

7<sup>th</sup> December 2023

Belvedere House, 5th Floor  
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Manchester  
M2 4AW

**Ancoats Dispensary – Planning Ref 130356/FO/2021**

0161 833 9579  
[www.ridge.co.uk](http://www.ridge.co.uk)

5014349

Ridge have prepared this technical note to provide information in relation to Planning Condition 12, for Planning Reference 130356/FO/2021

***12. Prior to the first occupation of the development, details of the implementation, maintenance and management of the sustainable drainage scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include:***

***-Verification report providing photographic evidence of construction as per design drawings***

***-As built construction drawings if different from design construction drawings;***

***-Management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.***

***The implementation of the management and maintenance plan shall be implemented in accordance with the timescales agreed and retained for as long as the development remains in use.***

***Reason - To manage flooding and pollution and to ensure that a managing body is in place for the sustainable drainage system and there is funding and maintenance mechanism for the lifetime of the development pursuant to policies SP1, EN14 and DM1 of the Manchester Core Strategy (2012).***

| Element of Planning Condition 12                                                                                                                                                                                                                                                              | Related Information to Discharge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Verification report providing photographic evidence of construction as per design drawings.</i></b>                                                                                                                                                                                     | This TN constitutes the verification report, photos, drawings, schedules and data sheets are provided for the drainage system within this document. An operation and maintenance plan has been provided as part of this Technical Note.                                                                                                                                                                                                                                                                                                        |
| <b><i>As built construction drawings if different from design construction drawings.</i></b>                                                                                                                                                                                                  | . The most recent drawings of the surface water network have been included in Appendix A.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b><i>Management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.</i></b> | <p>The construction record drawings are included in Appendix A</p> <p>The construction record drawings include manhole schedules that record grid reference of chambers.</p> <p>Installation photographs have been provided in a table below.</p> <p>Critical Assets such as attenuation tanks and flow controls are annotated on the drawing and have been identified for an operation and maintenance regime in the maintenance schedule. Included in Appendix B</p> <p>Data sheets for the hydrobrake have been provided in Appendix C.</p> |

| Critical Drainage Element | Photographic evidence of installation.                                               |
|---------------------------|--------------------------------------------------------------------------------------|
| Attenuation Installation  |    |
|                           |   |
| Pipework Installation     |  |



FLOW  
CONTROL





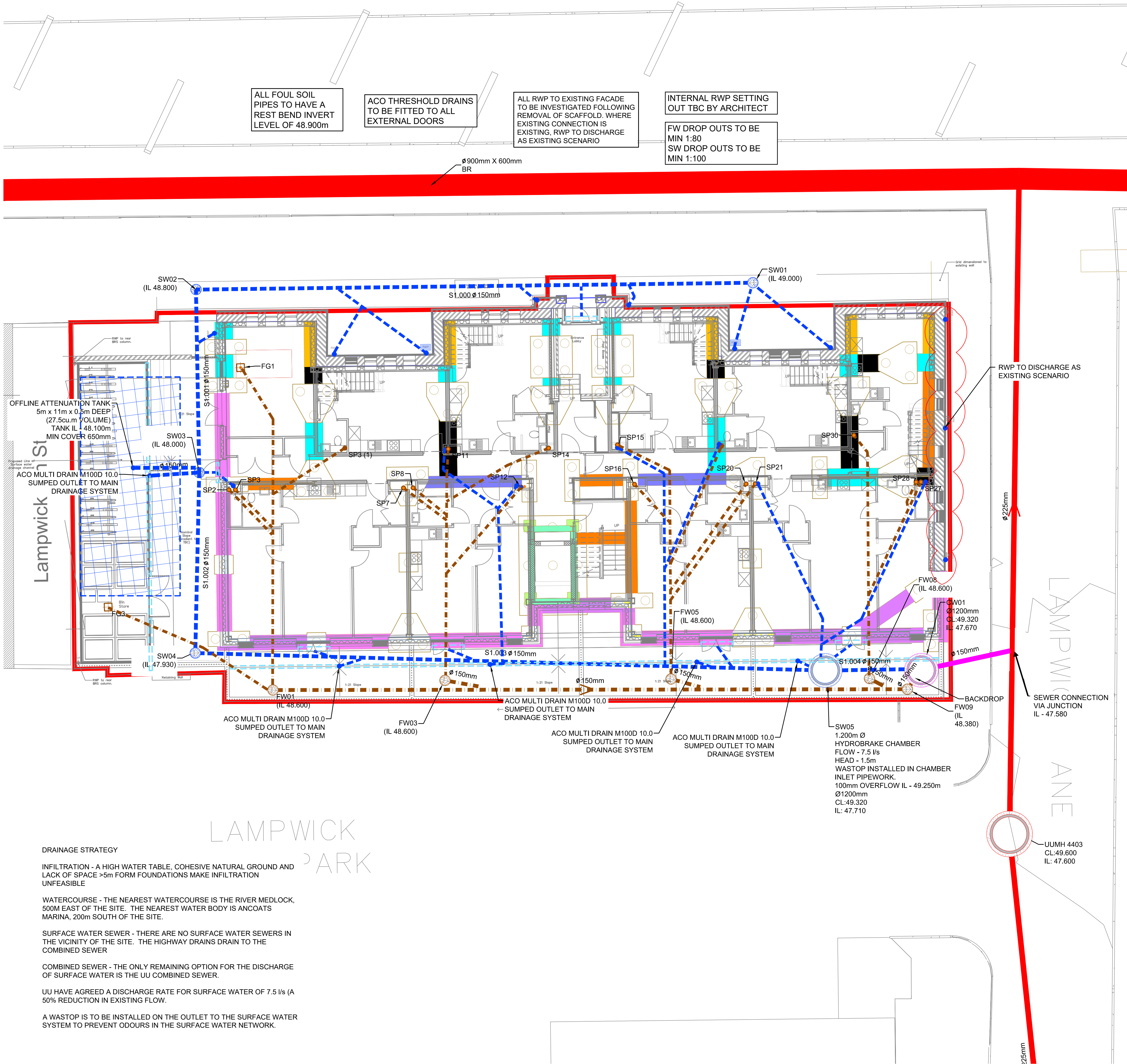
**PROPERTY & CONSTRUCTION CONSULTANTS**

**RIDGE**

**APPENDIX A –**

NOTES

- Drawings to be read in conjunction with all services and structural engineers drawings & specifications.
- This document must not be altered, reproduced or distributed without prior written consent of the originator.
- Do not scale from this document – use figured dimensions only.
- All dimensions must be checked on site prior to commencement of any related works.
- Contractor to provide and have an approved method statement prior to works.
- This drawing shall be read in conjunction with the civil engineering specification, and all relevant Architect's and Engineer's drawings.
- All setting out to be in accordance with the Architects drawings. Any discrepancies between Ridge and the Architects drawings to be referred to the Architect before proceeding. Dimensions must not be scaled.
- All levels are in metres above ordance datum.
- The Contractor is to comply full with CDM regulations in the course of constructing the works.
- At the commencement of the works, the Contractor is to carry out trial pits and liaise with utility companies in order to establish the exact position of all existing utility plant in the vicinity of the works and take adequate precautions for their protection.
- The Contractor is to refer to Health and Safety Executive 'Note 47 – Avoiding Danger from Underground Services' and 'Document C56 – Avoiding Danger from Overhead Electric Lines.'
- Works on or adjacent to existing public highway will be executed in accordance with the Traffic Safety Code for Road Works and Traffic Signs Manual: Chapter 8.
- The Contractor will ascertain the CBR value of the subgrade in order to determine the required sub-base / capping thickness.
- Prior to laying any material, the subgrade must be inspected and any soft spots removed and filled with 6F2 capping material.
- Prior to the construction of any drainage works, the Contractor is to confirm the invert levels of existing manholes, drains and sewers. Any variations from the designed levels shown on the drawings must be reported to the Drainage Engineer in advance of construction works commencing. All new sewers and drains are to be laid in sequence starting from the outfall location.
- All drainage to be installed in accordance with relevant Building Regulation documents and current Sewers for Adoption. Connections to public sewers are to be agreed and inspection by the Water Authority.
- All drain and sewer pipes are #100mm and laid soffit to soffit, unless shown otherwise.
- Invert to base of soil stack bands to be 450mm below lowest branch connection for up to three storey buildings; for buildings up to five storeys, the invert to the base of soil stack bands should not be less than 750mm. All foul and surface water drainage stacks are to have above ground radding access. Refer to above ground drainage layout(s) by others.
- All RWP and SVP setting is to be confirmed by the Architect. All below ground connections are to match above ground outlet size, minimum #100mm.
- SVPs are to project 100mm above finished floor level.
- All internal manholes and inspection chambers to have double sealed recessed covers to suit floor finishes as defined by the Architect.
- All external covers in non-tarmac areas are to have recessed covers to suit the paving material.
- This drawing has been produced in colour and should be reproduced in colour for clarity.
- A CCTV survey and report in WINCAN format for all new drainage will be required prior to 'as built' drawing being issued.
- The Contractor is responsible for the traffic safety and management associated with the construction of the works. Works will not commence on the existing highway until their traffic management proposals have been agreed with Highway Authority.
- Where the works involve the obstruction of a footway, the Contractor will provide an alternative safe footway properly signed, guarded and lit.
- Where one-way traffic is unavoidable, traffic will be controlled by a proper system of vehicle-actuated traffic signals or manual stop / go signs and during the hours of darkness, by a proper system of vehicle-actuated traffic signals, all to the approval of Highway Authority.
- 65mm Minimum thickness tactile paving, coloured buff will be incorporated at all pedestrian crossings in accordance with the Department for Transport and Regions document "Guidance on the Use of Tactile Paving Surfaces." (DETR No. 1998)
- All signs and road markings will be in accordance with the "Traffic Signs Regulations and General Directions 2016". (TSRGD 2016)
- All excavation and backfilling work in the existing highway to be in accordance with the provisions of the New Street Works Act 1991 or that specified on the working drawings.
- All highways works to be carried out in accordance with Highway Authority's highway standards, to the satisfaction of the Highway Authority Section 278 Inspector and in accordance with the Specification for Highway Works.
- Gullies, gully connections, drains, manholes, catch pit, soakways, headwalls and other drainage structures intended to convey only highway water are to be constructed in accordance with the specification of Highway Authority and to the satisfaction of the Highway Inspector.
- Where existing junctions and accesses are to remain in operation within the works during the construction process, the Contractor will ensure that access to these units remains available at all times.
- Highways in the vicinity of the works must be kept free from mud, debris and dust falling from vehicles or wheels of vehicles connected with the works. Where the deposits of debris and mud are unavoidable, warning signs must be displayed whilst work is in progress and affected carriageways / footways must be regularly cleared.  
Source:
  - Topographical survey by ? Drawing No. ? dated ?
  - Architect's layout by ? Drawing No. ? dated ?



DRAINAGE STRATEGY

INFILTRATION - A HIGH WATER TABLE, COHESIVE NATURAL GROUND AND LACK OF SPACE >5m FORM FOUNDATIONS MAKE INFILTRATION UNFEASIBLE

WATERCOURSE - THE NEAREST WATERCOURSE IS THE RIVER MEDLOCK, 500M EAST OF THE SITE. THE NEAREST WATER BODY IS ANCOATS MARINA, 200m SOUTH OF THE SITE.

SURFACE WATER SEWER - THERE ARE NO SURFACE WATER SEWERS IN THE VICINITY OF THE SITE. THE HIGHWAY DRAINS DRAIN TO THE COMBINED SEWER

COMBINED SEWER - THE ONLY REMAINING OPTION FOR THE DISCHARGE OF SURFACE WATER IS THE UU COMBINED SEWER.

UU HAVE AGREED A DISCHARGE RATE FOR SURFACE WATER OF 7.5 l/s (A 50% REDUCTION IN EXISTING FLOW.

A WASTOP IS TO BE INSTALLED ON THE OUTLET TO THE SURFACE WATER SYSTEM TO PREVENT ODOURS IN THE SURFACE WATER NETWORK.

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CDM REGULATIONS 2015

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- KEY
- EXISTING UU COMBINED SEWER
  - PROPOSED FOUL DRAIN
  - PROPOSED SURFACE DRAIN
  - PROPOSED ACO
  - PROPOSED ATTENUATION
  - PIPE SLEEVED THROUGH GROUND BEAM

|    |                    |          |    |    |
|----|--------------------|----------|----|----|
| C4 | CONSTRUCTION ISSUE | 29.07.22 | AP | PB |
| C3 | CONSTRUCTION ISSUE | 11.07.22 | AP | PB |
| C2 | CONSTRUCTION ISSUE | 18.05.22 | AP | PB |
| C1 | CONSTRUCTION ISSUE | 25.04.22 | AP | PB |

| REV | DESCRIPTION | DATE | BY | CHKD |
|-----|-------------|------|----|------|
|     |             |      |    |      |

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CLIENT:  
ERIC WRIGHT

IN ASSOCIATION WITH:  
GREAT PLACES HOUSING GROUP LTD

PROJECT:  
ANCOATS DISPENSARY

TITLE:  
PROPOSED DRAINAGE  
GENERAL ARRANGEMENT

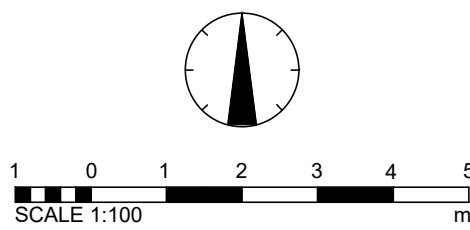
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|-----------|------|-------|---------------|-------|---|----|
| ENG/TECH: | CSE: | ICSE: | SCALE:        | 1:100 | @ | A1 |
| PB        | PB   | ED    | STATUS ISSUE: | D2    |   |    |

STATUS:  
CONSTRUCTION

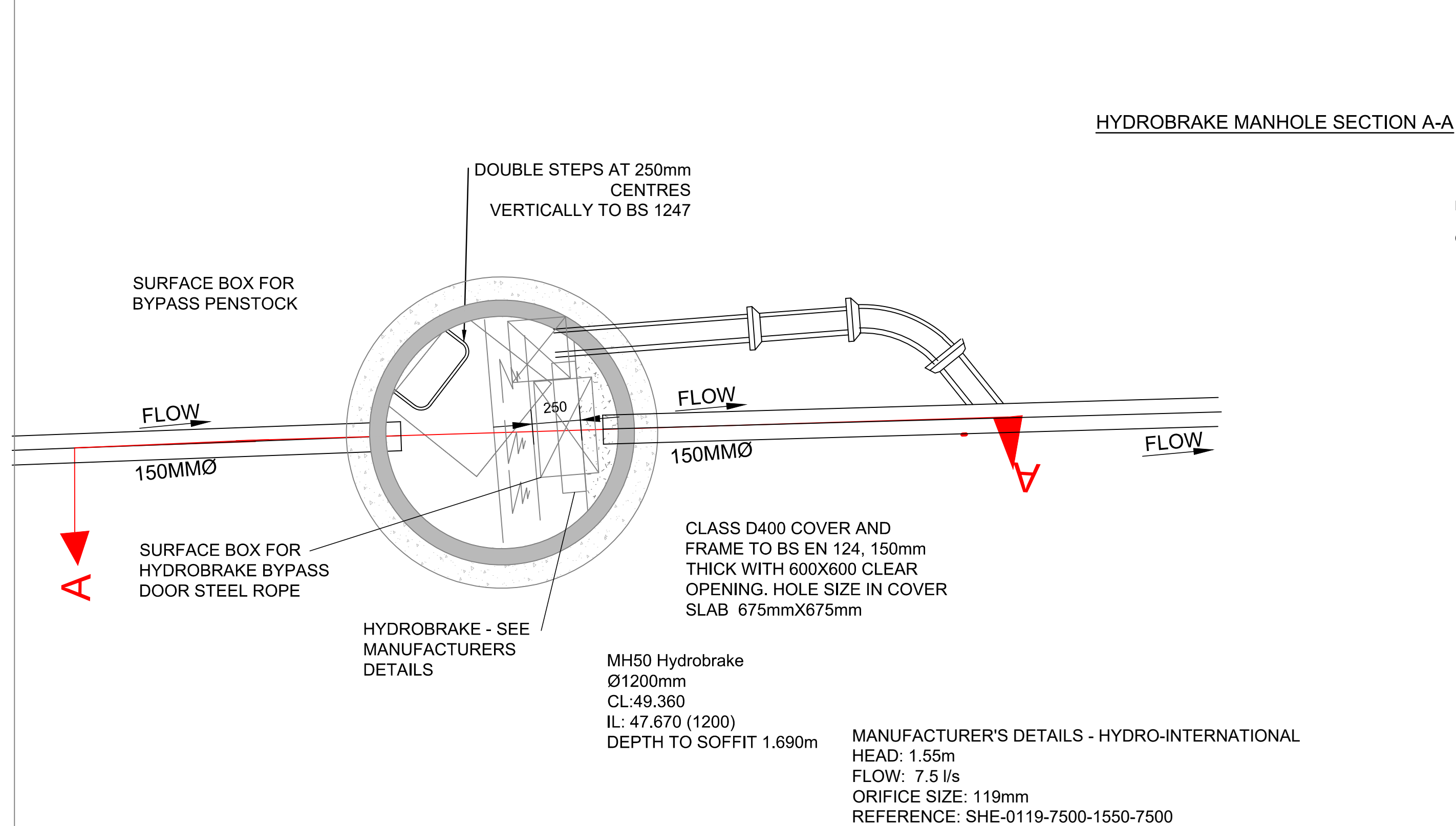
\*\*UNLESS ISSUED FOR CONSTRUCTION - WORKS AT CLIENT/CONTRACTORS RISK\*\*

SUITABILITY: S4 - Issued for Construction Approval

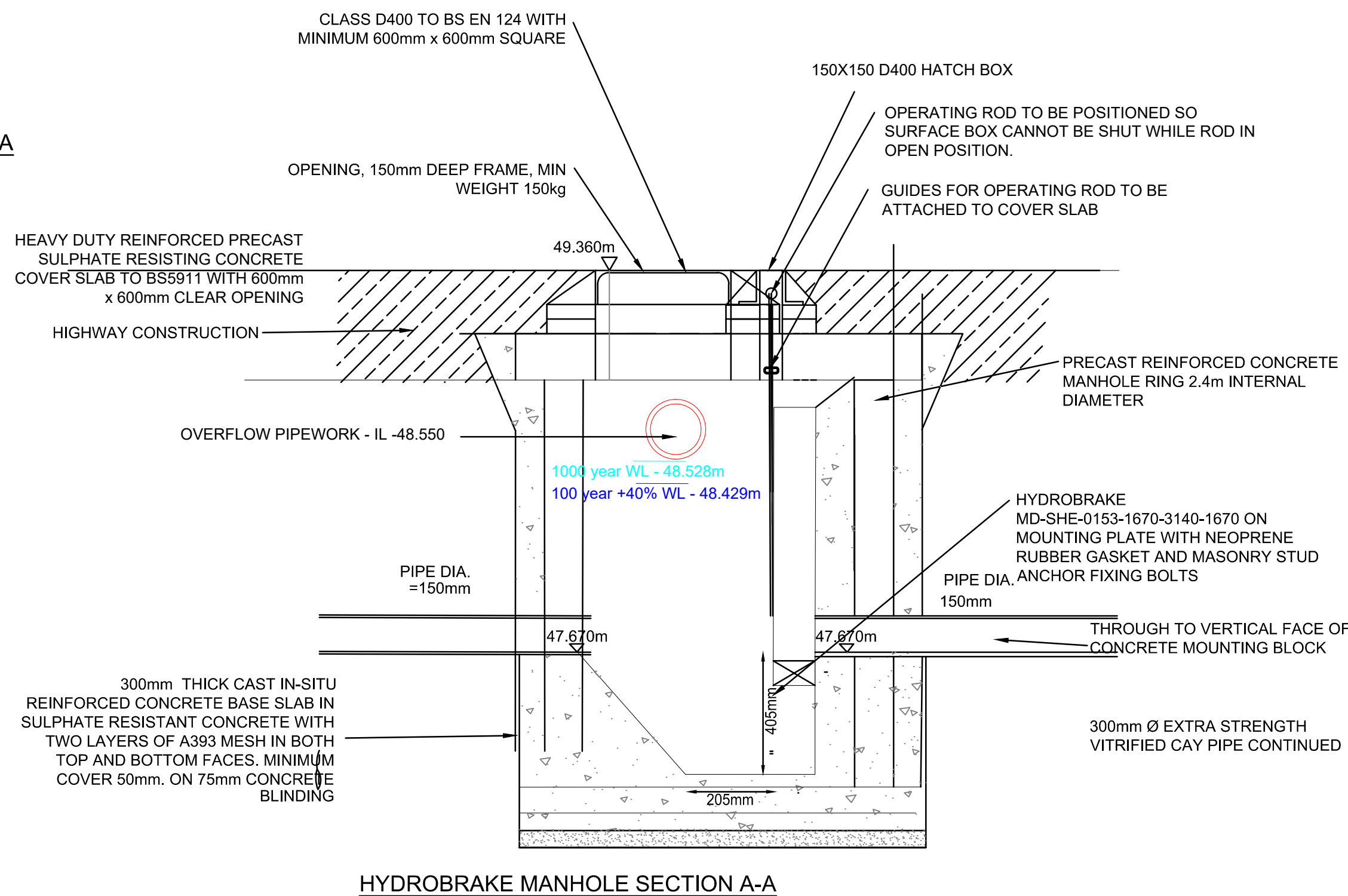
| PROJECT: | ORG: | ZONE: | LEVEL: | TYPE: | ROLE: | NUMBER: | REV: |
|----------|------|-------|--------|-------|-------|---------|------|
| 210005   | RDG  | XX    | XX     | DR    | C     | 0100    | C4   |



## NOTES



1:20 DETAIL  
HYDROBRAKE MANHOLE  
PLAN AND SECTION



### HYDROBRAKE MANHOLE SECTION A-A

THE CONTRACTOR SHALL PROHIBIT THE MOVEMENT OF CONSTRUCTION PLANT ACROSS THE STORAGE TANK AND WHERE NECESSARY PROVIDE ADDITIONAL SUPPORT AND PROTECTION TO THE STRUCTURE. PARTICULARLY POST CONSTRUCTION, TEMPORARY FENCING CAN BE USED TO PROHIBIT TRADE STOCKS, PILLING MATERIALS, HEAVY PLANTS ETC.,

**INLET/OUTLET PIPES MUST BE SUPPORTED WITH CONCRETE TO PROTECT IT DURING BACKFILLING**

BACKFILL OPTIONS ABOVE THE MODULAR UNIT :

- MIN 100mm THICK SELECTED EXCAVATED MATERIAL IF SEEN SUITABLE BY THE SITE ENGINEER.
- 100 mm THICK COARSE SAND OR CLASS 6H SELECTED GRANULAR MATERIAL.
- BACKERBOARD HD (IS A PREMOULDED BOARD FOR USE AS PROTECTION AGAINST BACKFILL)

TO PROTECT THE WATERPROOF TUFLEX GEOMEMBRANE DURING BACKFILLING OPERATION, OVERLAY THE TOP AND SIDES WITH GEOTEX 300 PP NEEDLE PUNCHED NON-WOVEN PROTECTION GEOTEXTILE WITH A LAPPED JOINTS (AS SUPPLIED BY ALDERBURGH LIMITED).

BACKFILL SUGGESTIONS  
OPTIONS AROUND THE SIDES  
OF MODULAR UNIT:

- 100mm THICK SELECTED EXCAVATED MATERIAL IF SEEN SUITABLE BY THE SITE ENGINEER.
- BACKERBOARD HD (IS A PREMOULDED BOARD FOR USE AS PROTECTION AGAINST BACKFILL)

PIPES CONNECTED TO THE ATTENUATION TANK USING HEAVY DUTY PIPE COLLARS (HEAT WELDED TO TULFEX IMPERMEABLE GEOMEMBRANE) WITH STAINLESS STEEL STRANGLE BANDS FOR FASTENING AROUND THE PIPE (AS SUPPLIED BY ALDERBURGH LIMITED).

MODULES REQUIRE 450 mm  
MINIMUM BACKFILL COVER  
BEFORE DRIVING OVER WITH  
SMALL EXCAVATORS OR  
BOBCAT

TOP OF TANK  
LEVEL - 48.500

IL - 48.100

IL - 48.100

ESS PLUVIAL CUBE MODULE  
TO BE WRAPPED WITH TUFLEX  
IMPERMEABLE GEOMEMBRANE  
WITH A mm LAP HEAT WELDED  
JOINTS. (AS SUPPLIED BY  
ALDERBURGH LIMITED).

ESS PLUVIAL CUBE MODULE (500 mm LONG x 500 mm WIDE X 500 mm HIGH) ARRANGEMENTS AS SHOWN. MODULES CAN BE SECURED AS A 'HOUSE KEEPING' MEASURE WITH PLASTIC PROPRIETY CABLE TIES.

150mm THICK CONCRETE SLAB  
WITH 1 LAYER A393 MESH.  
CONCRETE TO BE MIN C35  
WITH SULPHATE RESISTANCE  
CLASS DC2. SLAB TO EXTEND  
500mm BEYOND TANK ON ALL  
SIDES.



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REGISTER.



|     |                    |          |    |    |
|-----|--------------------|----------|----|----|
| C01 | CONSTRUCTION ISSUE | 24.04.22 | PB | PB |
| P04 | STAGE 4            | 18.02.22 | PB | PB |
| P03 | PRELIMINARY        | 17.12.21 | PB | PB |
| P02 | PRELIMINARY        | 09.07.21 | PB | PB |
| P01 | PRELIMINARY        | 20.04.21 | PB | PB |

| REV | DESCRIPTION | DATE | BY | CHK |
|-----|-------------|------|----|-----|
|-----|-------------|------|----|-----|

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CLIENT

ERIC WRIGHT

IN ASSOCIATION WITH

GREAT PLACES HOUSING GROUP LTD

PROJECT

ANCOATS DISPENSARY

| TITLE | DATE | BY  | NO. | PRICE | REMARKS |
|-------|------|-----|-----|-------|---------|
| ...   | ...  | ... | ... | ...   | ...     |

## PROPOSED DRAINAGE SPECIFIC DETAILS

|           |      |       |                  |
|-----------|------|-------|------------------|
| ENG/TECH: | CSE: | ICSE: | SCALE: 1:20 @ A1 |
| PB        | PB   | ED    | STATUS ISSUE: D2 |

STATUS

PRELIMINARY

\*\*UNLESS ISSUED FOR CONSTRUCTION - WORKS AT CLIENT/CONTRACTORS RISK

SUITABILITY: S2 - Issued for Information

|          |      |       |        |       |       |         |      |
|----------|------|-------|--------|-------|-------|---------|------|
| PROJECT: | ORG: | ZONE: | LEVEL: | TYPE: | ROLE: | NUMBER: | REV: |
| 210005   | RDG  | XX    | XX     | DR    | C     | 0107    | C01  |

NOTES

600 X 600 CLEAR OPENING  
DUCTILE IRON COVER AND FRAME TO BE  
BS EN124 KITEMARKED, CLASS D400 AND  
150mm DEEP IN HIGHWAY. BEDDED ON  
CLASS M1, M2 OR EPOXY MORTAR.  
APPROVED PACKING MATERIAL MAY BE  
USED IF REQUIRED. MANUFACTURERS  
NAME TO BE CLEARLY VISIBLE

CLASS M1, M2 OR EPOXY  
MORTAR HAUNCHING TO  
M.H. COVER AND FRAME  
COVER SLAB WITH 675 X 675 ACCESS  
(BS5911 KITEMARKED) BEDDED ON  
MORTAR.

LIFTING EYES IN CONCRETE  
RING TO BE POINTED

DOUBLE WIDTH STEP IRONS  
AT 250mm CENTRES  
VERTICALLY SHOULD BE  
INSTALLED IN ALL MANHOLES  
UPTO 6m DEEP

ALL INSITU CONCRETE TO BE C20  
WITH SULPHATE RESISTING CEMENT  
UNLESS OTHERWISE AGREED

HIGH STRENGTH CONCRETE  
TOPPING TO BE BROUGHT UP  
TO A DENSE SMOOTH FACE  
NEATLY SHAPED AND FINISHED  
TO ALL BRANCH CONNECTIONS  
(MIN THICKNESS 20mm)

CONSTRUCTION JOINT

DISTANCE BETWEEN TOP OF PIPE  
AND UNDERSIDE OF PRECAST  
SECTION TO BE MIN 50mm

INVERTS TO BE FORMED  
USING CHANNEL PIPES

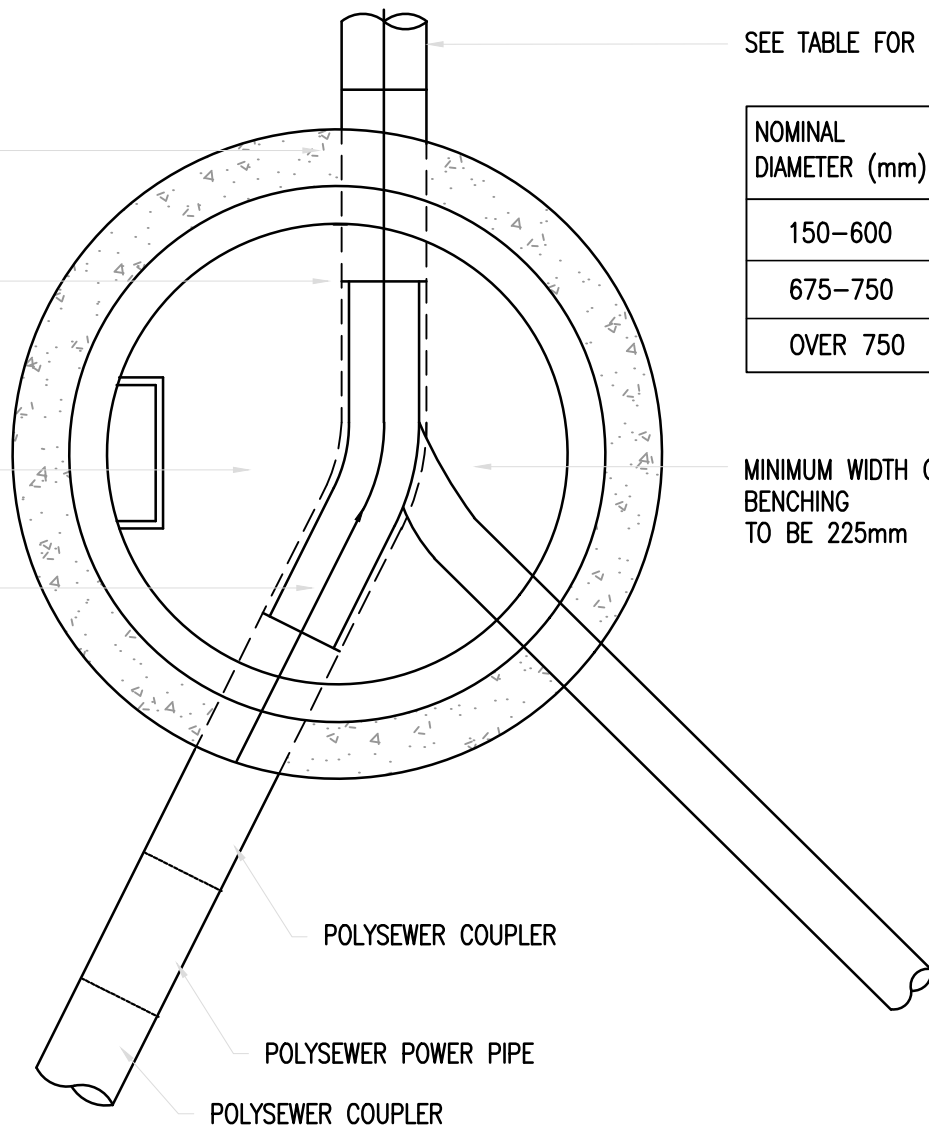
JOINT TO BE AS CLOSE AS POSSIBLE  
TO FACE OF MANHOLE TO PERMIT  
SATISFACTORY JOINT AND  
SUBSEQUENT MOVEMENT

PIPE JOINT WITH CHANNEL  
TO BE LOCATED MIN 100mm  
INSIDE FACE OF MANHOLE

MINIMUM WIDTH OF BENCHING  
TO BE 500mm

ALL CHANNELS IN MANHOLES  
TO BE CLAYWARE

MANHOLES WITH OUTGOING  
PIPES GREATER THAN 600mm  
DIA SHOULD BE FITTED WITH GAIRD  
BARS, SAFETY CHAINS  
OR OTHER SAFETY DEVICES



TYPICAL MANHOLE DETAIL-TYPE B

SEWERS FOR ADOPTION - 6th EDITION.  
MAX DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 3.0m AND  
600mm X 600mm CLEAR OPENING ACCESS.  
THE DESIGN OF MANHOLES WILL NEED TO COMPLY WITH THE  
UNDERTAKER'S SAFETY POLICY.

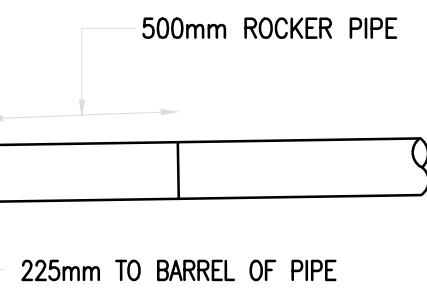
675mm MAX TO FIRST STEP  
PROPRIETARY ADJUSTING UNIT (LOAD  
BEARING SLAB) (BS5911  
KITEMARKED) WITH 600 X 600  
ECCENTRIC ACCESS HOLE (BS752)  
BEDDED ON MORTAR.

PRECAST CONCRETE CHAMBER  
SECTIONS AND COVER SLAB TO  
BE BEDDED WITH MORTAR,  
PROPRIETARY BITUMEN OR  
RESIN MASTIC SEALANT

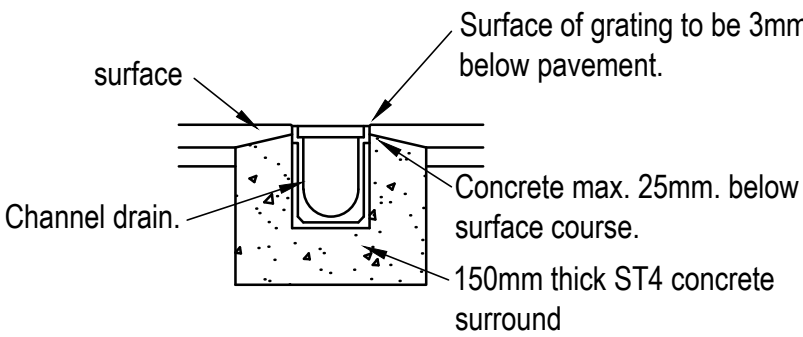
150mm CONCRETE SURROUND  
CHAMBER HEIGHT  
(NOT LESS THAN 900mm)

BENCHING SLOPE TO  
BE 1 IN 10 TO 1 IN 30

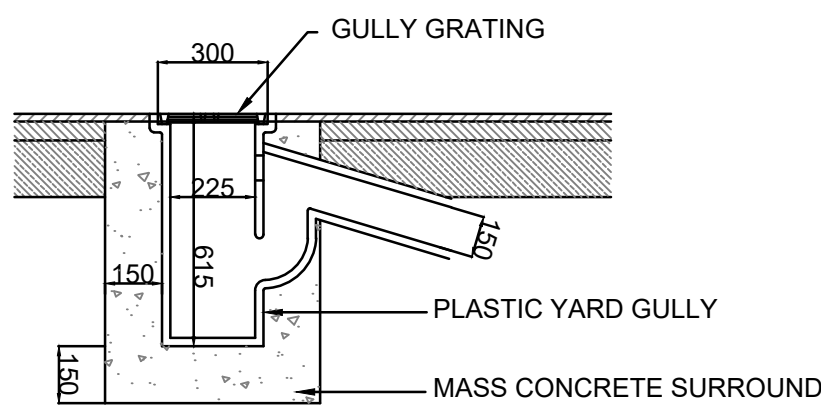
THE BOTTOM PRECAST MANHOLE  
RING TO BE BUILT INTO BASE  
CONCRETE MIN 100mm



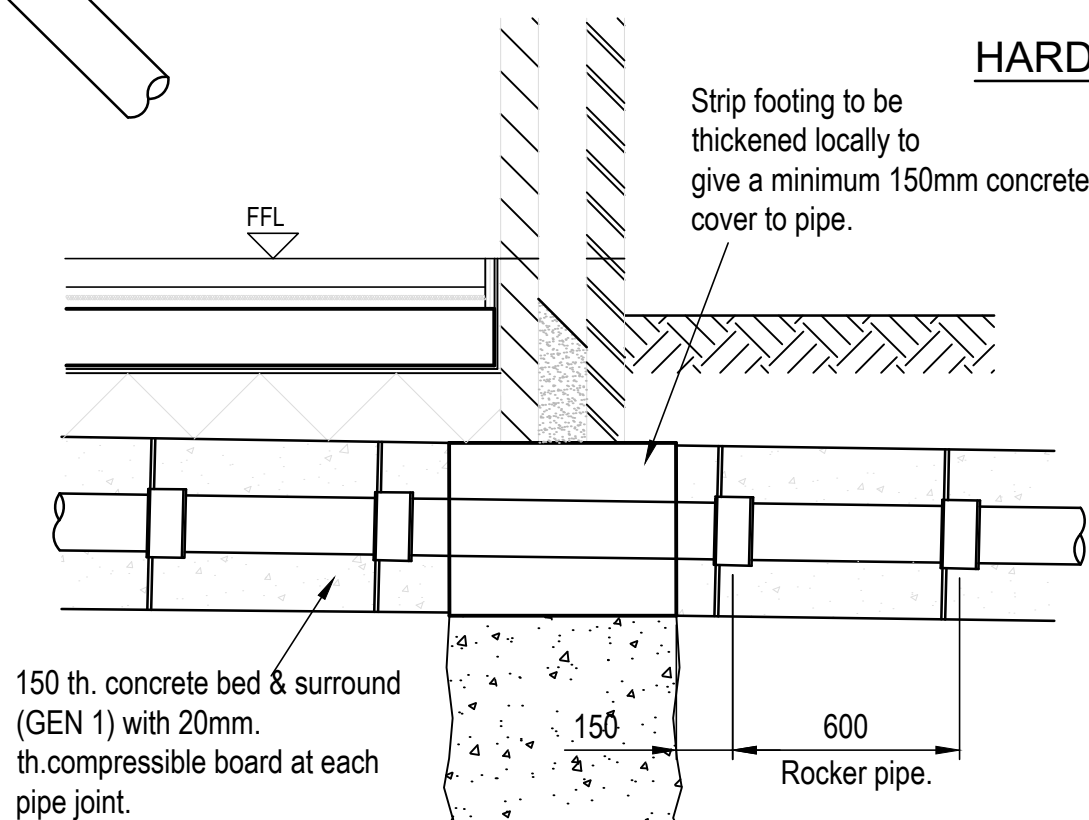
VERTICAL BACKDROP DETAIL



CHANNEL DRAIN

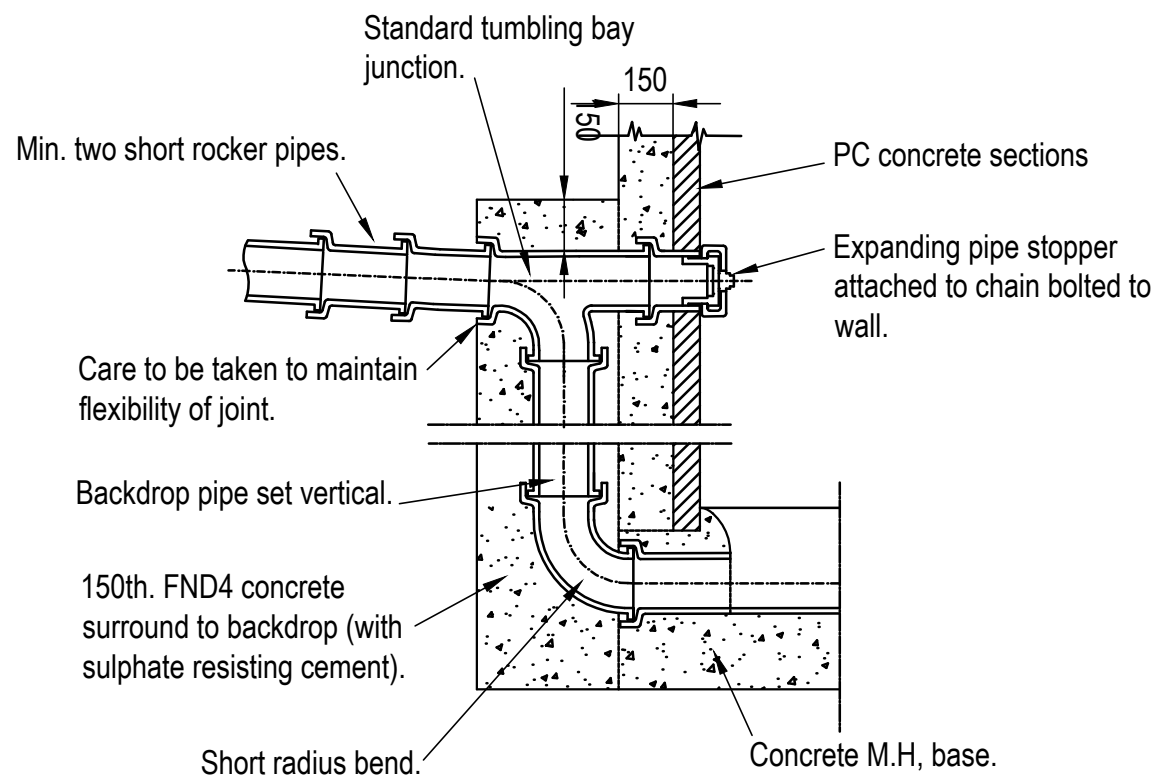


HARD LANDSCAPE GULLY



DETAIL OF PIPE THROUGH FOUNDATION

SCALE 1:25

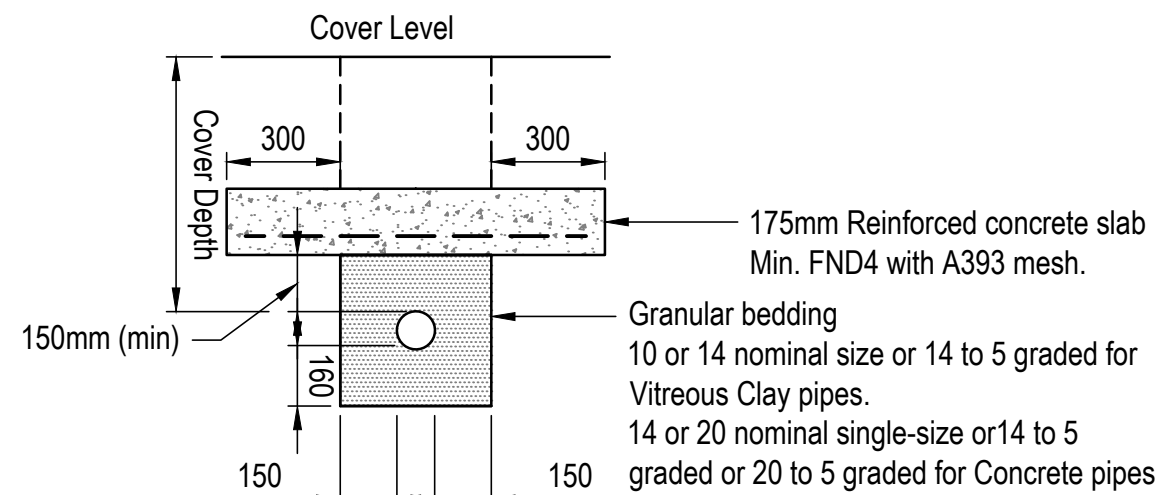


Selected backfill comprising readily compactable  
material free from stones retained on a 40mm.  
sieve, timber, frozen material, vegetable &  
foreign matter & lumps of clay retained on a  
100mm. sieve.

Granular bedding  
- 10 or 14 nominal size or 14 to 5  
graded for Vitreous Clay pipes.  
- 14 or 20 nominal single-size or  
14 to 5 graded or 20 to 5  
graded for Concrete pipes.

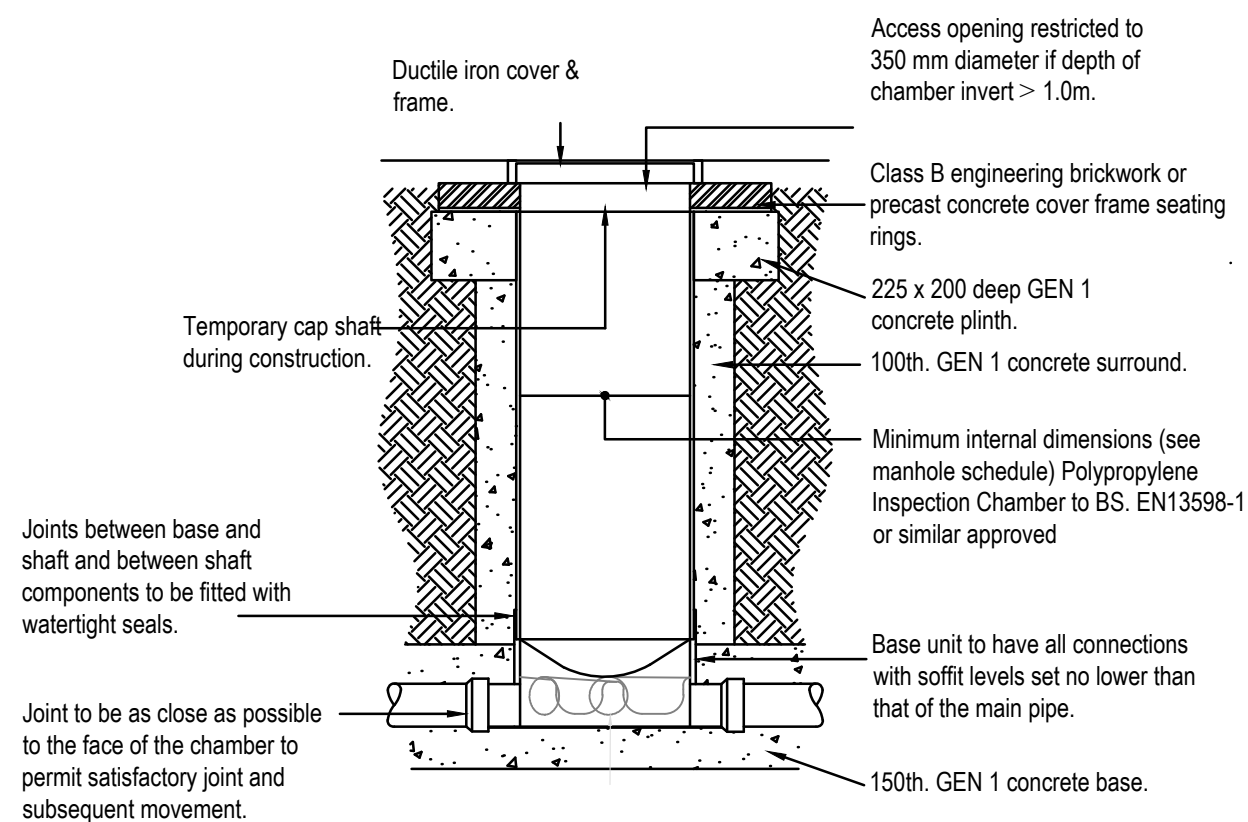
BEDDING DETAIL - CLASS S

(Where depth of cover is grater than 900mm in  
landscaped areas and 1200mm in roads &  
footpaths / highway verge)



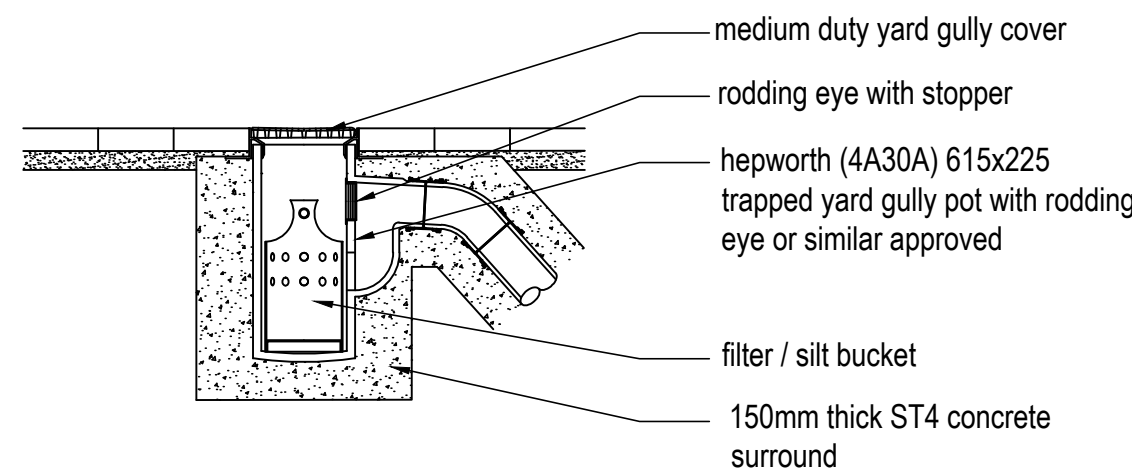
Bedding Detail - Concrete  
Slab Protection

(Where depth of cover is less than 900mm in landscaped  
areas or 1200mm in roads & footpaths)  
Scale 1:25

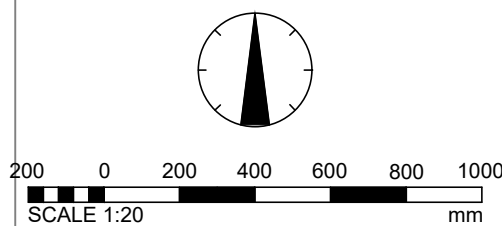


450mm. DIA. INSPECTION CHAMBER  
DETAIL 100 & 150 DIA. Max Depth 3m

SCALE 1:20



YARD GULLY



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| REV | DESCRIPTION        | DATE     | BY | CHKD |
|-----|--------------------|----------|----|------|
| C1  | CONSTRUCTION ISSUE | 25.04.22 | AP | PB   |

ORIGINATOR:

**RIDGE**  
PROPERTY & CONSTRUCTION CONSULTANTS

26th FLOOR  
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BOOTH STREET  
MANCHESTER, M2 4AW

TEL: 0161 833 9579  
WWW.RIDGE.CO.UK

CLIENT:

ERIC WRIGHT

IN ASSOCIATION WITH:

GREAT PLACES HOUSING GROUP LTD

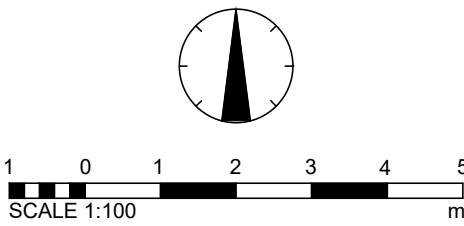
PROJECT:

ANCOATS DISPENSARY

TITLE:

PROPOSED DRAINAGE  
TYPICAL DETAILS

|                                                                       |      |       |               |       |       |         |
|-----------------------------------------------------------------------|------|-------|---------------|-------|-------|---------|
| ENG/TECH:                                                             | CSE: | ICSE: | SCALE:        | 1:100 | @     | A1      |
| PB                                                                    | PB   | ED    | STATUS ISSUE: | D2    |       |         |
| STATUS:                                                               |      |       |               |       |       |         |
| CONSTRUCTION                                                          |      |       |               |       |       |         |
| **UNLESS ISSUED FOR CONSTRUCTION - WORKS AT CLIENT/CONTRACTORS RISK** |      |       |               |       |       |         |
| SUITABILITY: S4 - Issued for Construction Approval                    |      |       |               |       |       |         |
| PROJECT:                                                              | ORG: | ZONE: | LEVEL:        | TYPE: | ROLE: | NUMBER: |
| 210005                                                                | RDG  | XX    | XX            | DR    | C     | 0105    |
|                                                                       |      |       |               |       |       | REV:    |
|                                                                       |      |       |               |       |       | C1      |



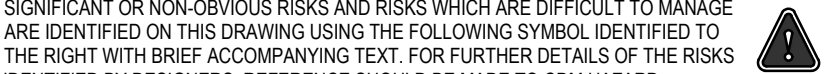
| MANHOLE SCHEDULE |                              |                 |                     |              |              |                                                       |                                       |                         |                                                                                                                                       |
|------------------|------------------------------|-----------------|---------------------|--------------|--------------|-------------------------------------------------------|---------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| MANHOLE NO.      | MANHOLE CO-ORDINATES         | COVER LEVEL (m) | DEPTH TO INVERT (m) | MANHOLE SIZE | MANHOLE TYPE | PIPE IN NAME, INVERT LEVEL (m) & DIA                  | PIPE OUT NAME, INVERT LEVEL (m) & DIA | COVER SIZE (mm) & GRADE | COMMENTS                                                                                                                              |
| CW01             | E:385470.260<br>N:398427.887 | 49.320          | 1.650               | 1,200        | Type-B       | F1.001, IL=48.300, 150mmØ                             | C1.000, IL=47.670, 150mmØ             | 600x600<br>D400         |                                                                                                                                       |
| CW02             | E:385473.270<br>N:398431.507 | 49.584          | 2.004               | 1,500        | Type-B       | C1.000, IL=47.640, 150mmØ                             |                                       | 600x600<br>D400         | Confirm Invert Level of Existing Drain<br>S106 Part 2 Required to be approved before Installation<br>Specific Detail o9n Drawing 0107 |
| FW01             | E:385445.084<br>N:398407.182 | 49.380          | 0.780               | 450          | IC           |                                                       | F1.000, IL=48.600, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| FW03             | E:385451.631<br>N:398412.851 | 49.350          | 0.750               | 450          |              |                                                       | BSD, IL=48.600, 150mmØ                | 450<br>B125             |                                                                                                                                       |
| FW05             | E:385460.577<br>N:398419.848 | 49.350          | 0.750               | 450          | IC           |                                                       | Pipe4 (3), IL=48.600, 150mmØ          | 450<br>B125             |                                                                                                                                       |
| FW08             | E:385468.445<br>N:398425.966 | 49.350          | 0.750               | 450          | IC           |                                                       | Pipe4 (6), IL=48.600, 150mmØ          | 450<br>B125             |                                                                                                                                       |
| FW09             | E:385470.286<br>N:398426.703 | 49.350          | 0.970               | 450          | IC           | F1.000, IL=48.380, 150mmØ                             | F1.001, IL=48.380, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| SW01             | E:385451.650<br>N:398438.124 | 49.929          | 0.929               | 450          | IC           |                                                       | S1.000, IL=49.000, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| SW02             | E:385429.719<br>N:398420.750 | 49.721          | 0.921               | 450          | IC           | S1.000, IL=48.800, 150mmØ                             | S1.001, IL=48.800, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| SW03             | E:385435.471<br>N:398413.571 | 49.400          | 1.400               | 450          | IC           | S1.001, IL=48.000, 150mmØ<br>XXXXX, IL=48.000, 150mmØ | S1.002, IL=48.000, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| SW04             | E:385440.858<br>N:398406.272 | 49.400          | 1.470               | 450          | IC           | S1.002, IL=47.930, 150mmØ                             | S1.003, IL=47.930, 150mmØ             | 450<br>B125             |                                                                                                                                       |
| SW05             | E:385466.443<br>N:398424.921 | 49.320          | 1.610               | 1,200        | Hydrobrake   | S1.003, IL=47.710, 150mmØ                             | S1.004, IL=47.710, 150mmØ             | 1200x675<br>D400        | Hydrobrake Chamber - See Details Sheet 0107<br>Hydrobrake Flow - 7.5 l/s<br>Hydrobrake Head - 1.5m                                    |

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|     |                             |          |    |      |
|-----|-----------------------------|----------|----|------|
| C4  | COVER LEVELS UPDATED        | 29.07.22 | AP | PB   |
| C3  | UPDATE TO INCLUDE SW AND FW | 11.07.22 | AP | PB   |
| P04 | UPDATE TO INCLUDE SW AND FW | 22.03.22 | AP | PB   |
| P03 | STAGE 4                     | 18.02.22 | PB | PB   |
| P02 | PRELIMINARY ISSUE           | 09.07.21 | PB | PB   |
| P01 | PRELIMINARY ISSUE           | 30.04.21 | PB | PB   |
| REV | DESCRIPTION                 | DATE     | BY | CHKD |

ORIGINATOR:

7TH FLOOR  
BELVEDERE HOUSE  
12 BOOTH STREET  
MANCHESTER M2 4AW

TEL: 0161 833 9579  
WWW.RIDGE.CO.UK

CLIENT:

ERIC WRIGHT

IN ASSOCIATION WITH:

GREAT PLACES HOUSING GROUP LTD

PROJECT:

ANCOATS DISPENSARY

TITLE:

PROPOSED DRAINAGE  
MANHOLE SCHEDULE

|           |      |       |               |       |   |    |
|-----------|------|-------|---------------|-------|---|----|
| ENG/TECH: | CSE: | ICSE: | SCALE:        | 1:100 | @ | A1 |
| PB        | PB   | ED    | STATUS ISSUE: | D2    |   |    |

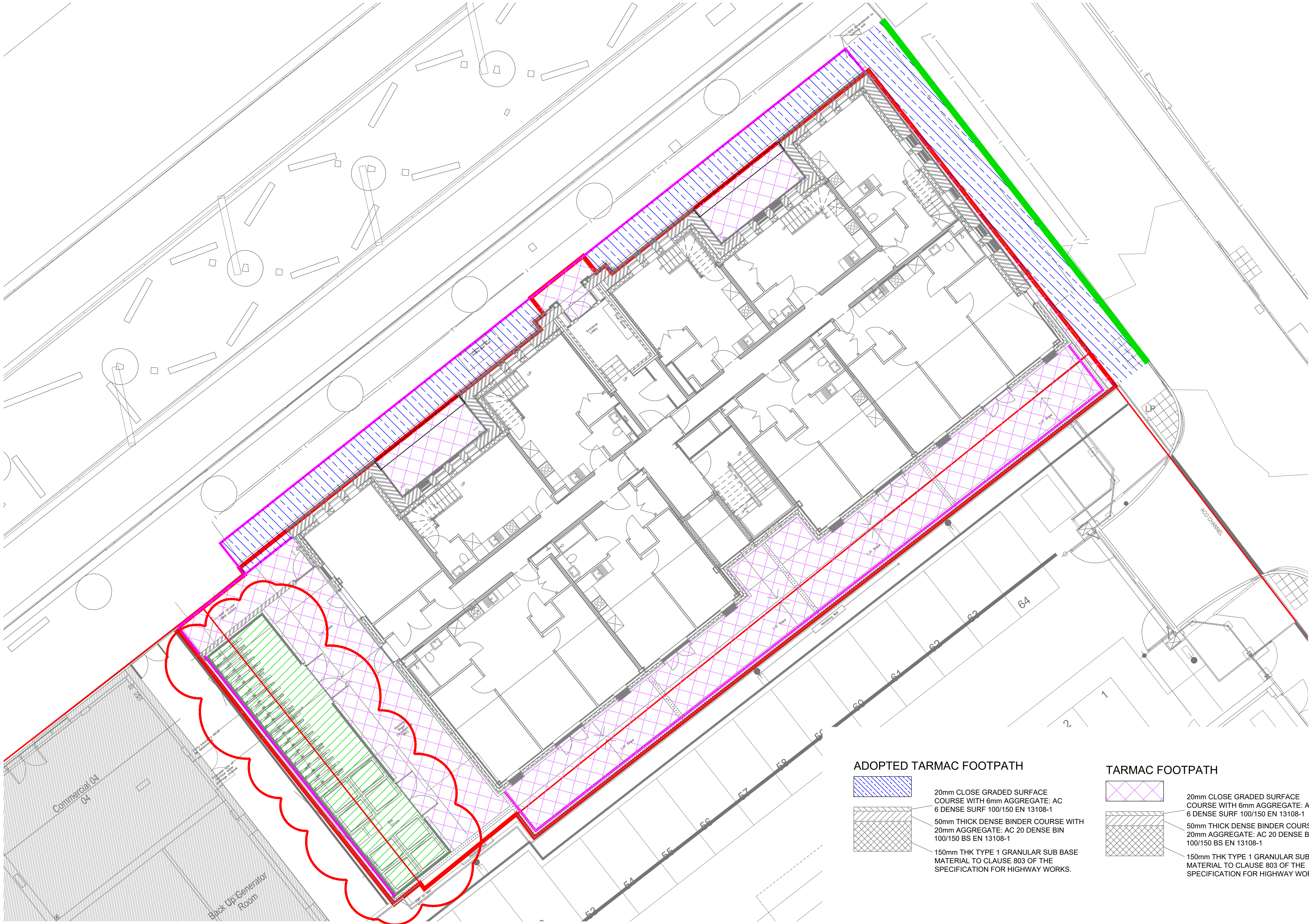
STATUS:

PRELIMINARY

\*\*UNLESS ISSUED FOR CONSTRUCTION - WORKS AT CLIENT/CONTRACTORS RISK\*\*

SUITABILITY: S2 - Issued for Information

|          |      |       |        |       |       |         |      |
|----------|------|-------|--------|-------|-------|---------|------|
| PROJECT: | ORG: | ZONE: | LEVEL: | TYPE: | ROLE: | NUMBER: | REV: |
| 210005   | RDG  | XX    | XX     | DR    | C     | 0102    | C4   |



ADOPTED TARMAC FOOTPATH

- 20mm CLOSE GRADED SURFACE COURSE WITH 6mm AGGREGATE: AC 6 DENSE SURF 100/150 EN 13108-1
- 50mm THICK DENSE BINDER COURSE WITH 20mm AGGREGATE: AC 20 DENSE BIN 100/150 BS EN 13108-1
- 150mm THK TYPE 1 GRANULAR SUB BASE MATERIAL TO CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS.

TARMAC FOOTPATH

- 20mm CLOSE GRADED SURFACE COURSE WITH 6mm AGGREGATE: AC 6 DENSE SURF 100/150 EN 13108-1
- 50mm THICK DENSE BINDER COURSE WITH 20mm AGGREGATE: AC 20 DENSE BIN 100/150 BS EN 13108-1
- 150mm THK TYPE 1 GRANULAR SUB BASE MATERIAL TO CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS.

IN-SITU CONCRETE SLAB

- 125mm CONCRETE SLAB GRADE PAV2 WITH A142 MESH
- 150mm THK TYPE 1 GRANULAR SUB BASE MATERIAL TO CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS.

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KERBING KEY

- HB2 KERB (100mm UPSTAND)
- PIN KERB (0mm UPSTAND)

| REV | DESCRIPTION                  | DATE     | BY | CHKD |
|-----|------------------------------|----------|----|------|
| C2  | CYCLE & BIN STORE SLAB ADDED | 15.09.23 | AP | PB   |
| C1  | CONSTRUCTION ISSUE           | 30.04.21 | AP | PB   |

ORIGINATOR:

**RIDGE**  
PROPERTY & CONSTRUCTION CONSULTANTS

5TH FLOOR  
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12 BOOTH STREET  
MANCHESTER M2 4AW

TEL: 0161 833 9579  
WWW.RIDGE.CO.UK

CLIENT:  
**ERIC WRIGHT**

IN ASSOCIATION WITH:  
**GREAT PLACES HOUSING GROUP LTD**

PROJECT:  
**ANCOATS DISPENSARY**

TITLE:  
**EXTERNAL WORKS  
GENERAL ARRANGEMENT**

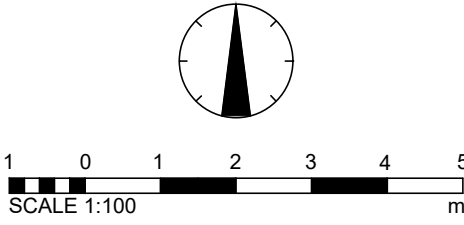
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|-----------|------|-------|---------------|-------|------|
| JF        | PB   | ED    | STATUS ISSUE: | D2    |      |

STATUS:  
**CONSTRUCTION**

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SUITABILITY: S4 - Issued for Construction Approval

| PROJECT: | ORG: | ZONE: | LEVEL: | TYPE: | ROLE: | NUMBER: | REV: |
|----------|------|-------|--------|-------|-------|---------|------|
| 210005   | RDG  | XX    | XX     | DR    | C     | 0300    | C2   |



**PROPERTY & CONSTRUCTION CONSULTANTS**

**RIDGE**

**APPENDIX B –**

## ANCOATS DISPENSARY DRAINAGE MAINTENANCE SCHEDULE

Organisation responsible for maintenance: GREAT PLACES HOUSING GROUP

Contact Details – Name: CHRIS MCMANUS

Number: 07817 498 672

Documents:

- Drainage Layout
- Drainage Details

SUDS have been specified for the site to promote sustainable management of surface water for both flow attenuation and water quality. This document outlines the maintenance schedules for each system in order to maintain the efficiency of the drainage network. The schedules have been created based on guidance from CIRIA C753.

**Table 1: Pipes and Manholes Maintenance Schedule**

| Maintenance schedule   | Required Action                                             | Recommended Frequency         |
|------------------------|-------------------------------------------------------------|-------------------------------|
| Occasional maintenance | Visual inspection of covers, gratings and manhole chambers. | Annually or as required.      |
|                        | Cleaning out manholes.                                      | Annually or as required.      |
|                        | CCTV inspection of drainage pipes.                          | Annually or as required.      |
| Remedial actions       | Reactive cleaning of manholes and drains.                   | During flooding events.       |
|                        | Cleaning out drains by water jetting.                       | As required.                  |
|                        | Replace damaged covers, grating and manhole components.     | As required.                  |
|                        | Rehabilitation – repairs, relining or replacement.          | As determined by inspections. |

**Table 2: Geocellular Tank Maintenance Schedule**

| Maintenance Schedule | Required Action                                                                                | Recommended Frequency                              |
|----------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Regular Maintenance  | Inspect and identify areas that are not operating correctly. If required, take remedial action | Monthly for 3 months, then annually or as required |
|                      | Remove debris from the catchment surface                                                       | Monthly                                            |
|                      | Remove sediment from pre-treatment structures                                                  | Annually                                           |

|                  |                                                                                                   |                                                  |
|------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Remedial Actions | Repair / rehabilitate inlets/outlet and vents                                                     | As required                                      |
| Monitoring       | Inspect inlets, outlets and vents to ensure they are in good condition and operating as designed. | Annually                                         |
|                  | Survey Inside of tank for sediment build up and remove is necessary                               | Every 5 years or where concerned about operation |

**Table 3: Drainage Channels and Gullies**

| Maintenance schedule   | Required Action                                             | Recommended Frequency         |
|------------------------|-------------------------------------------------------------|-------------------------------|
| Occasional maintenance | Visual inspection of covers, gratings and manhole chambers. | Annually or as required.      |
|                        | Cleaning out sumps and outlets                              | Annually or as required.      |
| Remedial actions       | Reactive cleaning of drainage channels.                     | During flooding events.       |
|                        | Cleaning out channels by water jetting.                     | As required.                  |
|                        | Replace damaged covers and gratings                         | As required.                  |
|                        | Rehabilitation – repairs, or replacement.                   | As determined by inspections. |

**PROPERTY & CONSTRUCTION CONSULTANTS**

**RIDGE**

**APPENDIX C –**

## Technical Specification

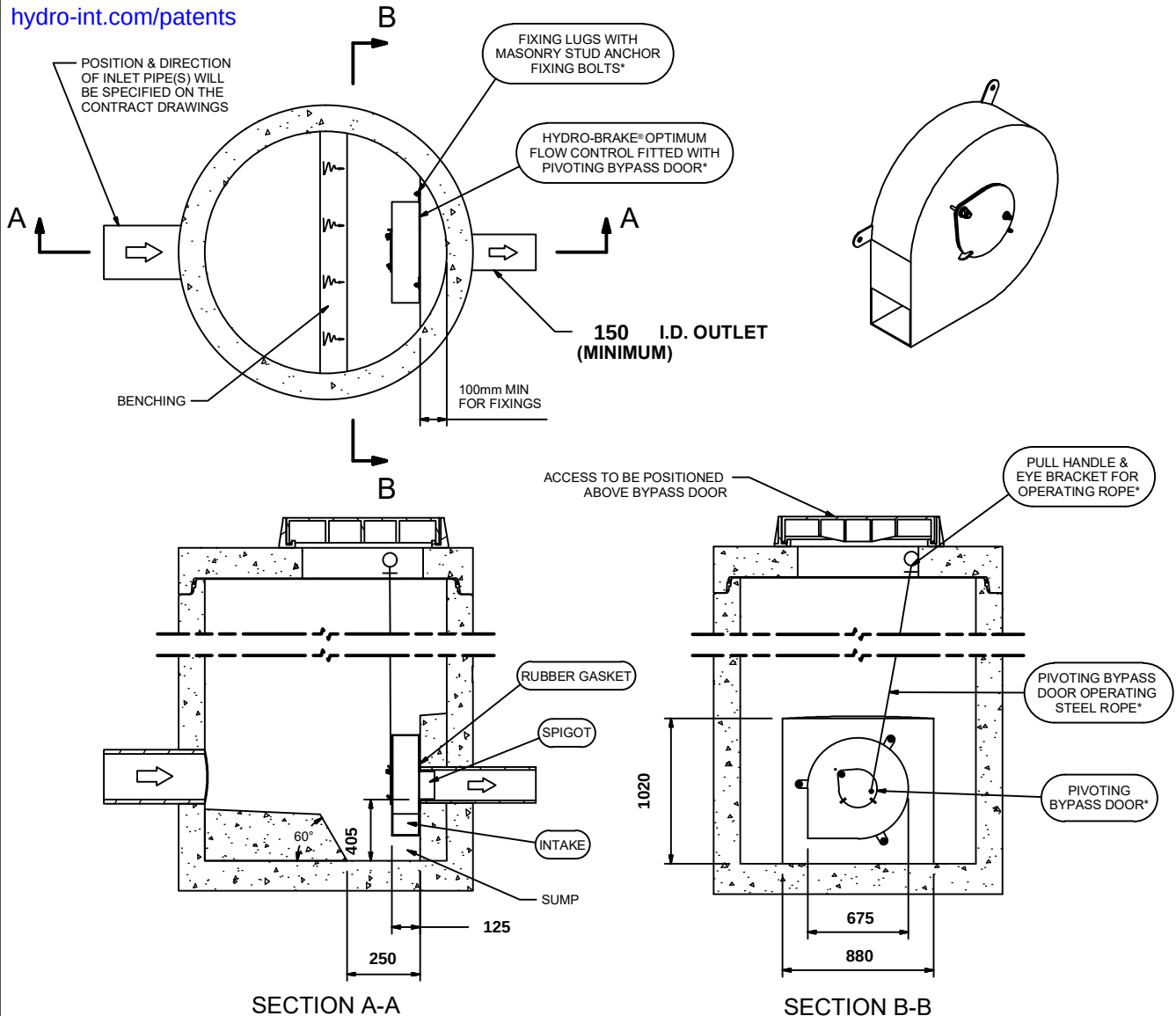
| Control Point  | Head (m) | Flow (l/s) |
|----------------|----------|------------|
| Primary Design | 1.550    | 7.500      |
| Flush-Flo™     | 0.454    | 7.492      |
| Kick-Flo®      | 0.946    | 5.955      |
| Mean Flow      |          | 6.560      |

Hydro-Brake® Optimum Flow Control including:

- 3 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet



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### IMPORTANT:

○ LIMIT OF HYDRO INTERNATIONAL SUPPLY

THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS  
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL  
ALL CIVIL AND INSTALLATION WORK BY OTHERS

\* WHERE SUPPLIED

HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW  
CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

**THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.**

### DESIGN ADVICE



The head/flow characteristics of this SHE-0119-7500-1550-7500 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.  
**The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

**Hydro**  
International®

DATE 4/6/2021 6:13 AM

SITE Ancoats Dispensary

DESIGNER Philip Barrett

REF ACD - HYD - 01

SHE-0119-7500-1550-7500

Hydro-Brake® Optimum

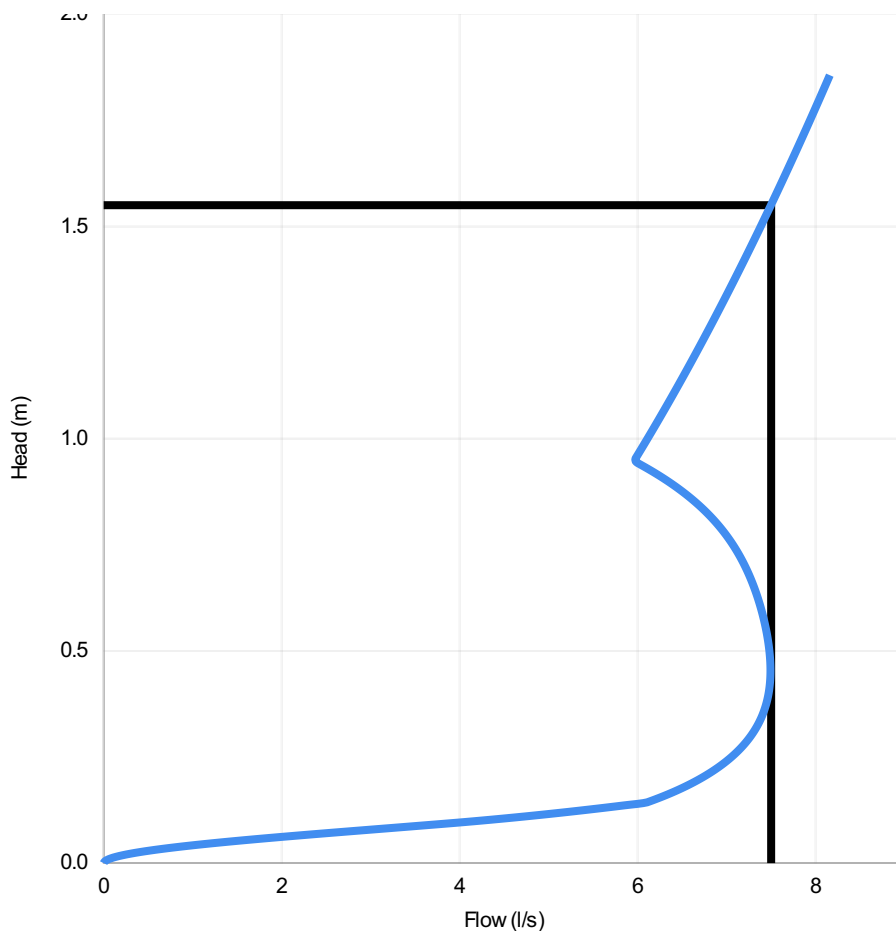
## Technical Specification

| Control Point  | Head (m) | Flow (l/s) |
|----------------|----------|------------|
| Primary Design | 1.550    | 7.500      |
| Flush-Flo      | 0.454    | 7.492      |
| Kick-Flo®      | 0.946    | 5.955      |
| Mean Flow      |          | 6.560      |



PT/329/0412

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| Head (m) | Flow (l/s) |
|----------|------------|
| 0.000    | 0.000      |
| 0.053    | 1.550      |
| 0.107    | 4.586      |
| 0.160    | 6.320      |
| 0.214    | 6.822      |
| 0.267    | 7.141      |
| 0.321    | 7.337      |
| 0.374    | 7.443      |
| 0.428    | 7.488      |
| 0.481    | 7.488      |
| 0.534    | 7.457      |
| 0.588    | 7.401      |
| 0.641    | 7.323      |
| 0.695    | 7.217      |
| 0.748    | 7.076      |
| 0.802    | 6.883      |
| 0.855    | 6.623      |
| 0.909    | 6.275      |
| 0.962    | 6.002      |
| 1.016    | 6.154      |
| 1.069    | 6.303      |
| 1.122    | 6.448      |
| 1.176    | 6.589      |
| 1.229    | 6.727      |
| 1.283    | 6.862      |
| 1.336    | 6.994      |
| 1.390    | 7.124      |
| 1.443    | 7.250      |
| 1.497    | 7.375      |
| 1.550    | 7.497      |

### DESIGN ADVICE



The head/flow characteristics of this SHE-0119-7500-1550-7500 Hydro-Brake Optimum® Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

**The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

**Hydro**  
International

|          |                    |
|----------|--------------------|
| DATE     | 06/04/2021 06:13   |
| Site     | Ancoats Dispensary |
| DESIGNER | Philip Barrett     |
| Ref      | ACD - HYD - 01     |

SHE-0119-7500-1550-7500  
Hydro-Brake Optimum®