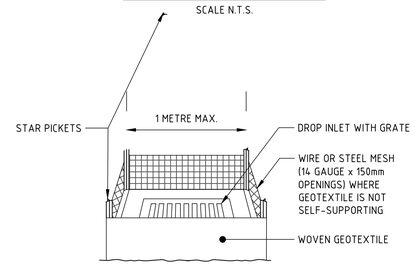

**NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAC.UPSLOPE LENGTH IS 80 METERS.**

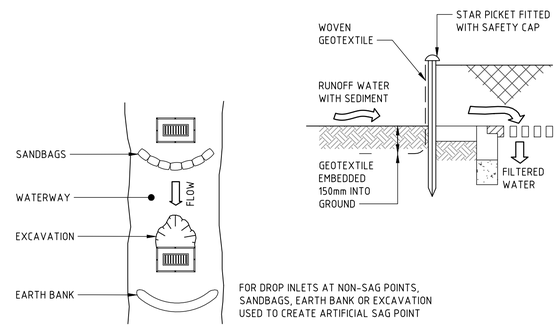
## CATCH DRAIN CONSTRUCTION NOTES:

1. CONSTRUCT ALONG GRADIENT AS SPECIFIED.
2. MAXIMUM SPACING BETWEEN BANKS SHALL BE 80 METRES.
3. DRAINS TO BE OF PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. CONSTRUCTION IS OF A TEMPORARY NATURE AND SHALL BE COMPACTED AT THE END A DAYS WORK OR IMMEDIATELY PRIOR RAIN.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL AISLE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

## CATCH DRAINS SD 5-8

SCALE N.T.S.

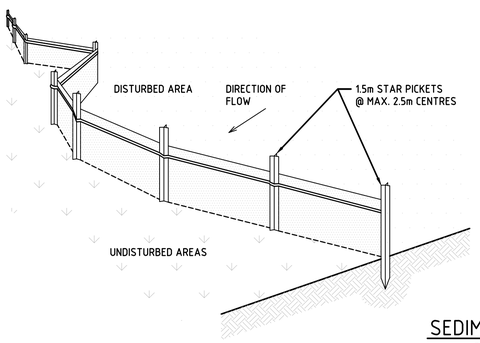


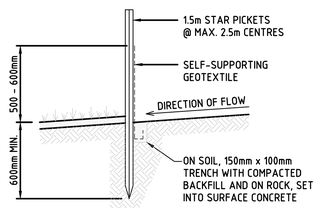




## CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. PICKET SPACING TO BE 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



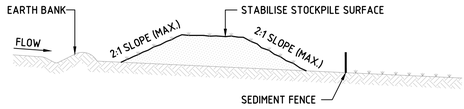

SECTION DETAIL

## SEDIMENT FENCE

SCALE N.T.S.

## SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

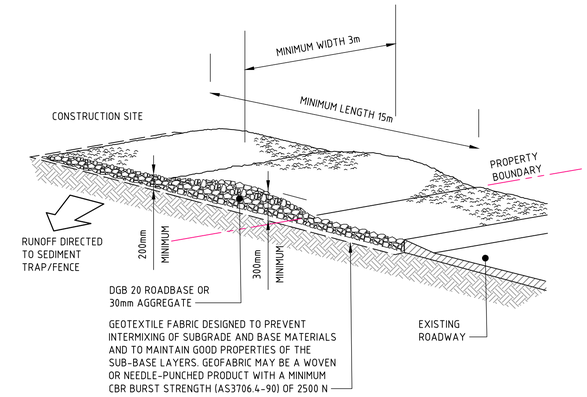



## STOCKPILE CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
4. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.

## STOCKPILES

SCALE N.T.S.




## CONSTRUCTION NOTES

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

## STABILISED SITE ACCESS (SD 6-14)

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

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DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**EROSION AND SEDIMENT CONTROL DETAILS**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C02.11** REVISION **A**

DRAWING SHEET SIZE = A1

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# EROSION AND SEDIMENT CONTROL NOTES

THE FOLLOWING NOTES MAY NOT BE RELEVANT TO EACH DEVELOPMENT.

## General

1. ESCP refers to Erosion and Sediment Control Plan or a Soil and Water Management Plan (SWMP).
2. ESC refers to erosion and sediment control.
3. Sediment, includes, but is not limited to, clay, silt, sand, gravel, soil, mud, cement, and ceramic waste.
4. Any reference to the Blue Book refers to Managing Urban Stormwater – Soils and Construction. Landcom, 2004.
5. Any reference to the IECA White Books (2008) refers to IECA 2008. Best Practice Erosion and Sediment Control. Books 1-6. International Erosion Control Association (Australasia). Picton NSW.
6. Any material deposited in any conservation area from works associated with the development shall be removed immediately by measures involving minimal ground and/or vegetation disturbance and no machinery, or following directions by Council and/or within a timeframe advised by Council.

## The ESCP

7. The ESCP and its associated ESC measures shall be constantly monitored, reviewed, and modified as required to correct deficiencies. Council has the right to direct changes if, in its opinion, the measures that are proposed or have been installed are inadequate to prevent pollution.
8. Prior to any activities onsite, the responsible person(s) is to be nominated. The responsible person(s) shall be responsible for the ESC measures onsite. The name, address and 24 hour contact details of the person(s) shall be provided to Council in writing. Council shall be advised within 48 hours of any changes to the responsible person(s), or their contact details, in writing.
9. At least 14 days before the natural surface is disturbed in any new stage, the contractor shall submit to the Certifier, a plan showing ESC measures for that Stage. The degree of design detail shall be based on the disturbed area.
10. At any time, the ESC measures onsite shall be appropriate for the area of disturbance and its characteristics including soils (in accordance with those required for the site as per DCP).
11. The implementation of the ESCP shall be supervised by personnel with appropriate qualifications and/or experience in ESC on construction sites.
12. The approved ESCP shall be available on-site for inspection by Council officers while work activities are occurring.
13. The approved ESCP shall be up to date and show a timeline of installation, maintenance and removal of ESC measures.
14. All ESC measures shall be appropriate for the Sediment Type(s) of the soils onsite, in accordance with the Blue Book, IECA White Books or other current recognised industry standard for ESC for Australian conditions.
15. Adequate site data, including soil data from a NATA approved Laboratory, shall be obtained to allow the preparation of an appropriate ESCP, and allow the selection, design and specification of required ESC measures.
16. All works shall be carried out in accordance with the approved ESCP (as amended from time to time) unless circumstances arise where:
    a) compliance with the ESCP would increase the potential for environmental harm; or
    b) circumstances change during construction and those circumstances could not have been foreseen; or
    c) Council determines that unacceptable off-site sedimentation is occurring as a result of a land-disturbing activity. In either case, the person(s) responsible may be required to take additional, or alternative protective action, and/or undertake reasonable restoration works within the timeframe specified by the Council.
17. Additional ESC measures shall be implemented, and a revised ESCP submitted for approval to the certifier (within five business days of any such amendments) in the event that:
    a) there is a high probability that serious or material environmental harm may occur as a result of sediment leaving the site; or
    b) the implemented works fail to achieve Council's water quality objectives specified in these conditions; or
    c) site conditions significantly change; or
    d) site inspections indicate that the implemented works are failing to achieve the "objective" of the ESCP.
18. A copy of any amended ESCP shall be forwarded to an appropriate Council Officer, within five business days of any such amendments.

## Site establishment including clearing and mulching

19. No land clearing shall be undertaken unless preceded by the installation of adequate drainage and sediment control measures, unless such clearing is required for the purpose of installing such measures, in which case, only the minimum clearing required to install such measures shall occur.
20. Bulk tree clearing and grubbing of the site shall be immediately followed by specified temporary erosion control measures (e.g. temporary grassing or mulching) prior to commencement of each stage of construction works.
21. Trees and vegetation cleared from the site shall be mulched onsite within 7 days of clearing.
22. Appropriate measures shall be undertaken to control any dust originating due to the mulching of vegetation onsite.
23. All office facilities and operational activities shall be located such that any effluent, including wash-down water, can be totally contained and treated within the site.
24. All reasonable and practicable measures shall be taken to ensure stormwater runoff from access roads and stabilised entry/exit systems, drains to an appropriate sediment control device.
25. Site exit points shall be appropriately managed to minimise the risk of sediment being tracked onto sealed, public roadways.
26. Stormwater runoff from access roads and stabilised entry/exit points shall drain to an appropriate sediment control device.
27. The Applicant shall ensure an adequate supply of ESC, and appropriate pollution clean-up materials are available on-site at all times.
28. All temporary earth banks, flow diversion systems, and sediment basin embankments shall be machine-compacted, seeded and mulched within ten (10) days of formation for the purpose of establishing a vegetative cover, or lined appropriately.
29. Sediment deposited off site as a result of on-site activities shall be collected and the area cleaned/rehabilitated as soon as reasonable and practicable.
30. Concrete waste and chemical products, including petroleum and oil-based products, shall be prevented from entering any internal or external water body, or any external drainage system, excluding those on-site water bodies specifically designed to contain and/or treat such material. Appropriate measures shall be installed to trap these materials onsite.
31. Brick, tile or masonry cutting shall be carried out on a pervious surface (e.g. grass or open soil) and in such a manner that any resulting sediment-laden runoff is prevented from discharging into a gutter, drain or water. Appropriate measures shall be installed to trap these materials onsite.
32. Newly sealed hard-stand areas (e.g. roads, driveways and car parks) shall be swept thoroughly as soon as practicable after sealing/surfacing to minimise the risk of components of the surfacing compound entering stormwater drains.
33. Stockpiles of erodible material shall be provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than 10 days.
34. Stockpiles, temporary or permanent, shall not be located in areas identified as no-go zones (including, but not limited to, restricted access areas, buffer zones, or areas of non-disturbance) on the ESCP.
35. No more than 150m of a stormwater, sewer line or other service trench shall to be open at any one time.
36. Site spoil shall be lawfully disposed of in a manner that does not result in ongoing soil erosion or environmental harm.
37. Wherever reasonable and practicable, stormwater runoff entering the site from external areas, and non-sediment laden (clean) stormwater runoff entering a work area or area of soil disturbance, shall be diverted around or through that area in a manner that minimises soil erosion and the contamination of that water for all discharges up to the specified design storm discharge.

# EROSION AND SEDIMENT CONTROL NOTES (cont)

## Site Management including Dust

38. Priority shall be given to the prevention, or at least the minimisation, of soil erosion, rather than the trapping of displaced sediment. Such a clause shall not reduce the responsibility to apply and maintain, at all times, all necessary ESC measures.
39. Measures used to control wind erosion shall be appropriate for the location and prevent soil erosion at all times, including working hours, out of hours, weekends, public holidays, and during any other shutdown periods.
40. The application of liquid or chemical-based dust suppression measures shall ensure that sediment-laden runoff resulting from such measures does not create a traffic or environmental hazard.
41. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
42. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
43. All reasonable and practicable measures shall be taken to prevent, or at least minimise, the release of sediment from the site.
44. Suitable all-weather maintenance access shall be provided to all sediment control devices.
45. Sediment control devices, other than sediment basins, shall be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event, whether natural or artificial, if the device's sediment retention capacity falls below 75% of its design retention capacity.
46. All erosion and sediment control measures, including drainage control measures, shall be maintained in proper working order at all times during their operational lives.
47. Washing/flushing of sealed roadways shall only occur where sweeping has failed to remove sufficient sediment and there is a compelling need to remove the remaining sediment (e.g. for safety reasons). In such circumstances, all reasonable and practicable sediment control measures shall be used to prevent, or at least minimise, the release of sediment into receiving waters. Only those measures that will not cause safety and property flooding issues shall be employed. Sediment removed from roadways shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.
48. Sediment removed from sediment traps and places of sediment deposition shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.

## Sediment Basins – installation, maintenance and removal including sediment traps

49. As-Constructed plans shall be prepared for all constructed Sediment Basins and associated emergency spillways. Such plans shall verify the basin's dimensions, levels and volumes comply with the approved design drawings. These plans may be requested by the Certifier or Council.
50. Sediment basins shall be constructed and fully operational prior to any other soil disturbance in their catchment.
51. Install an internal gated valve, or similar, in any outlet pipe once pipes installed, or install a sacrificial pipe from basin through wall to external outlet point. The valve shall be connected to a riser made from slotted pipe in the basin. The valve may be opened once captured water meets water quality requirements. The final setup for temporary internal outlet structures to be confirmed prior to construction with Council. This setup will enable discharge of treated water from site without need for pumping.
52. A sediment storage level marker post shall be with a cross member set just below the top of the sediment storage zone (as specified on the approved ESCP). At least a 75mm wide post shall be firmly set into the basin floor.
53. The Site Manager shall obtain the relevant approvals from the relevant organisations to discharge treated water from any existing basins. Organisations may include, but not be limited to, Hunter Water, and Council.
54. Where more than one stage is to be developed at one time, or before the preceding stage is complete, the sediment basin(s) for these stages shall have sufficient capacity to cater for all area directed to the basin(s).
55. Prior to any forecast weather event likely to result in runoff, any basins/traps shall be dewatered to provide sufficient capacity to capture sediment laden water from the site.
56. Sufficient quantities of chemicals/agents to treat captured water shall be placed such that water entering the basin mixes with the chemical/agents and is carried into the basin to speed up clarification.
57. Any basin shall be dewatered within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
58. Sufficient quantities of chemicals/agents to treat turbid water shall be securely stored on-site to provide for at least three complete treatments of all basins requiring chemically treatment onsite.
59. Prior to the controlled discharge (e.g. de-watering activities) from site including excavations and/or sediment basins, the following water quality objectives shall be achieved:
    a) Total Suspended Solids (TSS) to a maximum 50 milligrams/L;
    b) water pH between 6.5 and 8.5, unless otherwise required by the Council;
    c) Turbidity (measured in NTUs) to a maximum of 60 NTU); and
    d) EC levels no greater than background levels.
60. The Development Approval may require testing of additional water quality elements prior to discharge. E.g. metals, organic substances, chemicals or bacteriological indicators.
61. A sample of the released treated water shall be kept onsite in a clear container with the sample date recorded on it.
62. Water quality samples shall be taken at a depth no less than 200mm below the water surface of the basin.
63. No Aluminium based products may be used treat captured water onsite without the prior written permission from an appropriate Council Officer. The applicant shall have a demonstrated ability to use such products correctly and without environmental harm prior to any approval.
64. The chemical/agent used in Type D and Type F basins to treat captured water captured in the basin shall be applied in concentrations sufficient to achieve Council's water quality objectives within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
65. All Manufacturers' Instructions shall be followed for any chemicals/agents used onsite, except where approved by the Responsible Person or an appropriate Council Officer.
66. The Applicant shall ensure that on each occasion a Type F or Type D basin was not de-watered prior to being surcharged by a following rainfall event, a report is presented to an appropriate Council officer within 5 days identifying the circumstances and proposed amendments, if any, to the basin's operating procedures.
67. Settled sediment shall be removed as soon as reasonable and practicable from any sediment basin if:
    a) it is anticipated that the next storm event is likely to cause sediment to settle above the basin's sediment storage zone; or
    b) the elevation of settled sediment is above the top of the basin's sediment storage zone; or
    c) the elevation of settled sediment is above the basins sediment marker line.
68. Scour protection measures placed on sediment basin emergency spillways shall appropriately protect the spillway chute and its side batters from scour, and shall extend a minimum of 3m beyond the downstream toe of the basin's embankment.
69. Suitable all-weather maintenance access shall be provided to all sediment control devices.
70. Materials, whether liquid or solid, removed from any ESC measure or excavation during maintenance or decommissioning, shall be disposed of in a manner that does not cause ongoing soil erosion, water pollution or environmental harm.
71. All sediment basins shall remain fully operational at all times until the basin's design catchment achieves 70% ground cover or surface stabilisation acceptable to Council.
72. The ESC measures installed during the decommissioning and rehabilitation of a sediment basin shall comply with same standards specified for the normal construction works.
73. A sediment basin shall not be decommissioned until all up-slope site stabilisation measures have been implemented and are appropriately working to control soil erosion and sediment runoff..
74. Immediately prior to the construction of the permanent stormwater treatment device, appropriate flow bypass conditions shall be established to prevent sediment-laden water entering the device.

# EROSION AND SEDIMENT CONTROL NOTES (cont)

## Revegetation/Stabilisation

75. Temporary Stabilisation may be attained using vegetation, non rewettable soil polymers, or pneumatically applied erosion controls.
76. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
77. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
78. The LMCC Seed mix shall be used unless stated on the ESCP/SWMP.
79. The pH level of topsoil shall be appropriate to enable establishment and growth of specified vegetation prior to initiating the establishment of vegetation.
80. Non rewettable binder shall be used in all hydromulch/hydroseed/polymer mixes on slopes or works adjacent to a water course.
81. Soil ameliorants shall be added to the soil in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
82. Surface soil density, compaction and surface roughness shall be adjusted prior to seeding/planting in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
83. Procedures for initiating a site shutdown, whether programmed or un-programmed, shall incorporate revegetation of all soil disturbances unless otherwise approved by Council. The stabilisation works shall not rely upon the longevity of non-vegetated erosion control blankets, or temporary soil binders.

## Site Monitoring and Maintenance

84. The Applicant shall ensure that appropriate procedures and suitably qualified personnel are engaged to plan and conduct site inspections and water quality monitoring throughout the construction and maintenance phase.
85. All ESC measures shall be inspected and any maintenance undertaken immediately:
    a) at least daily (when work is occurring on-site); and
    b) at least weekly (when work is not occurring on-site); and
    c) within 24hrs of expected rainfall; and
    d) within 18hrs of a rainfall event that causes runoff on the site.
86. Written records shall be kept onsite of ESC monitoring and maintenance activities conducted during the construction and maintenance periods, and be available to Council officers on request.
87. All environmentally relevant incidents shall be recorded in a field log that shall remain accessible to all relevant regulatory authorities.
88. All water quality data, including dates of rainfall, dates of testing, testing results and dates of water release, shall be kept in an on-site register. The register is to be maintained up to date for the duration of the approved works and be available on-site for inspection by [insert name of regulatory authority] on request.
89. At nominated instream water monitoring sites, a minimum of 3 water samples shall be taken and analysed, and the average result used to determine quality.

## Instream Works

90. All instream works (including in or adjacent to watercourses natural or manmade, flowing or not) shall be carried out in accordance with the IECA White Books.

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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**EROSION AND SEDIMENT CONTROL DETAILS**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C02.11** REVISION **A**

DRAWING SHEET SIZE = A1

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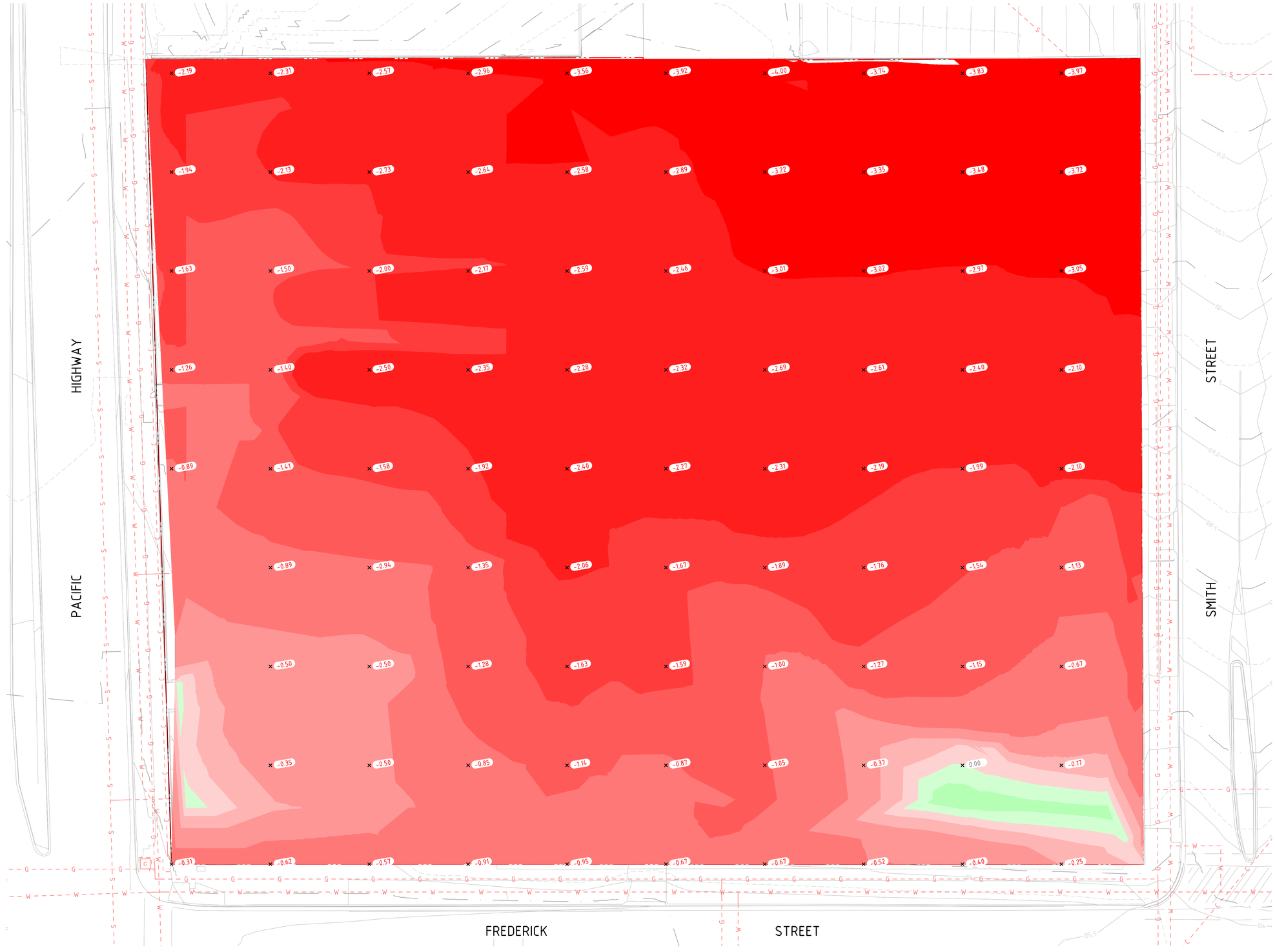


## LEGEND

- DENOTES PROPOSED SITE BOUNDARY
- × 0.15 — BULK EARTHWORKS SPOT HEIGHT
- 0.15 — DENOTES EXISTING SPOT LEVEL
- XX.XX — EXISTING CONTOURS (X.Xm INTERVAL)

### DEPTH OF CUT

| | | | |
|---|---|---|---|
| - 999m | TO | - 2.0m |
| - 2.0m | TO | - 1.5m |
| - 1.5m | TO | - 1.25m |
| - 1.25m | TO | - 1.0m |
| - 1.0m | TO | - 0.75m |
| - 0.75m | TO | - 0.5m |
| - 0.5m | TO | - 0.25m |
| - 0.25m | TO | - 0.0m |

### DEPTH OF FILL

| | | |
|---|---|---|
| 0.0m | TO | 0.25m |
| 0.25m | TO | 0.5m |
| 0.5m | TO | 0.75m |
| 0.75m | TO | 1.0m |
| 1.0m | TO | 1.25m |
| 1.25m | TO | 1.5m |
| 1.5m | TO | 2.0m |
| 2.0m | TO | 999m |

## NOTES

1. BULK EARTHWORKS LEVELS AND VOLUMES ARE BASED ON A COMPARISON OF THE DESIGN BULK EARTHWORKS SURFACE AND THE EXISTING SURFACE LEVEL AS SURVEYED WITH AN ALLOWANCE FOR TOPSOIL STRIPPING OF 100mm. THE FOLLOWING ALLOWANCES HAVE BEEN MADE TO GENERATE DESIGN BULK EARTHWORKS SURFACE;

   FINISHED DESIGN SURFACE MINUS:
   - BUILDING PADS: 250mm
   - VEHICULAR PAVEMENT: 250mm
   - FOOTPATHS: 250mm
   - LANDSCAPING/TURF: 250mm
   - STRIPPING OF TOPSOIL: 100mm
2. NO ALLOWANCE HAS BEEN MADE FOR SELECT LAYERS OR UNSUITABLE MATERIAL THAT IS LIKELY TO BE PRESENT.
3. NO ALLOWANCE HAS BEEN MADE FOR TEMPORARY SEDIMENT DAMS
4. NO ALLOWANCE HAS BEEN MADE FOR SAND LEVELING LAYER BENEATH BUILDING PADS
5. NO ALLOWANCE HAS BEEN MADE FOR SERVICE TRENCHES, DRAINAGE TRENCHES, DRAINAGE INFRASTRUCTURE (PITS, CULVERTS, ETC) IN THE LEVELS OR VOLUMES PRESENTED ON THIS PLAN.
6. NO ALLOWANCE FOR ANY TEMPORARY BATTERS DURING WORKS.
7. NO BULKING FACTORS HAVE BEEN CONSIDERED/ALLOWED FOR.
8. APPROXIMATE BULK EARTHWORKS VOLUMES BASED ON THE NOTES ABOVE ARE AS FOLLOWS;
   - BULK CUT = 14 868m$^3$
   - BULK FILL = 7m$^3$
   - BULK CUT/FILL BALANCE = 14 861m$^3$ (SURPLUS)
9. ALL BULK EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH SITE SPECIFIC GEOTECHNICAL REPORT AND BULK EARTHWORKS NOTES.

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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**BULK EARTHWORKS CUT AND FILL PLAN**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C03.00**

REVISION **A**

DRAWING SHEET SIZE = A1

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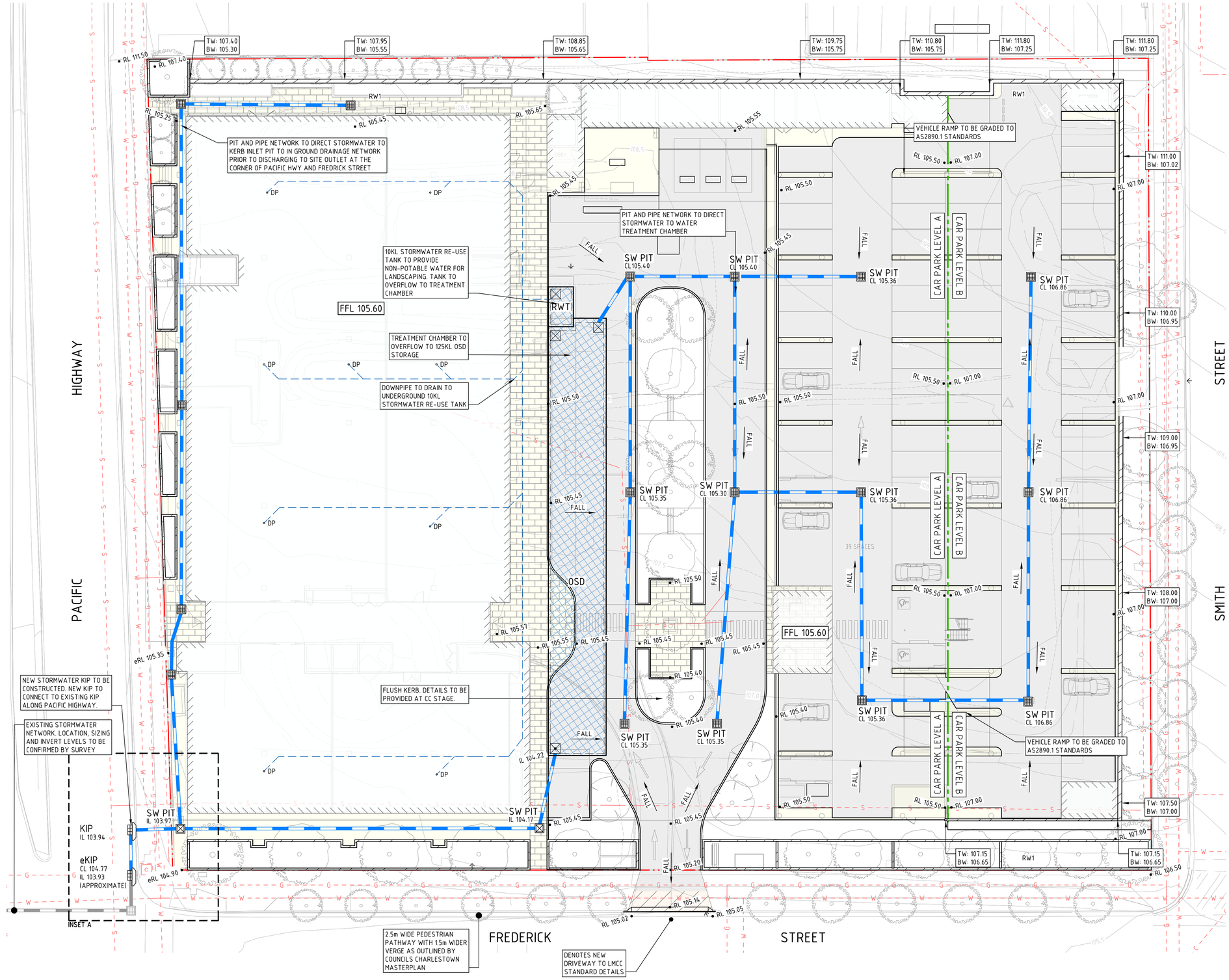
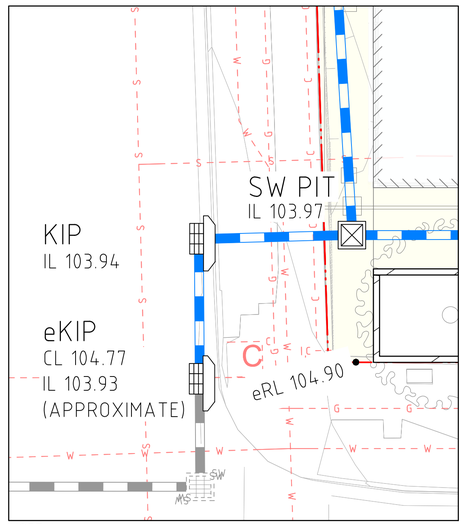



## LEGEND

- SITE BOUNDARY LINE
- STORMWATER PIPE
- EXISTING STORMWATER PIPE
- SW PIT CL xx.xx — STORMWATER PIT, PIT TAG AND COVER LEVEL
- DP — DOWNPIPE
- DOWNPIPE DRAINAGE LINE
- OSD / RWT — 135kL ON-SITE DETENTION / REUSE TANK REFER TO C09.01 FOR SCHEMATIC
- RL XX.XX — PROPOSED SPOT HEIGHT
- eRL XX.XX — EXISTING SPOT HEIGHT
- FALL — DIRECTION OF GRADE
- FFL XX.XX — PROPOSED FINISHED FLOOR LEVEL
- EXISTING CONTOURS (X.Xm INTERVALS)
- TRAFFICABLE VEHICLE PAVEMENT
- CONCRETE PAVEMENT
- PAVED PEDESTRIAN PAVEMENT
- CONCRETE DRIVEWAY CROSSOVER TO LMCC STANDARD DETAILS
- BUILDING EXTENTS
- EXISTING SERVICES BASED ON SURVEY DATA SUPPLIED
- VEHICULAR CROSSING
- RW1 — RETAINING WALL - TYPE 1
- CAR PARK LEVEL X — PARKING LOT LEVEL ORIENTATION
- TW: XX.XX / BW: XX.XX — TOP OF RETAINING WALL / BOTTOM OF RETAINING WALL




INSET A
@1:100m

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DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**CIVIL WORKS PLAN LEVEL 1**

JOB NUMBER: **NL211248**
DRAWING NUMBER: **DA-C03.01**
REVISION: **D**
DRAWING SHEET SIZE = A1

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

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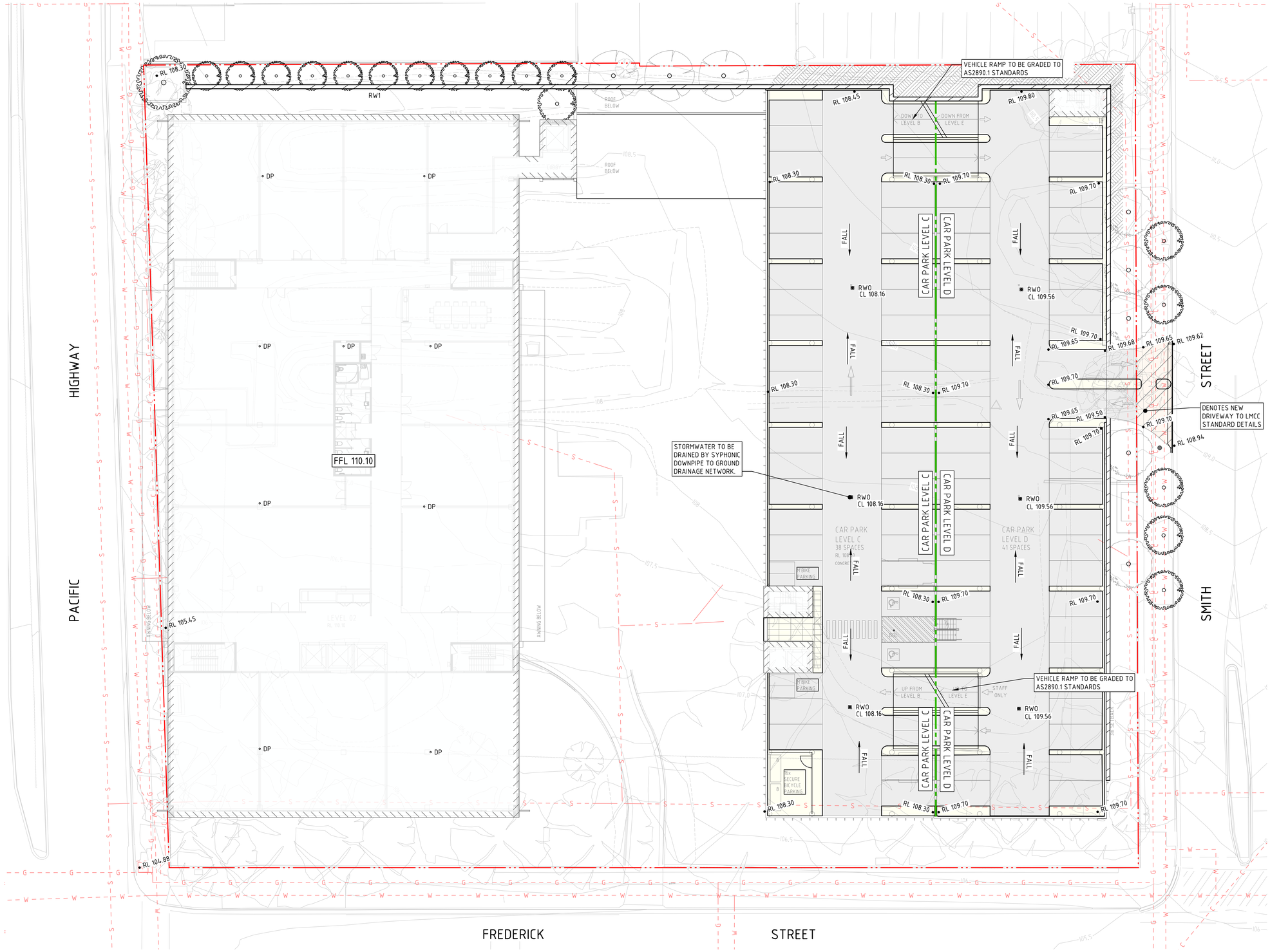


## LEGEND

- SITE BOUNDARY LINE
- FALL — DIRECTION OF GRADE
- FFL XX.XX — PROPOSED FINISHED FLOOR LEVEL
- RL XX.XX — PROPOSED SPOT HEIGHT
- XX.XX — EXISTING CONTOURS (X.Xm INTERVALS)
- TRAFFICABLE VEHICLE PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE DRIVEWAY CROSSOVER TO LMCC STANDARD DETAILS
- BUILDING EXTENTS
- X — EXISTING SERVICES BASED ON SURVEY DATA SUPPLIED
- VEHICULAR CROSSING
- RW1 — RETAINING WALL - TYPE 1
- RWO — RAINWATER OUTLET
- DP — DOWNPIPE
- CAR PARK LEVEL X / CAR PARK LEVEL X — PARKING LOT LEVEL ORIENTATION

DRAWN: B. DUGGAN
DESIGNED: R. WRIGHT
JOB MANAGER: C. SMITH
VERIFIER:

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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

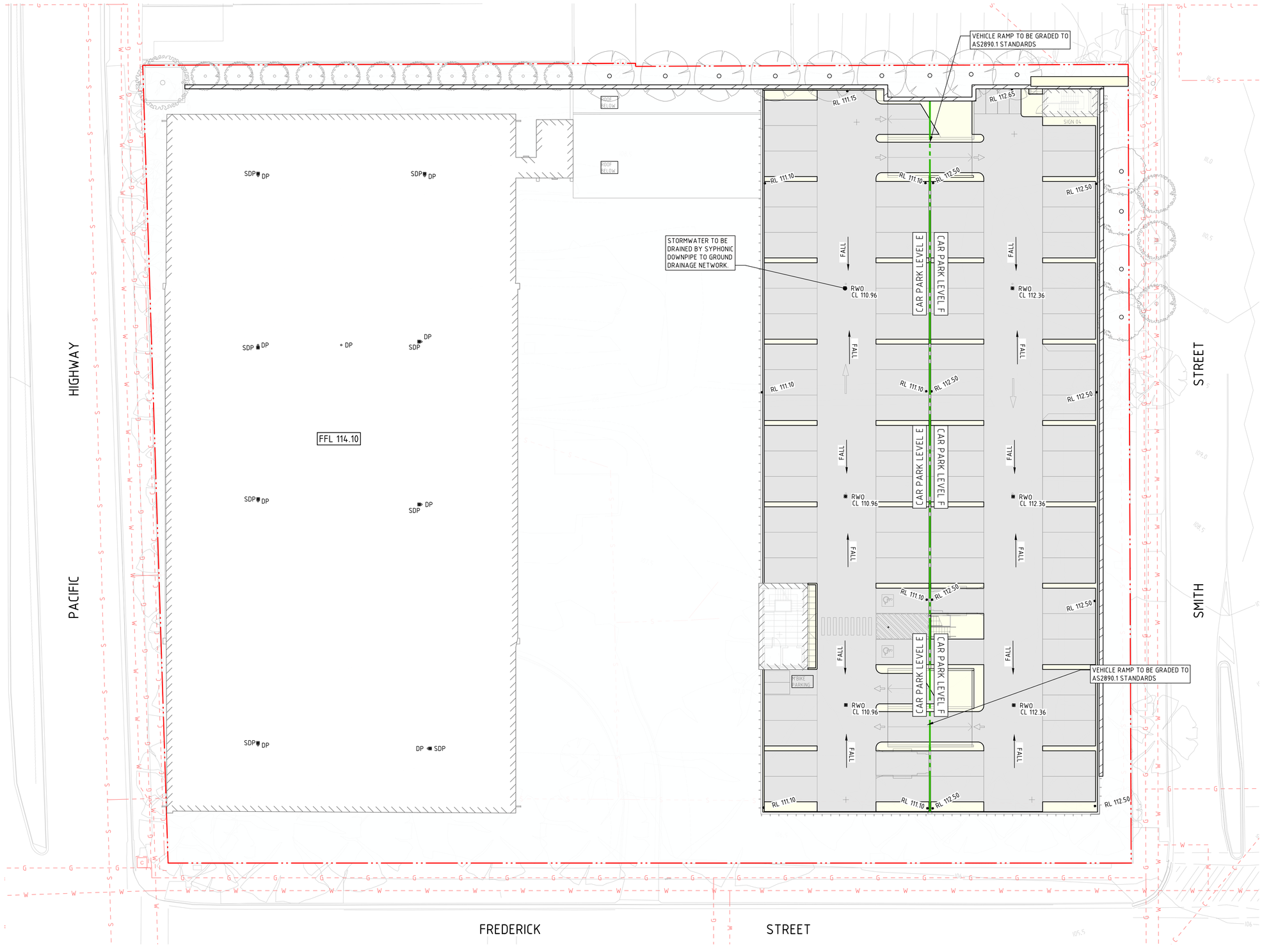
**CIVIL WORKS PLAN LEVEL 2**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C03.02**

REVISION **C**

DRAWING SHEET SIZE = A1




## LEGEND

- SITE BOUNDARY LINE
- STORMWATER PIPE
- EXISTING STORMWATER PIPE
- DP — DOWNPIPE
- SDP — SIPHONIC DOWNPIPE (FROM ROOF LEVEL ABOVE)
- RL XX.XX — PROPOSED SPOT HEIGHT
- FALL — DIRECTION OF GRADE
- FFL XX.XX — PROPOSED FINISHED FLOOR LEVEL
- XX.XX — EXISTING CONTOURS (X.Xm INTERVALS)
- TRAFFICABLE VEHICLE PAVEMENT
- CONCRETE PAVEMENT
- BUILDING EXTENTS
- X — EXISTING SERVICES BASED ON SURVEY DATA SUPPLIED
- RW1 — RETAINING WALL - TYPE 1
- RWO — RAINWATER OUTLET
- CAR PARK LEVEL X / CAR PARK LEVEL X — PARKING LOT LEVEL ORIENTATION

DRAWN: B. DUGGAN
DESIGNED: R. WRIGHT
JOB MANAGER: C. SMITH
VERIFIER:

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DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**CIVIL WORKS PLAN LEVEL 3**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C03.03** REVISION **C**

DRAWING SHEET SIZE = A1

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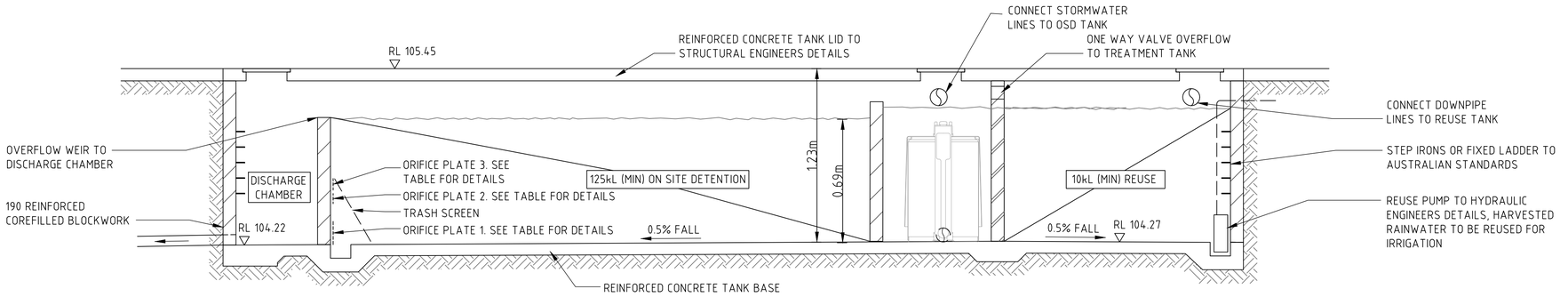


# TYPICAL OSD / REUSE TANK SCHEMATIC

DETAILS TO BE CONFIRMED AT CC STAGE

| BASIN DIMENSIONS | | | |
|---|---|---|---|
| ORIFICE NUMBER | 1 | 2 | 3 |
| ELEVATION OF CENTRE OF ORIFICE (m) | 0 | 0.35 | 0.45 |
| ORIFICE DIAMETER | 400 | 200 | 205 |

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

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SCALE 1:40@ A1

0 0.4 0.8 1.2 1.6 2m

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DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**OSD SCHEMATIC**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C09.01**

REVISION **D**

DRAWING SHEET SIZE = A1

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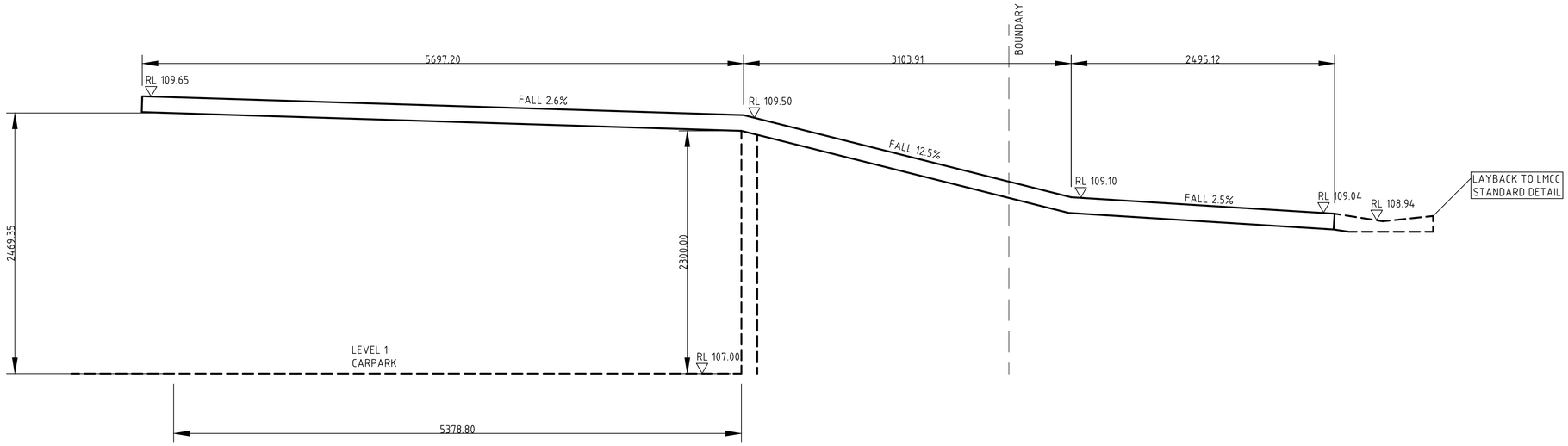
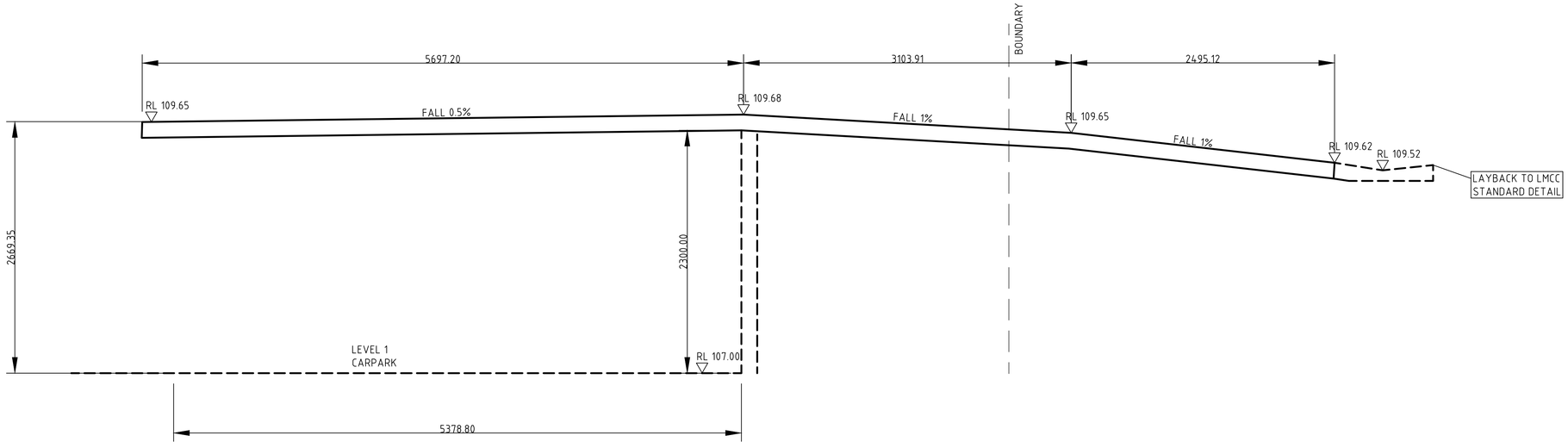
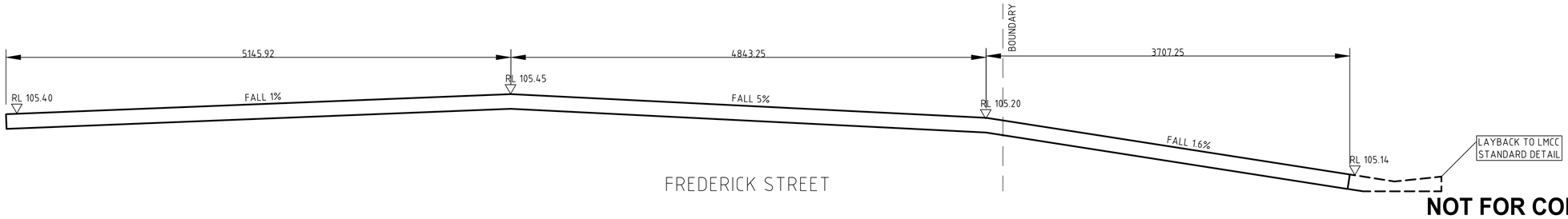



SMITH STREET - ENTRANCE




SMITH STREET - EXIT




FREDERICK STREET

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DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

| REVISION | DESCRIPTION | ISSUED | VER'D | APP'D | DATE |
|---|---|---|---|---|---|
| D | ISSUED FOR DA APPROVAL | JB | | CS | 19.04.23 |

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SCALE 1:25@ A1

0 0.25 0.5 0.75 1 1.25m

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PROJECT
**PROPOSED HEALTH SERVICES FACILITY AND RETAIL PREMISES 31-33 SMITH STREET, CHARLESTOWN**

DRAWING TITLE
**CIVIL ENGINEERING PACKAGE**

**DRIVEWAY LONGITUDINAL SECTIONS**

JOB NUMBER **NL211248**

DRAWING NUMBER **DA-C09.02** REVISION **D**

DRAWING SHEET SIZE = A1

Date : 19.04.2023 4:58 PM Plotted By : JBOOTHBY Found : Y:\YEAR 2021 Jobs\NL211248 - Charlestown Private Hospital\O - Drawings\CIVIL\03-CAD\01-DA\NL211248-DA C09.01 DETAILS.dwg