



**degadea**  
water, civils and environment

UK Experts in Flood Modelling, Flood Risk Assessments, and Surface Water Drainage Strategies

**degadea**  
water, civils and environment

# Document Issue Record

**Project:** T x x' "(j x "' ((

**Prepared for:** pj (R - ' (j " z" (c -(

**Reference:** QJWG DGvd CQvi x-z ""(e " (i x-v: F((

**Site Location:** ; B; (i x-z ""(e " (i x-dn "" -d x z " " (d CQFi g((

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# 1. Introduction

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## Site Overview

Figure 1: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.



Figure 1: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.

Figure 2: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.

Figure 3: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.

Figure 4: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.

Figure 5: Site location map showing the site boundary (red rectangle) within the Radcliffe New Rd area. The map includes a legend, a north arrow, and a 50m scale bar.

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## Ground Conditions

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## Development Proposals

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## 2. Surface Water Drainage Strategy

### Existing Drainage System

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## Proposed Drainage Strategy

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### 3. Future Maintenance Strategy

#### General Maintenance

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## Surface Water Drainage Systems

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|                         | S "z (x " x (-" z" ((                    | Q x (             |

## SuDS/Bioretention Planter

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| f zzx x(<br>dx " x z"( | S "x ' (x -9 ( " xz" " ( "(x (" " (                                               | k "'( (2 (x (<br>" "-3             |
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## Orifice Flow Control

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## Tanked Permeable Paving

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| f zzx x (d x " x z" (      | j xy "(x -( (z y ' (x -(<br>x-xz" (x "x (                                                                                                               | Q ( " "-(                                                                                                                                                                                                                                                                               |
|                            | i " " x ( " " "- ( ( x x' " " ( "<br>' ( " x "(x "-(- "z ( ( "<br>"( " "- (y (x (x z x (x " ( x ( "<br>x ' 8                                            | Q ( " "-( ( z" ( " ( "x ( ( " ( "<br>" " " ( "-( x " " (                                                                                                                                                                                                                                |
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B&E8 d x ( " " ( "z "z( x " x z"(xz " (" ( " ( x " " (zx (y" ( -" x " (x ( x ( " "  
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## SuDS Mitigation Indices

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| - z" ( z "(                  |        |         |            |          |                                     |         |            |
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# 5. Foul Drainage Strategy

## Proposed Strategy

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# Appendix A - United Utilities Sewer Records

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**Gold Sketch Studios**

55a  
Bury Old Road, Gold Sketch Studios  
Manchester, Prestwich  
M25 0FG

FAO:

**How to contact us:**

**United Utilities Water Limited  
Property Searches  
Haweswater House  
Lingley Mere Business Park  
Great Sankey  
Warrington  
WA5 3LP**

Telephone: 0370 7510101

E-mail: [propertysearches@uuplc.co.uk](mailto:propertysearches@uuplc.co.uk)

Your Ref: GSS24100 - 131 Radcliffe New Road  
Our Ref: UUPS-ORD-591354  
Date: 07/08/2024

Dear Sirs

**Location: 131 RADCLIFFE NEW ROAD, WHITEFIELD, MANCHESTER, M45 7RP**

I acknowledge with thanks your request dated 02/08/2024 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



Karen McCormack  
Property Searches Manager

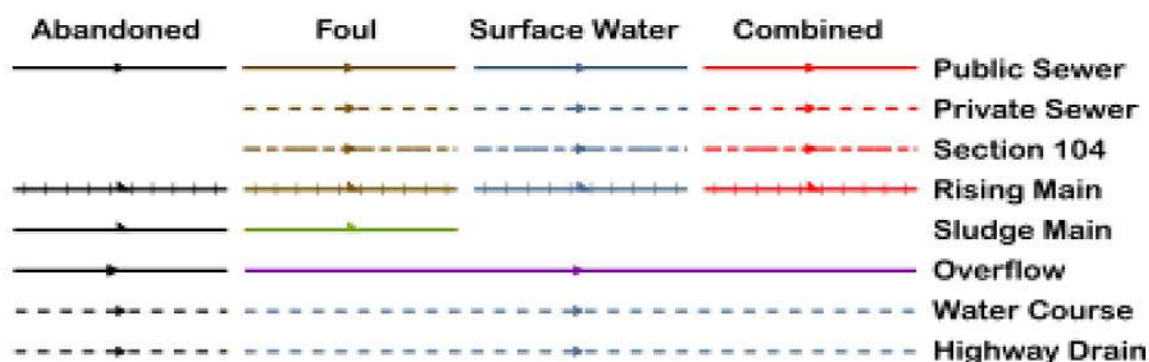
## TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

### TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

## Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul  
**blue** – surface water **purple** - overflow

|                         |                                     |
|-------------------------|-------------------------------------|
| <b>Manhole</b>          | <b>Side Entry Manhole</b>           |
| <b>Head of System</b>   | <b>Outfall</b>                      |
| <b>Extent of Survey</b> | <b>Screen Chamber</b>               |
| <b>Rodding Eye</b>      | <b>Inspection Chamber</b>           |
| <b>Inlet</b>            | <b>Bifurcation Chamber</b>          |
| <b>Discharge Point</b>  | <b>Lamp Hole</b>                    |
| <b>Vortex</b>           | <b>T Junction / Saddle</b>          |
| <b>Penstock</b>         | <b>Catchpit</b>                     |
| <b>Washout Chamber</b>  | <b>Valve Chamber</b>                |
| <b>Valve</b>            | <b>Vent Column</b>                  |
| <b>Air Valve</b>        | <b>Vortex Chamber</b>               |
| <b>Non Return Valve</b> | <b>Penstock Chamber</b>             |
| <b>Soakaway</b>         | <b>Network Storage Tank</b>         |
| <b>Gully</b>            | <b>Sewer Overflow</b>               |
| <b>Cascade</b>          | <b>Ww Treatment Works</b>           |
| <b>Flow Meter</b>       | <b>Ww Pumping Station</b>           |
| <b>Hatch Box</b>        | <b>Septic Tank</b>                  |
| <b>Oil Interceptor</b>  | <b>Control Kiosk</b>                |
| <b>Summit</b>           | <b>DNM Network Monitoring Point</b> |
| <b>Drop Shaft</b>       | <b>Change of Characteristic</b>     |
| <b>Orifice Plate</b>    |                                     |

# Appendix B - Development Proposals

(



## SEWER RECORDS

### Address or Site Reference

131 RADCLIFFE NEW ROAD,  
WHITEFIELD,  
MANCHESTER,  
M45 7RP

Scale: 1:1250  
Date: 07/08/2024

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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**Site Key**

- Grass
- Paving Stones
- Driveway
- Timber Fencing
- Brickwork
- Hedges
- Trees
- Parking
- Existing Building
- Proposed Building

**North**

**1:100**

0 1 2 5 10m

**Legend - Boundaries**

- Site Boundary
- Site Ownership

|     |                    |            |         |
|-----|--------------------|------------|---------|
| 3   | Planning - Revised | 28/04/2025 | TP      |
| 2   | PLANNING           | 29/10/2024 | TP      |
| 1   | Bins               | 15/10/2024 | SG      |
| No. | Description        | Date       | Initial |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|
| PROJECT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |              |
| 131 Radcliffe New Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |              |
| TITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |              |
| Site - Existing & Proposed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |              |
| STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |              |
| PLANNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |              |
| DRAWN BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DATE           | SCALE (@ A1) |
| CB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26/07/2024     | As indicated |
| PROJECT NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DRAWING NUMBER | REV          |
| GSS24100.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 502            | 3            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |              |
| <a href="http://www.goldsketch.co.uk">www.goldsketch.co.uk</a> <a href="mailto:info@goldsketch.co.uk">info@goldsketch.co.uk</a> 0161 792 9595                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |              |
| <p>NOTES:</p> <p>©COPYRIGHT BY THE DESIGNER. NOT TO BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT.</p> <p>DRAWING TO BE USED FOR THE STATED REASON ONLY. FOR WRITTEN CONSENT:</p> <p>ALL INFORMATION AND SETTING OUT OF THE SITE IS TO BE TAKEN AS ACCURATE. ANY DISCREPANCIES TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.</p> <p>THE CONSULTANT IS NOT RESPONSIBLE FOR ANY WORK, ALL WORK AND MATERIALS TO BE ACCORDING TO THE CURRENT BUILDING REGULATIONS, LEGISLATION, RELEVANT CODES OF PRACTICE AND BODIES STANDARDS. ALL DIMENSIONS ON THIS DRAWING ARE IN MILLIMETRES (UNLESS OTHERWISE STATED).</p> |                |              |



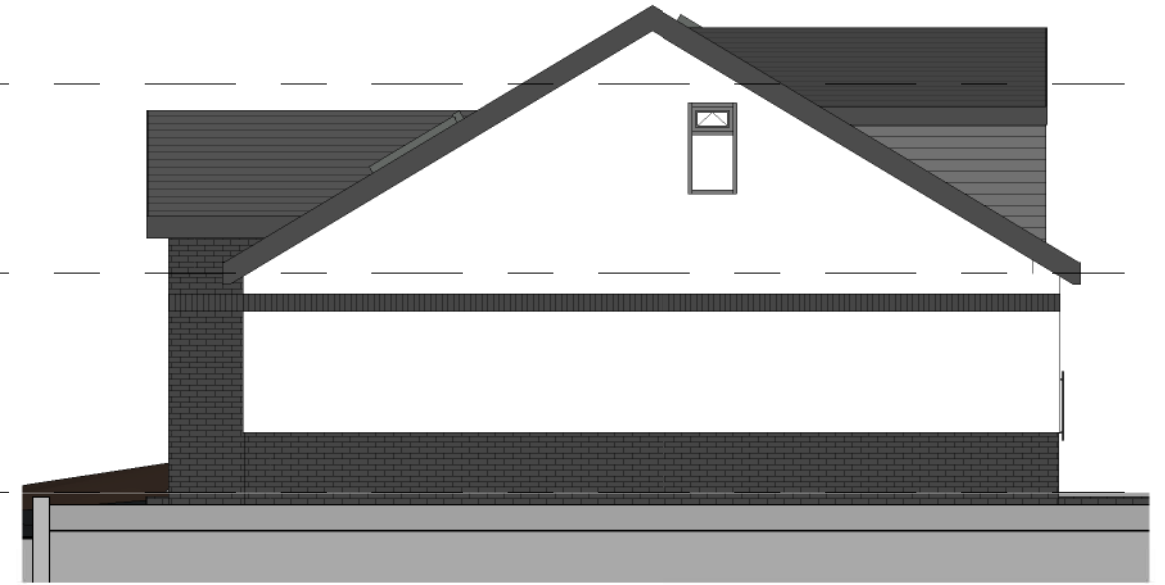
3 Front - Proposed  
1 : 50



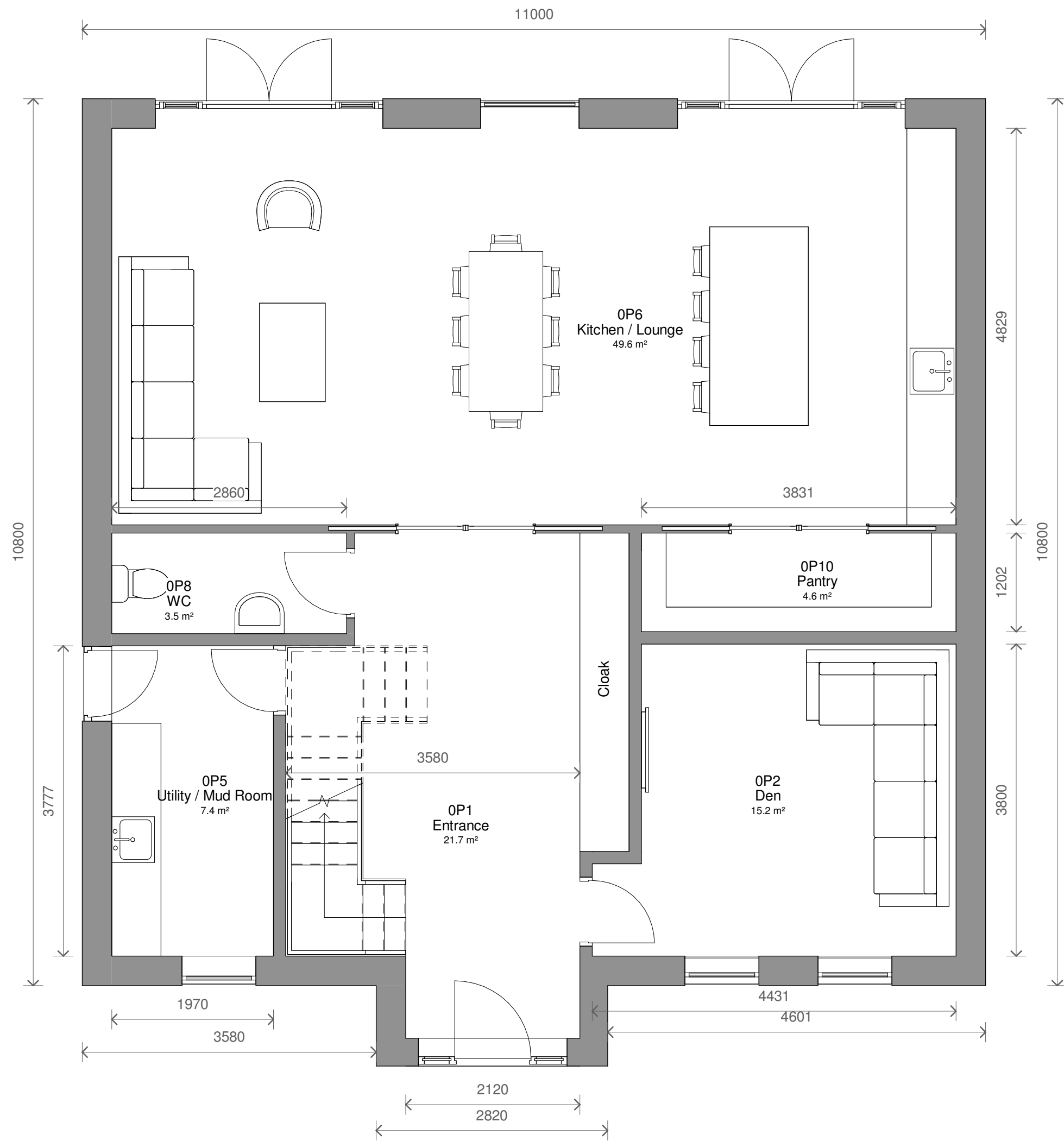
5 Rear - Proposed  
1 : 50



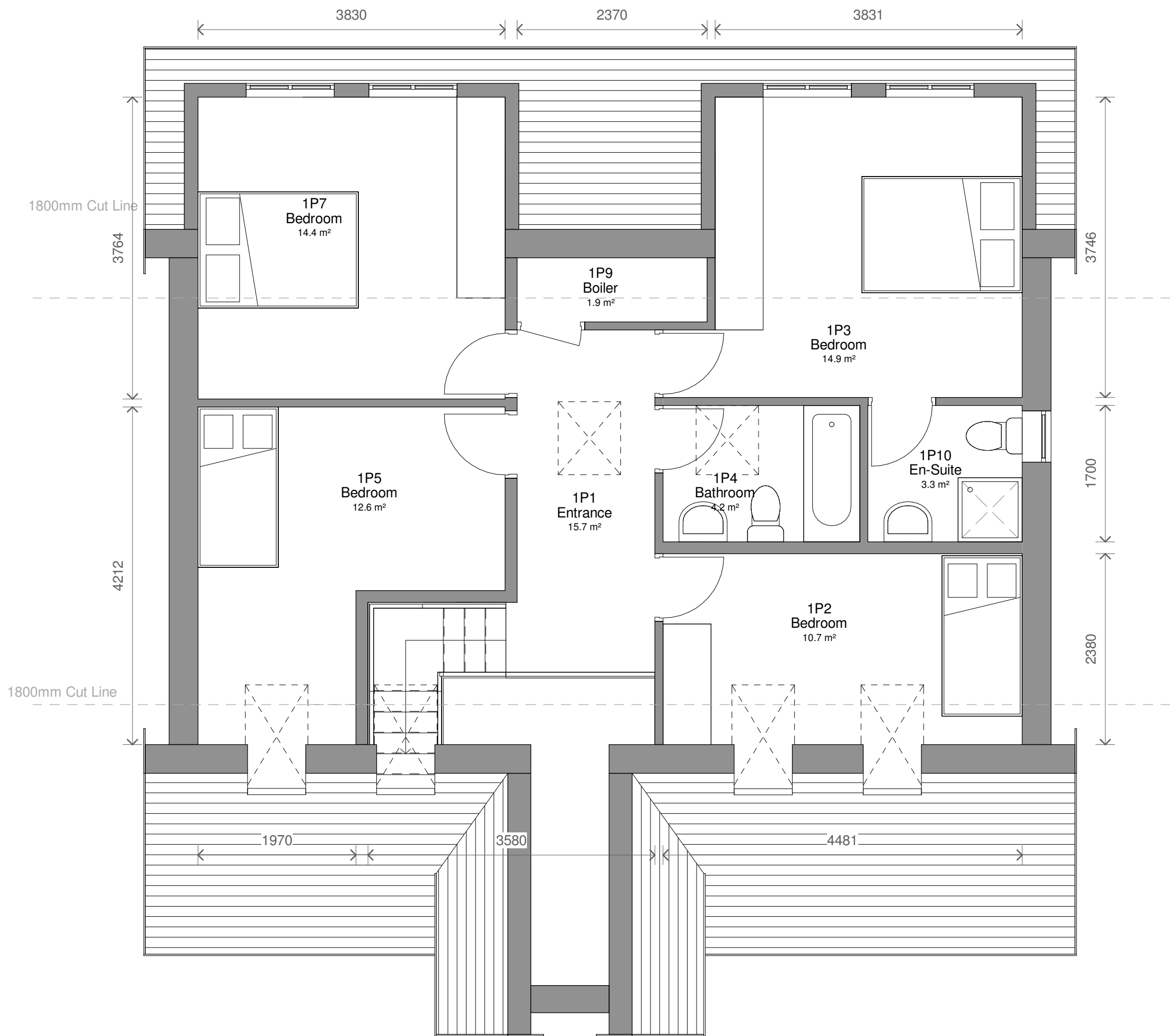
4 Left Side - Proposed  
1 : 100



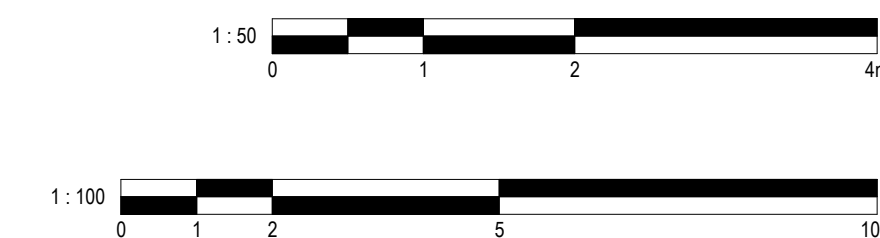
6 Right Side - Proposed  
1 : 100



1 Level 0 - Proposed  
1 : 50



2 Level 1 - Proposed  
1 : 50



|     |                   |            |         |
|-----|-------------------|------------|---------|
| 2   | Client - Comments | 06/08/2024 | TP      |
| 1   | Revised Drawings  | 01/08/2024 | TP      |
| No. | Description       | Date       | Initial |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |                        |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------|-----|
| PROJECT                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | 131 Radcliffe New Road |     |
| TITLE<br>Proposed Plans and Elevations                                                                                                                                                                                                                                                                                                                                                                                                             |            |                        |     |
| STATUS<br>DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |                        |     |
| DRAWN BY                                                                                                                                                                                                                                                                                                                                                                                                                                           | DATE       | SCALE (@ A1)           |     |
| TP                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 09/07/2024 | As indicated           |     |
| PROJECT NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                     |            | DRAWING NUMBER         | REV |
| GSS24100                                                                                                                                                                                                                                                                                                                                                                                                                                           |            | 003                    | 2   |
| GOLD SKETCH                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                        |     |
| www.goldsketch.co.uk info@goldsketch.co.uk 0161 792 9595                                                                                                                                                                                                                                                                                                                                                                                           |            |                        |     |
| NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |                        |     |
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2 Front - Street Scene Existing - Boundaries  
1 : 100



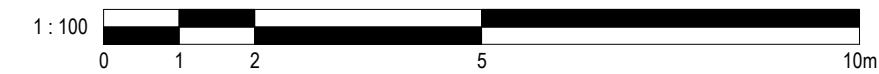
1 Front - Street Scene Proposed - Boundaries  
1 : 100



3 3D - Planning - Existing



4 3D - Planning - Proposed



| No. Description                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                | Date         | Initial |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|---------|
| PROJECT                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |              |         |
| 131 Radcliffe New Road                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |              |         |
| TITLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |              |         |
| Existing and Proposed Street Scene - Boundaries                                                                                                                                                                                                                                                                                                                                                                                                                         |                |              |         |
| STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |              |         |
| DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |              |         |
| DRAWN BY                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DATE           | SCALE (@ A1) |         |
| CB                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 26/07/2024     | 1 : 100      |         |
| PROJECT NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DRAWING NUMBER | REV          |         |
| GSS24100                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 005            |              |         |
| GOLD SKETCH                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |              |         |
| S T U D I O S                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |              |         |
| www.goldsketch.co.uk info@goldsketch.co.uk 0161 792 9595                                                                                                                                                                                                                                                                                                                                                                                                                |                |              |         |
| NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |              |         |
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# Appendix C - CCTV Drainage Survey Report

(



**Project**

**Project Name:** 131 Radcliffe New Road

**Project Date:** 27/09/2025

**Inspection Standard:** MSCC5 Sewers & Drainage GB (SRM5 Scoring)

REPORT ARRANGED BY \*



0333 772 1835

info@mypropertysurvey.co.uk

www.mypropertysurvey.co.uk

\*Arrangement subject to our service user terms and conditions, and the report is subject to the terms and conditions of your chosen service provider

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|------------------------|----------------|--------------|
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## Project Information

**Project Name**  
131 Radcliffe New Road**Project Number****Project Date**  
27/09/2025

### Client

**Company:** Gold Sketch Studios  
**Street:** 1 Ashbourne Grove  
**Town or City:** Salford  
**Post Code:** M7 4DB

### Site

**Street:** 131 Radcliffe New Road  
**Town or City:** Whitefield  
**County:** Greater Manchester  
**Post Code:** M45 7RP

### Contractor

**Company:** North West Drain Services Ltd  
**Street:** Unit G10 Falcon mill  
**Town or City:** Bolton  
**County:** Greater Manchester  
**Post Code:** BL1 8BL  
**Phone:** 07756631110 / 07429611080  
**Email:** drainservices@googlemail.com

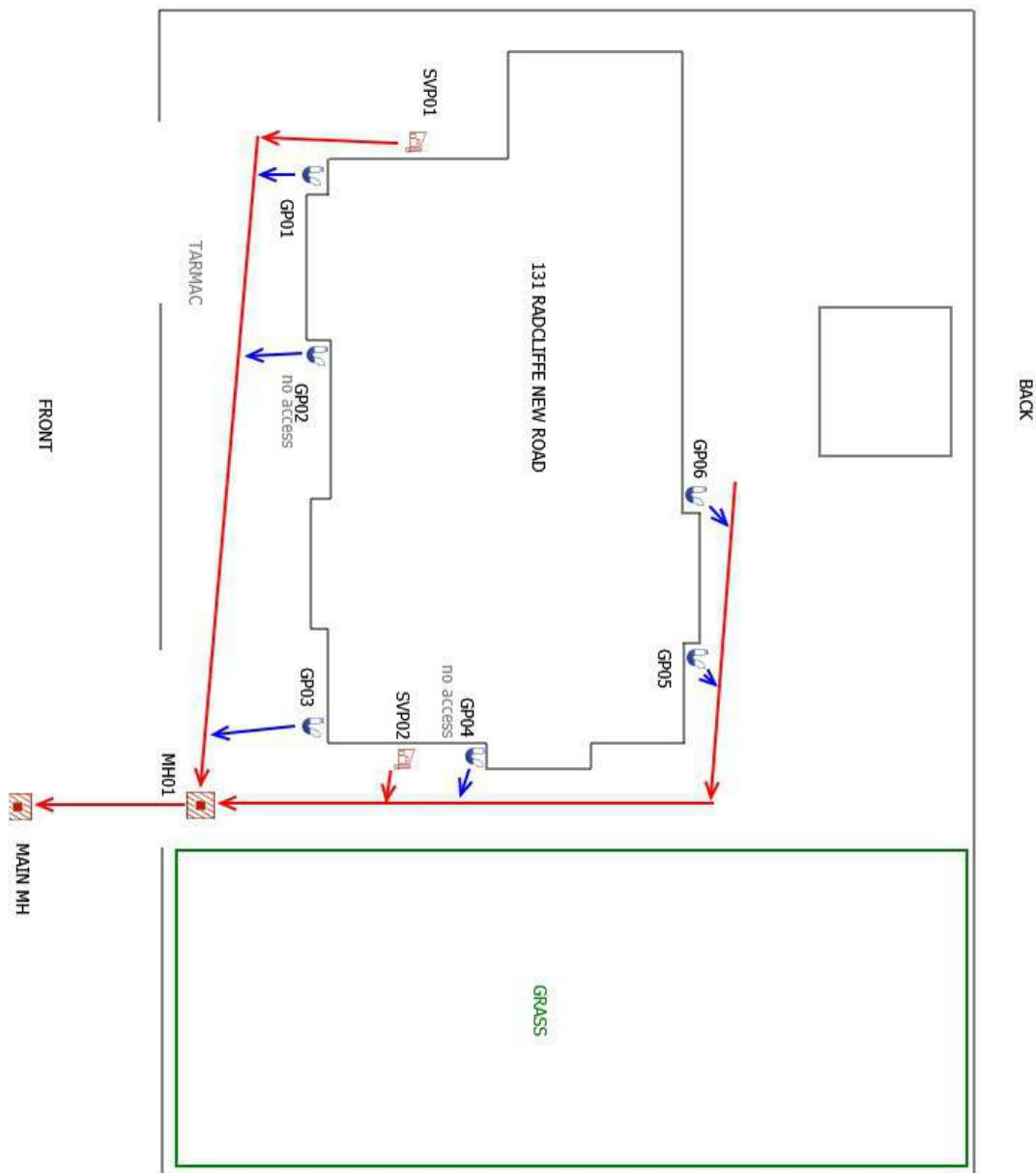
## Project Information

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025

### Project Drawing, Page '131 Radcliffe New Road'



## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



Manhole - MH01 (INTERNAL)

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



Manhole - MH01 (LID)

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP01

## Project Pictures

**Project Name**  
 131 Radcliffe New Road

**Project Number**

**Project Date**  
 27/09/2025



GP02

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP03

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP03 - Damage

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP04

## Project Pictures

| Project Name           | Project Number | Project Date |
|------------------------|----------------|--------------|
| 131 Radcliffe New Road |                | 27/09/2025   |



GP05

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP05 - Damage

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



GP06

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



SVP01

## Project Pictures

**Project Name**  
131 Radcliffe New Road

**Project Number**

**Project Date**  
27/09/2025



SVP02

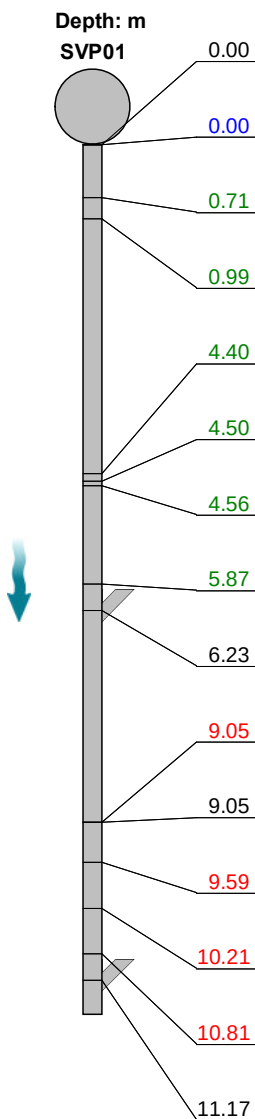
## Section Inspection - 28/09/2025 - SVP01

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 1        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | SVP01          |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                    |                               |         |
|----------------------------|-------------------------|------------------------------|--------------------|-------------------------------|---------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream         | <b>Upstream Node:</b>         | SVP01   |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 23.17 m            | <b>Upstream Pipe Depth:</b>   |         |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 23.17 m            | <b>Downstream Node:</b>       | Z       |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                    | <b>Downstream Pipe Depth:</b> | 1.580 m |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular           |                               |         |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm             |                               |         |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Polyvinyl chloride |                               |         |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining          |                               |         |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining          |                               |         |

### Comments:

### Recommendations:

| Scale:                                                                                                             | 1:101 | Position [m] | Code                                                                | Observation | MPEG | Photo | Grade |
|--------------------------------------------------------------------------------------------------------------------|-------|--------------|---------------------------------------------------------------------|-------------|------|-------|-------|
| <b>Depth: m</b><br><b>SVP01</b>  |       |              |                                                                     |             |      |       |       |
|                                                                                                                    | 0.00  | OC           | Start node, other special chamber, reference: SVP01: soil vent pipe | 00:00:00    |      |       |       |
|                                                                                                                    | 0.00  | WL           | Water level, 0% of the vertical dimension                           |             |      |       |       |
|                                                                                                                    | 0.71  | LU           | Line deviates up: 90°                                               | 00:00:05    |      |       |       |
|                                                                                                                    | 0.99  | LL           | Line deviates left: 15°                                             | 00:00:09    |      |       |       |
|                                                                                                                    | 4.40  | LD           | Line deviates down: 15°                                             | 00:00:26    |      |       |       |
|                                                                                                                    | 4.50  | LU           | Line deviates up: 15°                                               | 00:00:28    |      |       |       |
|                                                                                                                    | 4.56  | LL           | Line deviates left: 15°                                             | 00:00:28    |      |       |       |
|                                                                                                                    | 5.87  | LL           | Line deviates left: 45°                                             | 00:00:35    |      |       |       |
|                                                                                                                    | 6.23  | JN           | Junction at 9 o'clock, 100mm dia                                    | 00:00:38    |      |       |       |
|                                                                                                                    | 9.05  | JDL          | Joint displaced, large                                              | 00:00:54    |      | 1     | 1 / 4 |
|                                                                                                                    | 9.05  | MCVC         | Pipe material changes to vitrified clay at this point               | 00:00:54    |      |       |       |
|                                                                                                                    | 9.59  | JDM          | Joint displaced, medium                                             | 00:00:59    |      | 2     | 1 / 3 |
|                                                                                                                    | 10.21 | JDM          | Joint displaced, medium                                             | 00:01:03    |      | 3     | 1 / 3 |
|                                                                                                                    | 10.81 | JDM          | Joint displaced, medium                                             | 00:01:08    |      | 4     | 1 / 3 |
|                                                                                                                    | 11.17 | JN           | Junction at 9 o'clock, 100mm dia                                    | 00:01:12    |      |       |       |

## Section Inspection - 28/09/2025 - SVP01

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 1        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | SVP01          |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

| Scale: | 1:101 | Position [m] | Code | Observation                                                                                          | MPEG     | Photo | Grade |
|--------|-------|--------------|------|------------------------------------------------------------------------------------------------------|----------|-------|-------|
|        |       | 12.07        | DEEJ | Attached deposits, encrustation at joint from 4 o'clock to 8 o'clock, 15% cross-sectional area loss  | 00:01:21 | 5     | 3     |
|        |       | 15.27        | DEEJ | Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 15% cross-sectional area loss  | 00:01:48 | 6     | 3     |
|        |       | 17.31        | JN   | Junction at 10 o'clock, 100mm dia                                                                    | 00:02:05 |       |       |
|        |       | 17.65        | JDL  | Joint displaced, large                                                                               | 00:02:09 | 7     | 1 / 4 |
|        |       | 18.30        | DEEJ | Attached deposits, encrustation at joint from 5 o'clock to 10 o'clock, 20% cross-sectional area loss | 00:02:15 | 8     | 3     |
|        |       | 18.96        | JDL  | Joint displaced, large                                                                               | 00:02:20 | 9     | 1 / 4 |
|        |       | 19.28        | LR   | Line deviates right: 30°                                                                             | 00:02:24 |       |       |
|        |       | 19.45        | LR   | Line deviates right: 45°                                                                             | 00:02:33 |       |       |
|        |       | 19.60        | REM  | General remark: joins another line                                                                   | 00:02:34 |       |       |
|        |       | 19.60        | SC   | Pipe size changes, new size(s), 150mm high                                                           | 00:02:34 |       |       |
|        |       | 23.17        | MHF  | Finish node, manhole, reference: Z: MH01                                                             | 00:02:55 |       |       |

Depth: 1.58 m

| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 6                     | 2.0      | 0.4      | 9.0       | 1.0       | 9                                  | 5.0      | 1.3      | 27.0      | 4.0       |

## Section Pictures - 28/09/2025 - SVP01

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 1        | Downstream           | SVP01 |                  |                      |



1, 00:00:54, 9.05 m  
Joint displaced, large



2, 00:00:59, 9.59 m  
Joint displaced, medium



3, 00:01:03, 10.21 m  
Joint displaced, medium



4, 00:01:08, 10.81 m  
Joint displaced, medium

## Section Pictures - 28/09/2025 - SVP01

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 1        | Downstream           | SVP01 |                  |                      |



5, 00:01:21, 12.07 m  
Attached deposits, encrustation at joint from 4 o'clock to 8 o'clock, 15% cross-sectional area loss



6, 00:01:48, 15.27 m  
Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 15% cross-sectional area loss



7, 00:02:09, 17.65 m  
Joint displaced, large



8, 00:02:15, 18.30 m  
Attached deposits, encrustation at joint from 5 o'clock to 10 o'clock, 20% cross-sectional area loss

## Section Pictures - 28/09/2025 - SVP01

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 1        | Downstream           | SVP01 |                  |                      |



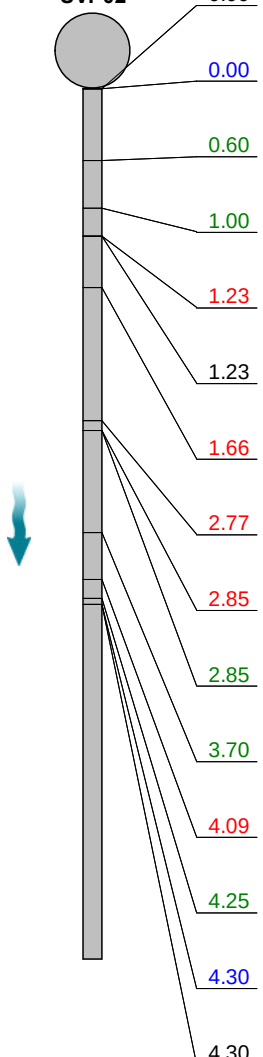
9, 00:02:20, 18.96 m  
Joint displaced, large

## Section Inspection - 28/09/2025 - SVP02

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 2        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | SVP02          |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                    |                               |       |
|----------------------------|-------------------------|------------------------------|--------------------|-------------------------------|-------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream         | <b>Upstream Node:</b>         | SVP02 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 14.85 m            | <b>Upstream Pipe Depth:</b>   |       |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 14.85 m            | <b>Downstream Node:</b>       | Z     |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                    | <b>Downstream Pipe Depth:</b> |       |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular           |                               |       |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm             |                               |       |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Polyvinyl chloride |                               |       |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining          |                               |       |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining          |                               |       |

**Comments:**  
**Recommendations:**

| Scale:                                                                                                             | 1:63 | Position [m] | Code                                                                | Observation | MPEG | Photo | Grade |
|--------------------------------------------------------------------------------------------------------------------|------|--------------|---------------------------------------------------------------------|-------------|------|-------|-------|
| <b>Depth: m</b><br><b>SVP02</b>  |      |              |                                                                     |             |      |       |       |
|                                                                                                                    | 0.00 | OC           | Start node, other special chamber, reference: SVP02: soil vent pipe | 00:00:00    |      |       |       |
|                                                                                                                    | 0.00 | WL           | Water level, 0% of the vertical dimension                           |             |      |       |       |
|                                                                                                                    | 0.60 | LU           | Line deviates up: 90°                                               | 00:00:07    |      |       |       |
|                                                                                                                    | 1.00 | LR           | Line deviates right: 15°                                            | 00:00:11    |      |       |       |
|                                                                                                                    | 1.23 | JDL          | Joint displaced, large                                              | 00:00:13    |      | 1     | 1 / 4 |
|                                                                                                                    | 1.23 | MCVC         | Pipe material changes to vitrified clay at this point               | 00:00:13    |      |       |       |
|                                                                                                                    | 1.66 | JDM          | Joint displaced, medium                                             | 00:00:17    |      | 2     | 1 / 3 |
|                                                                                                                    | 2.77 | CC           | Crack, circumferential from 12 o'clock to 12 o'clock                | 00:00:24    |      | 3     | 2 / 2 |
|                                                                                                                    | 2.85 | JDM          | Joint displaced, medium                                             | 00:00:28    |      | 4     | 1 / 3 |
|                                                                                                                    | 2.85 | RFJ          | Roots, fine at joint                                                | 00:00:28    |      | 5     | 2     |
|                                                                                                                    | 3.70 | LD           | Line deviates down: 90°                                             | 00:00:34    |      |       |       |
|                                                                                                                    | 4.09 | JDL          | Joint displaced, large                                              | 00:00:36    |      | 6     | 1 / 4 |
|                                                                                                                    | 4.25 | LU           | Line deviates up: 90°                                               | 00:00:42    |      |       |       |
|                                                                                                                    | 4.30 | REM          | General remark: joins another line                                  | 00:00:43    |      |       |       |
|                                                                                                                    | 4.30 | SC           | Pipe size changes, new size(s), 150mm high                          | 00:01:10    |      |       |       |

## Section Inspection - 28/09/2025 - SVP02

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 2        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | SVP02          |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

| Scale:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1:63 | Position [m] | Code | Observation | MPEG | Photo | Grade |
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|      |              |      |             |      |       |       |

## Section Pictures - 28/09/2025 - SVP02

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 2        | Downstream           | SVP02 |                  |                      |



1, 00:00:13, 1.23 m  
Joint displaced, large



2, 00:00:17, 1.66 m  
Joint displaced, medium



3, 00:00:24, 2.77 m  
Crack, circumferential from 12 o'clock to 12 o'clock



4, 00:00:28, 2.85 m  
Joint displaced, medium

## Section Pictures - 28/09/2025 - SVP02

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 2        | Downstream           | SVP02 |                  |                      |



5, 00:00:28, 2.85 m  
Roots, fine at joint



6, 00:00:36, 4.09 m  
Joint displaced, large



7, 00:01:06, 10.21 m  
Joint displaced, medium



8, 00:01:10, 10.73 m  
Joint displaced, medium

## Section Pictures - 28/09/2025 - SVP02

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 2        | Downstream           | SVP02 |                  |                      |



9, 00:01:17, 12.03 m  
Joint displaced, medium



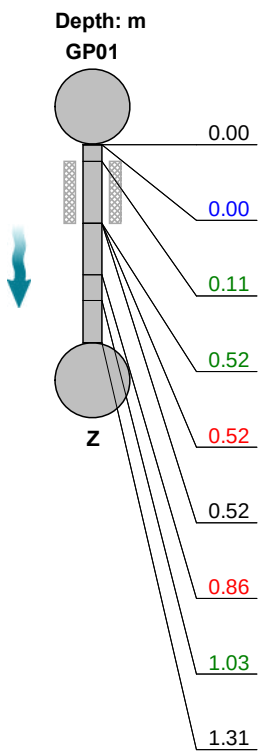
10, 00:01:20, 12.77 m  
Joint displaced, medium

## Section Inspection - 28/09/2025 - GP01

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 3        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | GP01           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |      |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | GP01 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 1.31 m         | <b>Upstream Pipe Depth:</b>   |      |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 1.31 m         | <b>Downstream Node:</b>       | Z    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |      |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular       |                               |      |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |      |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |      |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |      |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |      |

**Comments:**  
**Recommendations:**

| Scale:                                                                             | 1:50 | Position [m] | Code  | Observation                                                       | MPEG     | Photo | Grade |
|------------------------------------------------------------------------------------|------|--------------|-------|-------------------------------------------------------------------|----------|-------|-------|
|  |      |              |       |                                                                   |          |       |       |
|                                                                                    |      | 0.00         | GY    | Start node, gully, reference: GP01: gully                         | 00:00:00 |       |       |
|                                                                                    |      | 0.00         | WL    | Water level, 0% of the vertical dimension                         |          |       |       |
|                                                                                    |      | 0.11         | S01   | DES Settled deposits, fine, 20% cross-sectional area loss, start  | 00:00:15 | 1     |       |
|                                                                                    |      | 0.52         | F01   | DES Settled deposits, fine, 20% cross-sectional area loss, finish | 00:00:23 |       | 4     |
|                                                                                    |      | 0.52         | OJM   | Open joint, medium                                                | 00:00:23 | 2     | 1     |
|                                                                                    |      | 0.52         | MCPVC | Pipe material changes to polyvinyl chloride at this point         | 00:00:23 |       |       |
|                                                                                    |      | 0.86         | OJL   | Open joint, large: pipes not pushed into correct position         | 00:00:28 | 3     | 1     |
|                                                                                    |      | 1.03         | LL    | Line deviates left: 45°                                           | 00:00:34 |       |       |
|                                                                                    |      | 1.31         | OCF   | Finish node, other special chamber, reference: Z: carrier line    | 00:00:36 |       |       |

| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 2                     | 2.0      | 2.3      | 3.0       | 1.0       | 1                                  | 5.0      | 3.8      | 5.0       | 4.0       |

## Section Pictures - 28/09/2025 - GP01

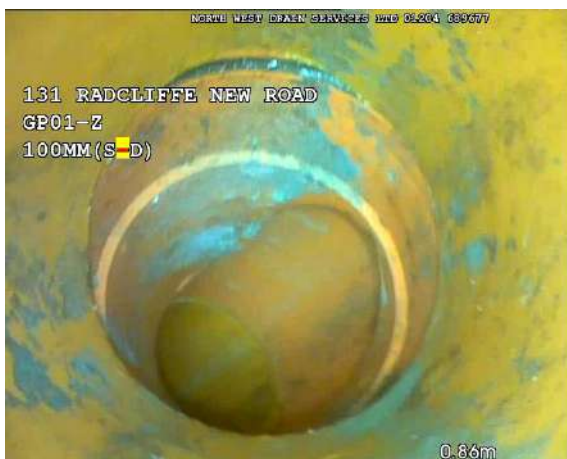
| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 3        | Downstream           | GP01 |                  |                      |



1, 00:00:15, 0.11 m  
Settled deposits, fine, 20% cross-sectional area loss, start



2, 00:00:23, 0.52 m  
Open joint, medium



3, 00:00:28, 0.86 m  
Open joint, large, pipes not pushed into correct position

## Section Inspection - 28/09/2025 - GP02

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 4        | 1         | 28/09/25      | 19:09 | Not Specified    | No Rain Or Snow | Not Specified | GP02           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |      |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | GP02 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 0.00 m         | <b>Upstream Pipe Depth:</b>   |      |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 0.00 m         | <b>Downstream Node:</b>       | Z    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |      |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular       |                               |      |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |      |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |      |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |      |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |      |

**Comments:**

**Recommendations:**

Scale: 1:50    Position [m]    Code    Observation    MPEG    Photo    Grade

Depth: m  
GP02



0.00

GY

Start node, gully, reference: GP02: gully

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

SA

Survey abandoned: unable to get access around u-bend of gully po

00:00:35

Construction Features

**Structural Defects**

Miscellaneous Features

**Service & Operational Observations**

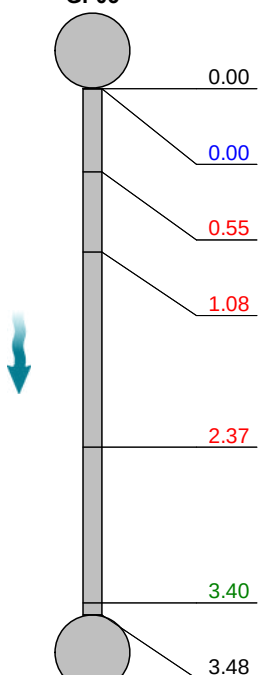
| STR No. Def | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def | SER Peak | SER Mean | SER Total | SER Grade |
|-------------|----------|----------|-----------|-----------|-------------|----------|----------|-----------|-----------|
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

## Section Inspection - 28/09/2025 - GP03

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 5        | 1         | 28/09/25      | 19:10 | Not Specified    | No Rain Or Snow | Not Specified | GP03           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |      |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | GP03 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 3.48 m         | <b>Upstream Pipe Depth:</b>   |      |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 3.48 m         | <b>Downstream Node:</b>       | Z    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |      |
| <b>Use:</b>                | Surface water           | <b>Pipe Shape:</b>           | Circular       |                               |      |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |      |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |      |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |      |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |      |

**Comments:**  
**Recommendations:**

| Scale:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|------|-------------|------|-------|-------|
| <div> <p>Depth: m<br/>GP03</p>  <p>0.00 GY Start node, gully, reference: GP03: gully 00:00:00</p> <p>0.00 WL Water level, 0% of the vertical dimension</p> <p>0.55 JDM Joint displaced, medium 00:00:17 1 1 / 3</p> <p>1.08 JDM Joint displaced, medium 00:00:25 2 1 / 3</p> <p>2.37 JDL Joint displaced, large 00:00:38 3 1 / 4</p> <p>3.40 LL Line deviates left: 45° 00:01:02</p> <p>3.48 OCF Finish node, other special chamber, reference: Z: carrier line 00:01:03</p> <p>Z<br/>Depth: m</p> </div> |      |              |      |             |      |       |       |

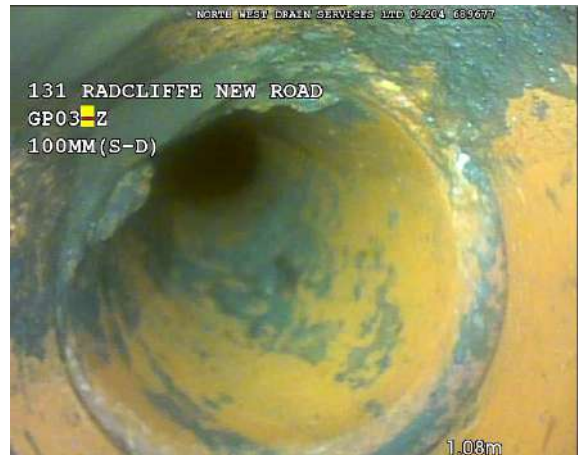
| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 3                     | 2.0      | 1.1      | 4.0       | 1.0       | 3                                  | 5.0      | 2.6      | 9.0       | 4.0       |

## Section Pictures - 28/09/2025 - GP03

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 5        | Downstream           | GP03 |                  |                      |



1, 00:00:17, 0.55 m  
Joint displaced, medium



2, 00:00:25, 1.08 m  
Joint displaced, medium



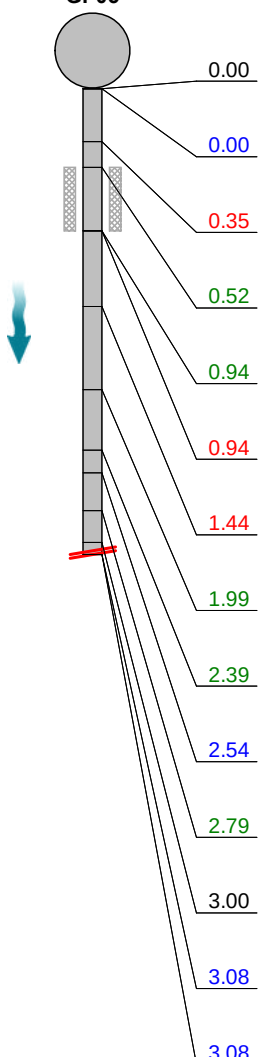
3, 00:00:38, 2.37 m  
Joint displaced, large

## Section Inspection - 28/09/2025 - GP05

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 6        | 1         | 28/09/25      | 19:10 | Not Specified    | No Rain Or Snow | Not Specified | GP05           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |      |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | GP05 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 3.08 m         | <b>Upstream Pipe Depth:</b>   |      |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 3.08 m         | <b>Downstream Node:</b>       | Z    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |      |
| <b>Use:</b>                | Surface water           | <b>Pipe Shape:</b>           | Circular       |                               |      |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |      |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |      |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |      |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |      |

**Comments:**  
**Recommendations:**

| Scale:                                                                                                                   | 1:50 | Position [m] | Code | Observation                                                                                                                        | MPEG     | Photo | Grade |
|--------------------------------------------------------------------------------------------------------------------------|------|--------------|------|------------------------------------------------------------------------------------------------------------------------------------|----------|-------|-------|
| <div> <p>Depth: m<br/>GP05</p>  </div> |      |              |      |                                                                                                                                    |          |       |       |
|                                                                                                                          | 0.00 | GY           |      | Start node, gully, reference: GP05                                                                                                 | 00:00:00 |       |       |
|                                                                                                                          | 0.00 | WL           |      | Water level, 0% of the vertical dimension                                                                                          |          |       |       |
|                                                                                                                          | 0.35 | JDM          |      | Joint displaced, medium                                                                                                            | 00:00:07 | 1     | 1 / 3 |
|                                                                                                                          | 0.52 | S01          | DES  | Settled deposits, fine, 10% cross-sectional area loss, start                                                                       | 00:00:11 | 2     |       |
|                                                                                                                          | 0.94 | F01          | DES  | Settled deposits, fine, finish                                                                                                     | 00:00:18 |       | 3     |
|                                                                                                                          | 0.94 | JDM          |      | Joint displaced, medium                                                                                                            | 00:00:18 | 3     | 1 / 3 |
|                                                                                                                          | 1.44 | JDL          |      | Joint displaced, large                                                                                                             | 00:00:23 | 4     | 1 / 4 |
|                                                                                                                          | 1.99 | DEEJ         |      | Attached deposits, encrustation at joint from 3 o'clock to 11 o'clock, 30% cross-sectional area loss                               | 00:00:29 | 5     | 4     |
|                                                                                                                          | 2.39 | LR           |      | Line deviates right: 45°                                                                                                           | 00:00:33 |       |       |
|                                                                                                                          | 2.54 | REM          |      | General remark: joins another line                                                                                                 | 00:00:34 |       |       |
|                                                                                                                          | 2.79 | DEE          |      | Attached deposits, encrustation from 10 o'clock to 2 o'clock, 25% cross-sectional area loss: suspect could be a connection covered | 00:00:38 | 6     | 4     |
|                                                                                                                          | 3.00 | SC           |      | Pipe size changes, new size(s), 150mm high                                                                                         | 00:00:42 |       |       |
|                                                                                                                          | 3.08 | CUW          |      | Loss of vision, camera under water                                                                                                 | 00:00:42 | 7     |       |
|                                                                                                                          | 3.08 | SA           |      | Survey abandoned: duw to CUW                                                                                                       | 00:00:42 |       |       |

| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 3                     | 2.0      | 1.3      | 4.0       | 1.0       | 6                                  | 5.0      | 6.8      | 21.0      | 5.0       |

## Section Pictures - 28/09/2025 - GP05

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 6        | Downstream           | GP05 |                  |                      |



1, 00:00:07, 0.35 m  
Joint displaced, medium



2, 00:00:11, 0.52 m  
Settled deposits, fine, 10% cross-sectional area loss, start



3, 00:00:18, 0.94 m  
Joint displaced, medium



4, 00:00:23, 1.44 m  
Joint displaced, large

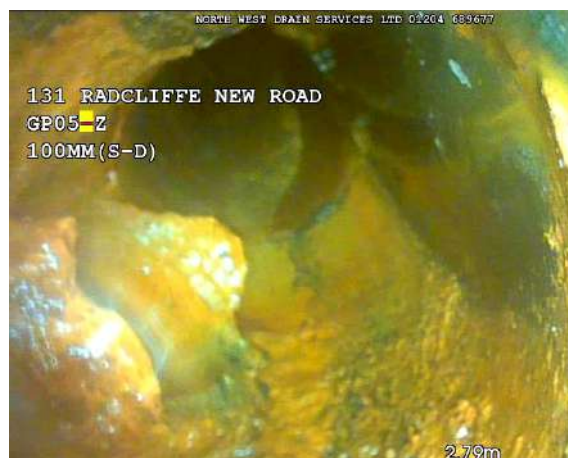
## Section Pictures - 28/09/2025 - GP05

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 6        | Downstream           | GP05 |                  |                      |



5, 00:00:29, 1.99 m

Attached deposits, encrustation at joint from 3 o'clock to 11 o'clock, 30% cross-sectional area loss



6, 00:00:38, 2.79 m

Attached deposits, encrustation from 10 o'clock to 2 o'clock, 25% cross-sectional area loss, suspect could be a connection covered



7, 00:00:42, 3.08 m

Loss of vision, camera under water

## Section Inspection - 28/09/2025 - GP06

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 7        | 1         | 28/09/25      | 19:10 | Not Specified    | No Rain Or Snow | Not Specified | GP06           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |      |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | GP06 |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 9.53 m         | <b>Upstream Pipe Depth:</b>   |      |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 9.53 m         | <b>Downstream Node:</b>       | Z    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |      |
| <b>Use:</b>                | Surface water           | <b>Pipe Shape:</b>           | Circular       |                               |      |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |      |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |      |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |      |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |      |

**Comments:**  
**Recommendations:**

| Scale:                         | 1:61 | Position [m] | Code                                                                                                  | Observation | MPEG | Photo | Grade |
|--------------------------------|------|--------------|-------------------------------------------------------------------------------------------------------|-------------|------|-------|-------|
| <b>Depth: m</b><br><b>GP06</b> |      |              |                                                                                                       |             |      |       |       |
| 0.00                           |      | GY           | Start node, gully, reference: GP06: gully pot                                                         | 00:00:00    |      |       |       |
| 0.00                           |      | WL           | Water level, 0% of the vertical dimension                                                             |             |      |       |       |
| 0.00                           |      | JDL          | Joint displaced, large                                                                                | 00:00:00    | 1    | 1 / 4 |       |
| 0.38                           |      | DEEJ         | Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 20% cross-sectional area loss   | 00:00:09    | 2    | 3     |       |
| 1.60                           |      | DEEJ         | Attached deposits, encrustation at joint from 12 o'clock to 12 o'clock, 10% cross-sectional area loss | 00:00:20    | 3    | 3     |       |
| 2.23                           |      | JDL          | Joint displaced, large                                                                                | 00:00:26    | 4    | 1 / 4 |       |
| 2.23                           |      | DEEJ         | Attached deposits, encrustation at joint from 4 o'clock to 8 o'clock, 10% cross-sectional area loss   | 00:00:26    | 5    | 3     |       |
| 2.50                           |      | LR           | Line deviates right: 45°                                                                              | 00:00:29    |      |       |       |
| 2.65                           |      | REM          | General remark: joins another line                                                                    | 00:00:31    |      |       |       |
| 2.65                           |      | SC           | Pipe size changes, new size(s), 150mm high                                                            | 00:00:34    |      |       |       |
| 3.19                           |      | CN           | Connection other than junction at 12 o'clock, 100mm dia                                               | 00:00:34    |      |       |       |
| 3.19                           |      | DEE          | Attached deposits, encrustation from 7 o'clock to 5 o'clock, 5% cross-sectional area loss             | 00:00:34    | 6    | 3     |       |
| 4.58                           |      | DER          | Settled deposits, coarse, 5% cross-sectional area loss                                                | 00:00:47    | 7    | 3     |       |
| 6.20                           |      | JN           | Junction at 3 o'clock, 100mm dia                                                                      | 00:01:01    |      |       |       |
| 6.90                           |      | CN           | Connection other than junction at 12 o'clock, 100mm dia                                               | 00:01:05    | 8    |       |       |

## Section Inspection - 28/09/2025 - GP06

| Item No. | Insp. No. | Date          | Time  | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|-------|------------------|-----------------|---------------|----------------|
| 7        | 1         | 28/09/25      | 19:10 | Not Specified    | No Rain Or Snow | Not Specified | GP06           |
| Operator |           | Vehicle       |       | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |       | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                                                                                   |      |              |      |                                                                                                      |                                                               |          |       |   |
|-----------------------------------------------------------------------------------|------|--------------|------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------|-------|---|
| Scale:                                                                            | 1:61 | Position [m] | Code | Observation                                                                                          | MPEG                                                          | Photo    | Grade |   |
|  |      | 7.00         | LR   | Line deviates right: 30°                                                                             | 00:01:07                                                      |          |       |   |
|                                                                                   |      | 8.27         | S01  | DES                                                                                                  | Settled deposits, fine, 15% cross-sectional area loss, start  | 00:01:17 | 9     |   |
|                                                                                   |      | 8.89         | F01  | DES                                                                                                  | Settled deposits, fine, 15% cross-sectional area loss, finish | 00:01:22 |       | 3 |
|                                                                                   |      | 9.52         | DEEJ | Attached deposits, encrustation at joint from 5 o'clock to 12 o'clock, 20% cross-sectional area loss | 00:01:31                                                      | 10       | 3     |   |
|                                                                                   |      | 9.53         | SA   | Survey abandoned: due to DEEJ                                                                        | 00:00:00                                                      |          |       |   |

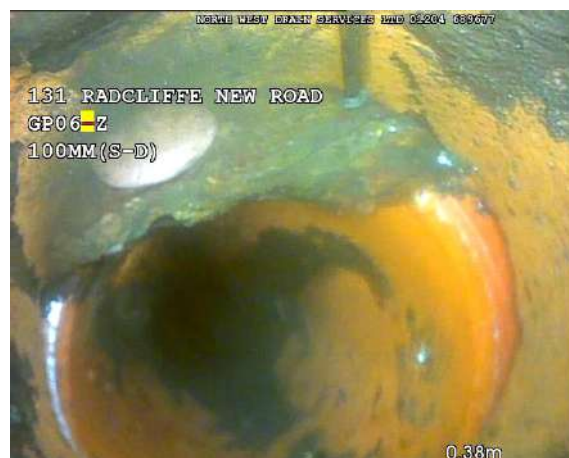
| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 2                     | 2.0      | 0.4      | 4.0       | 1.0       | 9                                  | 7.0      | 2.5      | 24.0      | 4.0       |

## Section Pictures - 28/09/2025 - GP06

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 7        | Downstream           | GP06 |                  |                      |



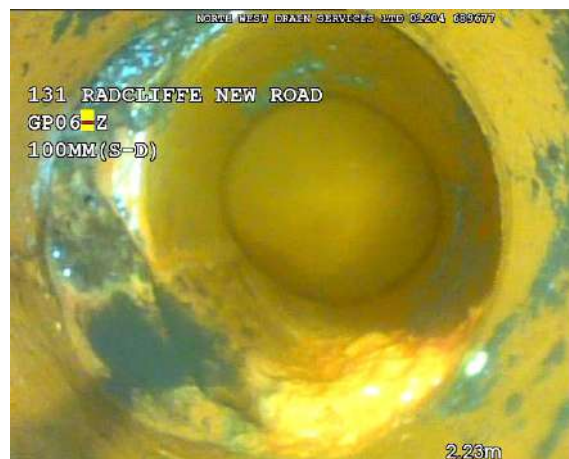
1, 00:00:00, 0.00 m  
Joint displaced, large



2, 00:00:09, 0.38 m  
Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 20% cross-sectional area loss



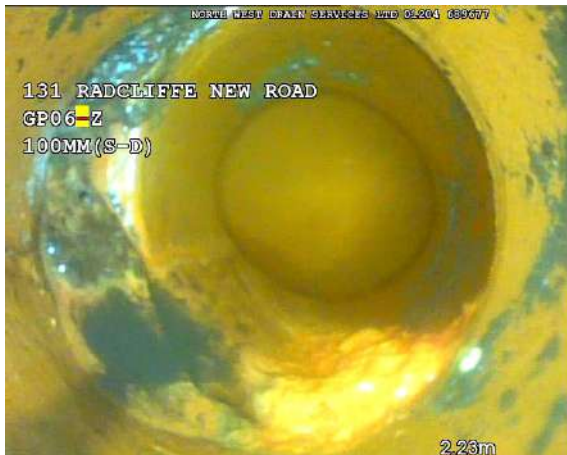
3, 00:00:20, 1.60 m  
Attached deposits, encrustation at joint from 12 o'clock to 12 o'clock, 10% cross-sectional area loss



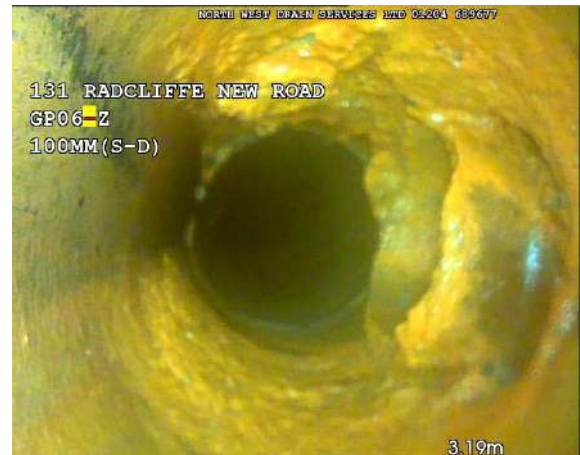
4, 00:00:26, 2.23 m  
Joint displaced, large

## Section Pictures - 28/09/2025 - GP06

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 7        | Downstream           | GP06 |                  |                      |



5, 00:00:26, 2.23 m  
Attached deposits, encrustation at joint from 4 o'clock to 8 o'clock, 10% cross-sectional area loss



6, 00:00:34, 3.19 m  
Attached deposits, encrustation from 7 o'clock to 5 o'clock, 5% cross-sectional area loss



7, 00:00:47, 4.58 m  
Settled deposits, coarse, 5% cross-sectional area loss



8, 00:01:05, 6.90 m  
Connection other than junction at 12 o'clock, 100mm dia

## Section Pictures - 28/09/2025 - GP06

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 7        | Downstream           | GP06 |                  |                      |



9, 00:01:17, 8.27 m

Settled deposits, fine, 15% cross-sectional area loss, start



10, 00:01:31, 9.52 m

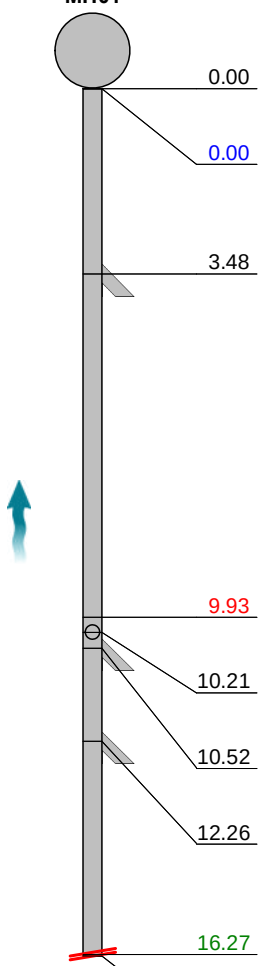
Attached deposits, encrustation at joint from 5 o'clock to 12 o'clock, 20% cross-sectional area loss

## Section Inspection - 26/09/2025 - Z

| Item No. | Insp. No. | Date          | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|------|------------------|-----------------|---------------|----------------|
| 8        | 1         | 26/09/25      | 0:00 | Not Specified    | No Rain Or Snow | Not Specified | Z              |
| Operator |           | Vehicle       |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |      | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |         |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|---------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Upstream       | <b>Upstream Node:</b>         | Z       |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 16.30 m        | <b>Upstream Pipe Depth:</b>   |         |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 16.30 m        | <b>Downstream Node:</b>       | MH01    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> | 1.580 m |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular       |                               |         |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 150 mm         |                               |         |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |         |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |         |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |         |

**Comments:**  
**Recommendations:**

| Scale:                                                                                                                        | 1:142 | Position [m] | Code                                                                                                | Observation | MPEG | Photo | Grade |
|-------------------------------------------------------------------------------------------------------------------------------|-------|--------------|-----------------------------------------------------------------------------------------------------|-------------|------|-------|-------|
| <div> <p>Depth: 1.58 m<br/>MH01</p>  </div> |       |              |                                                                                                     |             |      |       |       |
|                                                                                                                               | 0.00  | MH           | Start node, manhole, reference: MH01: screen txt error survey is upstream                           | 00:00:00    |      |       |       |
|                                                                                                                               | 0.00  | WL           | Water level, 0% of the vertical dimension                                                           |             |      |       |       |
|                                                                                                                               | 3.48  | JN           | Junction at 9 o'clock, 100mm dia                                                                    | 00:00:12    |      |       |       |
|                                                                                                                               | 9.93  | JDM          | Joint displaced, medium                                                                             | 00:00:58    | 1    | 1 / 3 |       |
|                                                                                                                               | 10.21 | CN           | Connection other than junction at 12 o'clock, 100mm dia                                             | 00:01:00    |      |       |       |
|                                                                                                                               | 10.52 | JN           | Junction at 9 o'clock, 100mm dia                                                                    | 00:01:03    |      |       |       |
|                                                                                                                               | 12.26 | JN           | Junction at 9 o'clock, 100mm dia                                                                    | 00:01:14    |      |       |       |
|                                                                                                                               | 16.27 | DEEJ         | Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 30% cross-sectional area loss | 00:01:46    | 2    | 4     |       |
|                                                                                                                               | 16.30 | SA           | Survey abandoned: due to DEEJ                                                                       | 00:00:00    |      |       |       |

| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 1                     | 1.0      | 0.1      | 1.0       | 1.0       | 2                                  | 5.0      | 0.4      | 7.0       | 4.0       |

## Section Pictures - 26/09/2025 - Z

| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-----|------------------|----------------------|
| 8        | Upstream             | Z   |                  |                      |



1, 00:00:58, 9.93 m  
Joint displaced, medium



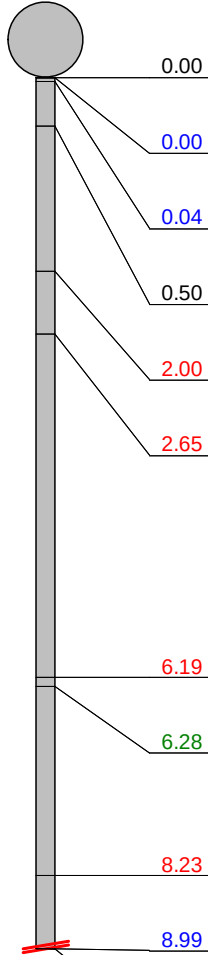
2, 00:01:46, 16.27 m  
Attached deposits, encrustation at joint from 3 o'clock to 9 o'clock, 30% cross-sectional area loss

## Section Inspection - 27/09/2025 - MH01

| Item No. | Insp. No. | Date          | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
|----------|-----------|---------------|------|------------------|-----------------|---------------|----------------|
| 9        | 1         | 27/09/25      | 0:00 | Not Specified    | No Rain Or Snow | Not Specified | MH01           |
| Operator |           | Vehicle       |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Tony     |           | Not Specified |      | Not Specified    | Not Specified   | Private Drain | Not Specified  |

|                            |                         |                              |                |                               |         |
|----------------------------|-------------------------|------------------------------|----------------|-------------------------------|---------|
| <b>Town or Village:</b>    | Whitefield              | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | MH01    |
| <b>Road:</b>               | 131 Radcliffe New Road  | <b>Inspected Length:</b>     | 8.99 m         | <b>Upstream Pipe Depth:</b>   | 1.580 m |
| <b>Location:</b>           |                         | <b>Total Length:</b>         | 8.99 m         | <b>Downstream Node:</b>       | MAIN    |
| <b>Surface Type:</b>       |                         | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |         |
| <b>Use:</b>                | Combined                | <b>Pipe Shape:</b>           | Circular       |                               |         |
| <b>Type of Pipe:</b>       | Gravity drain/sewer     | <b>Dia/Height:</b>           | 100 mm         |                               |         |
| <b>Flow Control:</b>       | No flow control         | <b>Material:</b>             | Vitrified clay |                               |         |
| <b>Year Constructed:</b>   | Not Specified           | <b>Lining Type:</b>          | No Lining      |                               |         |
| <b>Inspection Purpose:</b> | Sample condition survey | <b>Lining Material:</b>      | No Lining      |                               |         |

**Comments:**  
**Recommendations:**

| Scale:                                                                                                                        | 1:78 | Position [m] | Code | Observation                                 | MPEG     | Photo | Grade |
|-------------------------------------------------------------------------------------------------------------------------------|------|--------------|------|---------------------------------------------|----------|-------|-------|
| <div> <p>Depth: 1.58 m<br/>MH01</p>  </div> |      |              |      |                                             |          |       |       |
|                                                                                                                               |      | 0.00         | MH   | Start node, manhole, reference: MH01        | 00:00:00 |       |       |
|                                                                                                                               |      | 0.00         | WL   | Water level, 0% of the vertical dimension   |          |       |       |
|                                                                                                                               |      | 0.04         | REM  | General remark: trap visible 6 oclock       | 00:00:01 |       |       |
|                                                                                                                               |      | 0.50         | SC   | Pipe size changes, new size(s), 150mm high  | 00:00:02 |       |       |
|                                                                                                                               |      | 2.00         | JDM  | Joint displaced, medium                     | 00:00:10 | 1     | 1 / 3 |
|                                                                                                                               |      | 2.65         | JDL  | Joint displaced, large                      | 00:00:14 | 2     | 1 / 4 |
|                                                                                                                               |      | 6.19         | JDL  | Joint displaced, large                      | 00:00:33 | 3     | 1 / 4 |
|                                                                                                                               |      | 6.28         | LD   | Line deviates down: 15°                     | 00:00:38 |       |       |
|                                                                                                                               |      | 8.23         | JDM  | Joint displaced, medium                     | 00:00:45 | 4     | 1 / 3 |
|                                                                                                                               |      | 8.99         | REM  | General remark: drop shaft visible 6 oclock | 00:00:49 |       |       |
|                                                                                                                               |      | 8.99         | SA   | Survey abandoned: unable to pass            | 00:00:50 |       |       |

| Construction Features |          |          |           |           | Miscellaneous Features             |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| Structural Defects    |          |          |           |           | Service & Operational Observations |          |          |           |           |
| STR No. Def           | STR Peak | STR Mean | STR Total | STR Grade | SER No. Def                        | SER Peak | SER Mean | SER Total | SER Grade |
| 4                     | 2.0      | 0.7      | 6.0       | 1.0       | 4                                  | 5.0      | 1.6      | 14.0      | 4.0       |

## Section Pictures - 27/09/2025 - MH01

| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|------|------------------|----------------------|
| 9        | Downstream           | MH01 |                  |                      |



1, 00:00:10, 2.00 m  
Joint displaced, medium



2, 00:00:14, 2.65 m  
Joint displaced, large



3, 00:00:33, 6.19 m  
Joint displaced, large



4, 00:00:45, 8.23 m  
Joint displaced, medium

## North West Drain Services Ltd

Thank you for choosing to use North West Drain Services Ltd to carry out your drainage investigation works.

The results and views carried in this report are those of the engineer(s) appointed to carry out the investigation and are considered relevant on the day of the survey. Drain and sewer performance is known to alter over time, so liability cannot be accepted for differences between the recorded data and the actual data at a time after this report was generated.

This survey has been created in accordance with the drainage standard used in the country and language settings for this PC.

If a DVD has been supplied with this report, please note that it can only be used in a Windows based PC. Please browse the DVD and navigate to the PDF folder to find project-based documents such as drawings, engineer's site notes and survey specifications amongst others.

CCTV subsidence investigations do not account for the water tightness of the pipes and are merely a visual inspection of inside of the drains. CCTV drainage engineers are generally not qualified to comment on the causes of subsidence, and can only suggest required remedial actions for the pipes, and not the affected buildings.

Subsidence is a building structural failure, which can occur for many reasons. Although drainage failures can contribute to subsidence problems, other causes should always be investigated as part of a considered approach. In order to eliminate drains from suspicion, North West Drain Services Ltd suggests that all pipes within at least 10m of the subsidence area be pressure tested over and above a CCTV inspection, and remedial suggestions considered based on the findings.

Unless otherwise specified in an associated task order (or similar), the data gathered in this report may not be suitable for use as a pre-lining investigation. North West Drain Services Ltd are happy to carry out such surveys, but this must be agreed prior to the commencement of the works, and the client must specify the data they wish to capture and the acceptable tolerances.

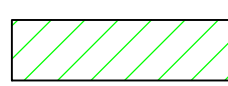
All measurements including depths, meterage, locations are given as an approximate guide only and not to be used for piling purposes. We do not offer pin-point locating of drainage.

# Appendix D - Proposed Drainage Strategy

(



KEY

PROPOSED IMPERMEABLE  
AREA: 300m<sup>2</sup>PROPOSED IMPERMEABLE AREA PLAN  
(SCALE 1:200)0m 5 10 15 20  
SCALE 1 : 200DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.  
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.  
ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER  
FOR CLARIFICATION BEFORE PROCEEDING.  
THIS DRAWING IS COPYRIGHT AND OWNED BY AEGAEA.SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION  
REFER TO THE RELEVANT CONSTRUCTION (DESIGN AND MANAGEMENT)  
DOCUMENTATION WHERE APPLICABLE.  
IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY  
A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE TO AN  
APPROVED METHOD STATEMENT.

## GENERAL NOTES

1. THIS DRAWING IS INDICATIVE ONLY AND SUBJECT TO CHANGE DURING DETAILED DESIGN AND APPROVALS FROM RELEVANT STATUTORY BODIES.
2. POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CONFIRMED PRIOR TO START ON SITE.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SPECIFICATIONS, GEOTECHNICAL AND OTHER RELEVANT DOCUMENTATION PROVIDED.
4. THIS DRAWING IS SCHEMATIC FOR CLARITY ONLY. POSITIONS OF PIPE RUNS AND MANHOLES MAY VARY ON SITE DUE TO SITE CONDITIONS.
5. WHERE EXISTING OR PROPOSED TREES ARE ADJACENT TO ACCESS ROADS OR DRAINAGE, ROOT BARRIERS (TYPE TO BE APPROVED) ARE REQUIRED TO PREVENT STRUCTURAL DAMAGE.
6. ANY ANOMALY OR CONTRADICTIONS BETWEEN ANY OF THE ABOVE IS TO BE REPORTED IMMEDIATELY.
7. THE DESIGN IS TO COMPLY IN ALL ASPECTS WITH THE CURRENT BRITISH STANDARDS, BUILDING REGULATIONS AND BUILDING LEGISLATION ETC.
8. ALL PIPE SIZES, CHAMBER DEPTHS, SIZE & QUANTITY SUBJECT TO REVIEW AND DETAILED DESIGN. ALL ADOPTED PIPE WORK ROUTING AND ANY EASEMENTS SUBJECT TO FULL DESIGN REVIEW AND APPROVAL BY THE RELEVANT BODIES.
9. DRAINAGE DESIGN SUBJECT TO DETAILED LEVELS AND EXTERNAL WORKS DESIGN.
10. POSITION OF RAIN WATER PIPES (RWP) TO BE CONFIRMED BY THE ARCHITECT.
11. SUBJECT TO DETAILED DESIGN AND APPROVAL.
12. EXISTING DRAINAGE TAKEN FROM CCTV SURVEY UNDERTAKEN BY 'NORTH WEST DRAINSERVICES' REF: 131 RADCLIFFE NEW ROAD DATED 27/09/2025.
13. COVER LEVELS BASED ON EXISTING TOPOGRAPHICAL INFORMATION, SUBJECT TO CONFIRMATION BY OTHERS.

## KEY

- SITE BOUNDARY
- LAND OWNED BY APPLICANT
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED FOUL WATER SEWER
- PROPOSED COMBINED WATER SEWER
- PROPOSED SuDS/BIORETENTION PLANTER
- PROPOSED TANKED PERMEABLE PAVING
- PROPOSED TANKED PERMEABLE PAVING (PATIO)
- PROPOSED PERFORATED PIPE
- EXISTING PRIVATE SW SEWERS
- EXISTING PRIVATE COMBINED SEWER
- EXISTING UNITED UTILITIES COMBINED SEWER

THIS DRAWING IS FOR DISCHARGE OF CONDITION  
ONLY AND NOT FOR CONSTRUCTION  
SUBJECT TO WATER AUTHORITY TECHNICAL  
APPROVALRWP, SVP AND INSPECTION CHAMBER LOCATIONS  
SUBJECT TO CONFIRMATION BY OTHERS.

A01 13.10.25 FIRST ISSUE AC

Rev Date Description By

Client

YS BUILDING SERVICES LTD

Project

131 RADCLIFFE NEW ROAD, WHITEFIELD

Title

PROPOSED DRAINAGE STRATEGY

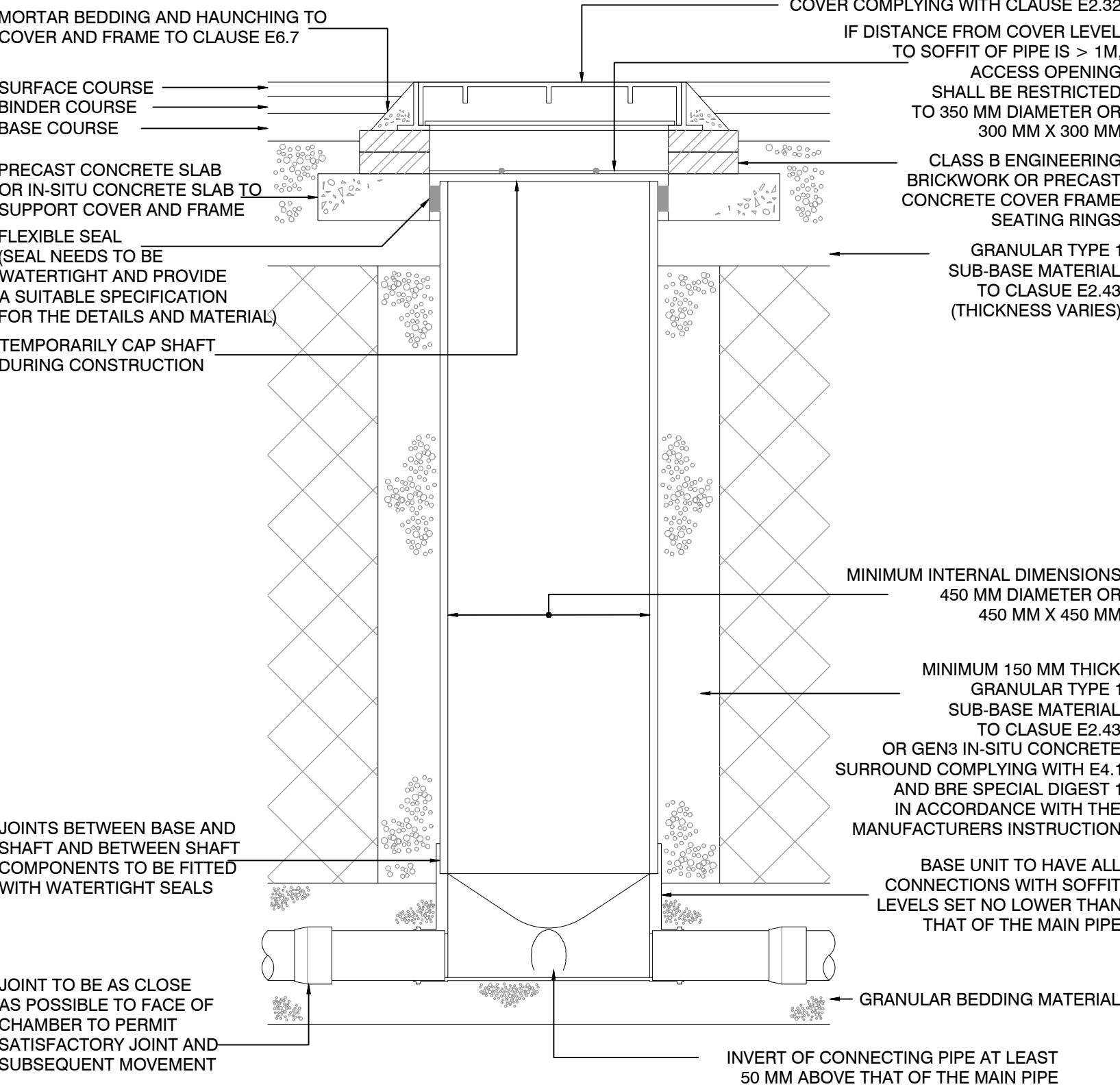
Project No. Drawing No. Revision  
AEG8058 CIV-001 A01Drawn Checked Approved Date Scale @ A1  
AC DB JM OCT 2025 1:100

Drawing Status

DISCHARGE OF CONDITION

**aegaea**  
water, civils and environment0m 2 4 6 8 10  
SCALE 1 : 100

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH CLAUSE E2.31

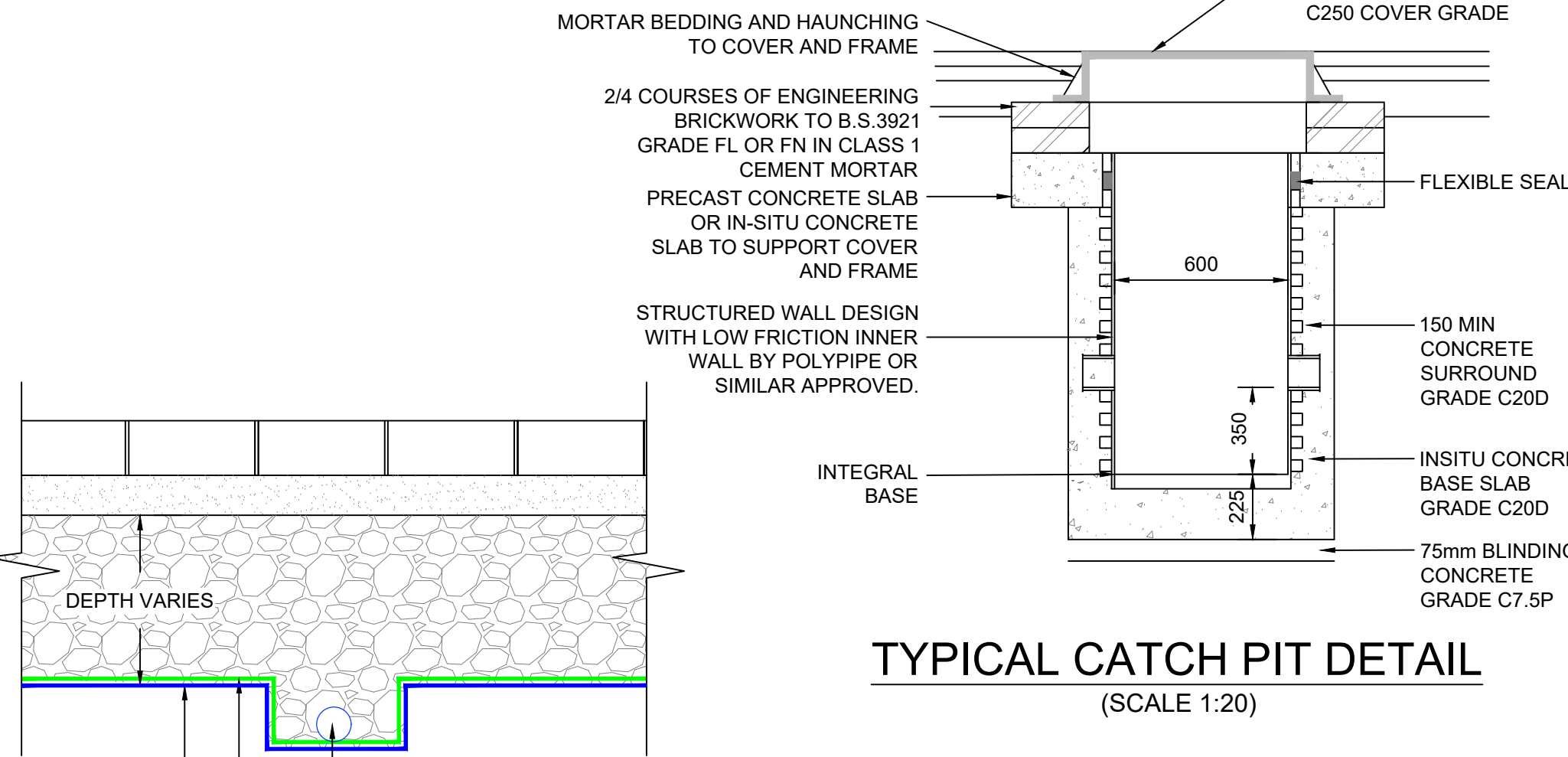


NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

NOT TO SCALE

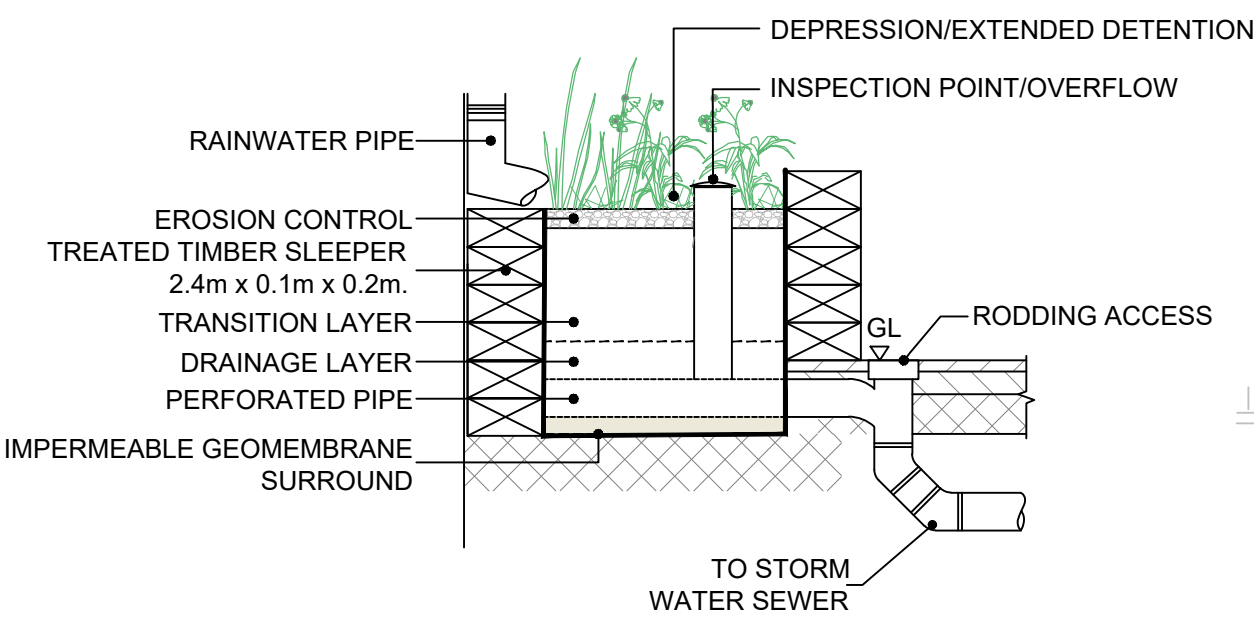
### TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 3 M  
FLEXIBLE MATERIAL CONSTRUCTION FOR USE IN AREAS SUBJECT TO VEHICLE LOADING



### TYPICAL CATCH PIT DETAIL (SCALE 1:20)

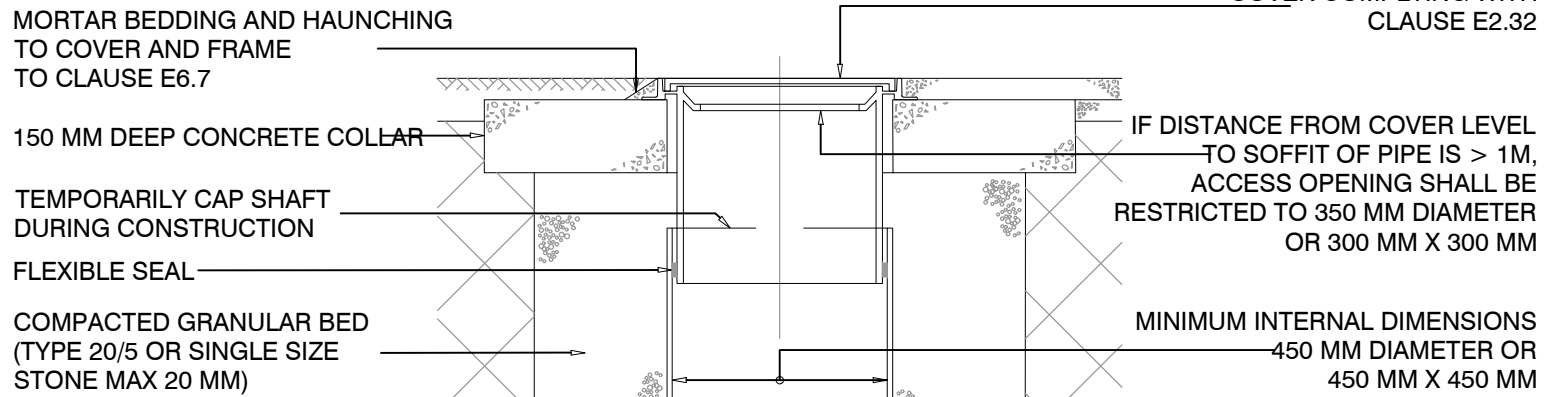
### DRAINAGE TRENCH WITHIN PERMEABLE PAVING (SCALE 1:10)



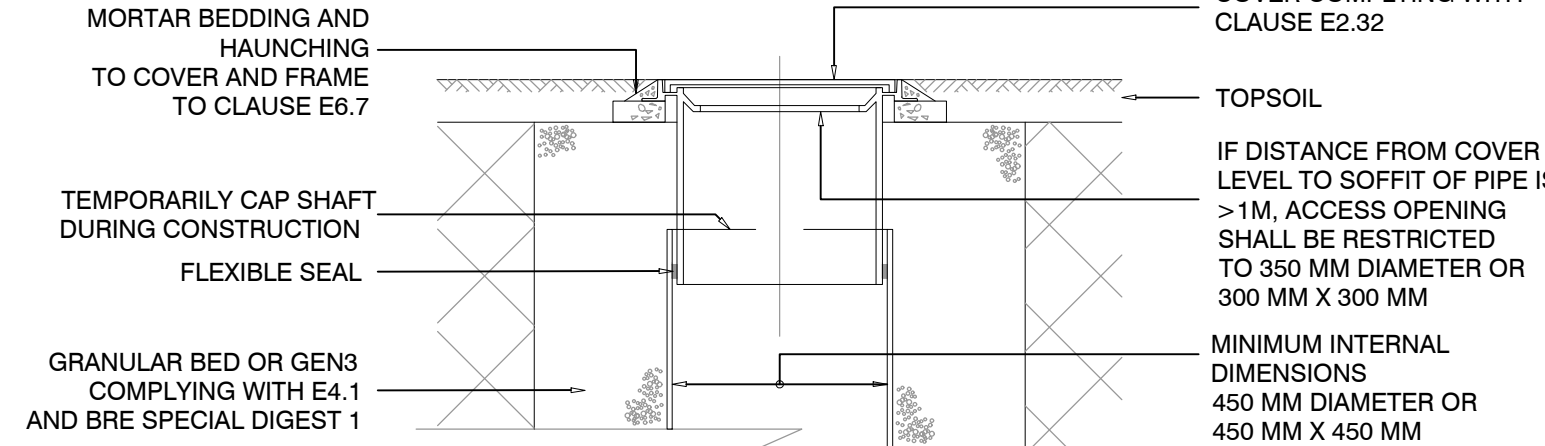
### TYPICAL SECTION THROUGH RAISED SUDS/BIORETENTION PLANTER (SCALE 1:20)

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH CLAUSE E2.31

SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS



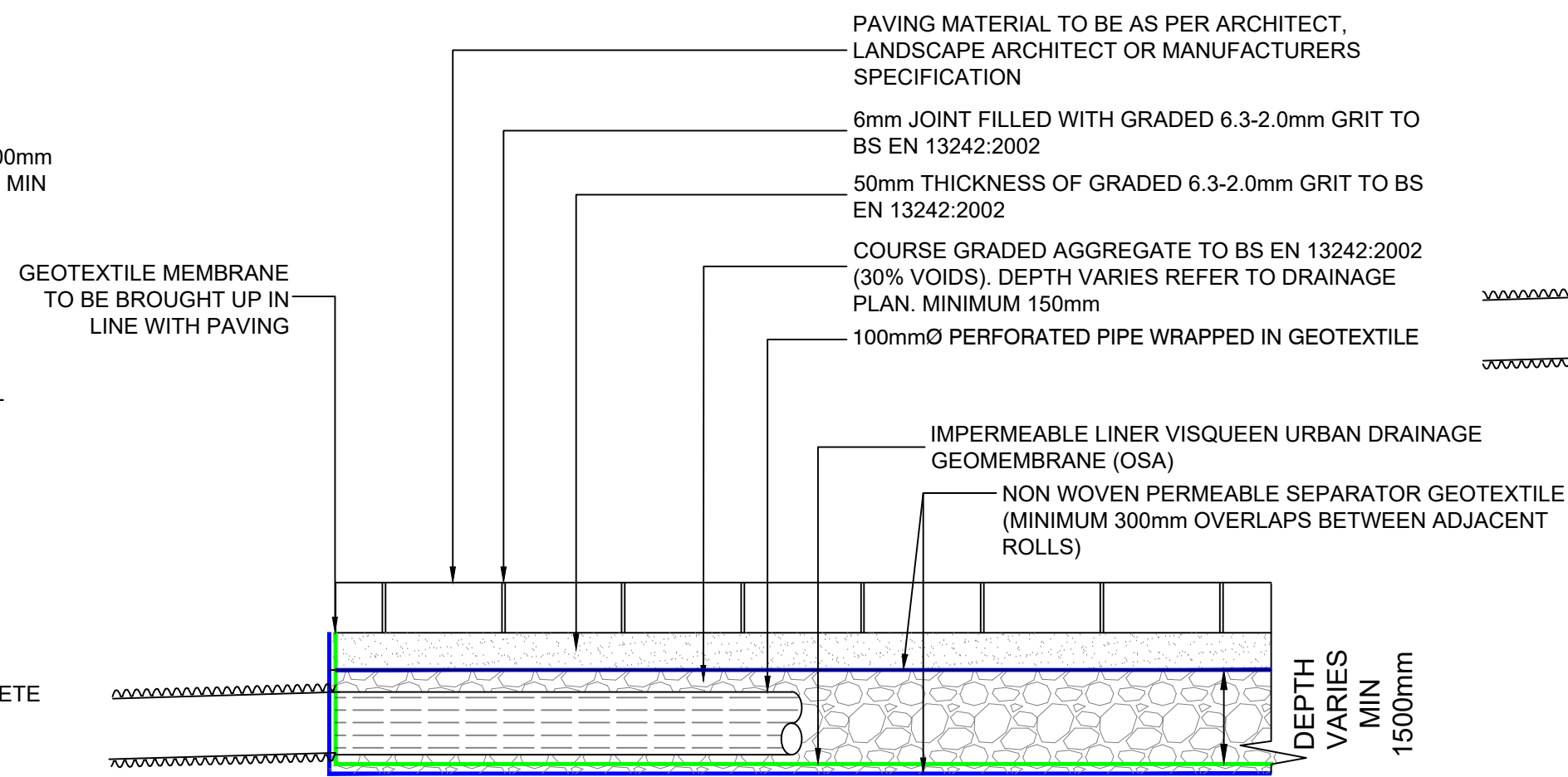
SITED IN DOMESTIC GARDENS



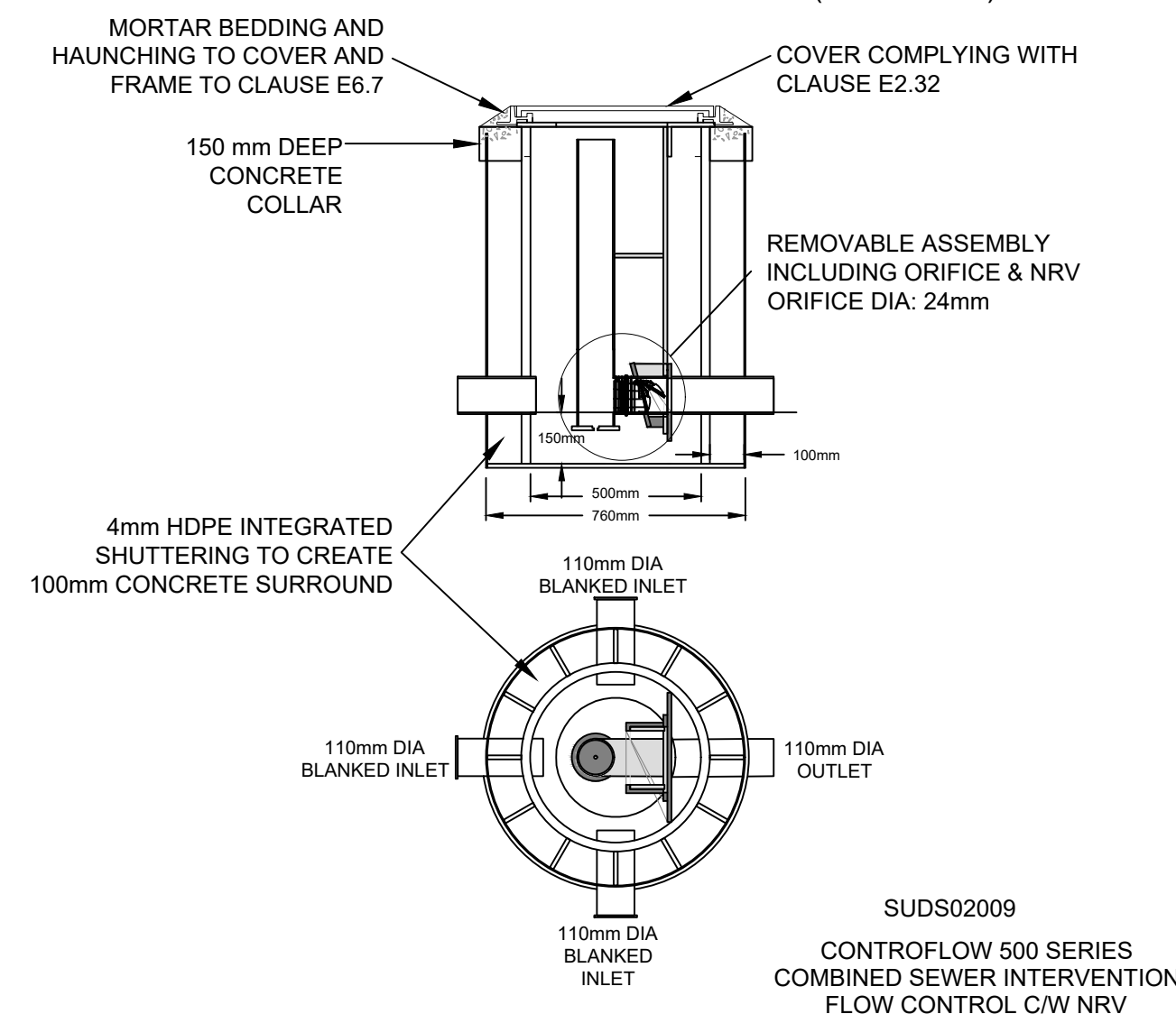
NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY (INCLUDING AND FOOTWAY), THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

### TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

FLEXIBLE MATERIAL CONSTRUCTION ALTERNATIVE TOP DETAILS FOR USE IN AREAS OF LIGHT VEHICLE LOADING OR LANDSCAPED AREAS

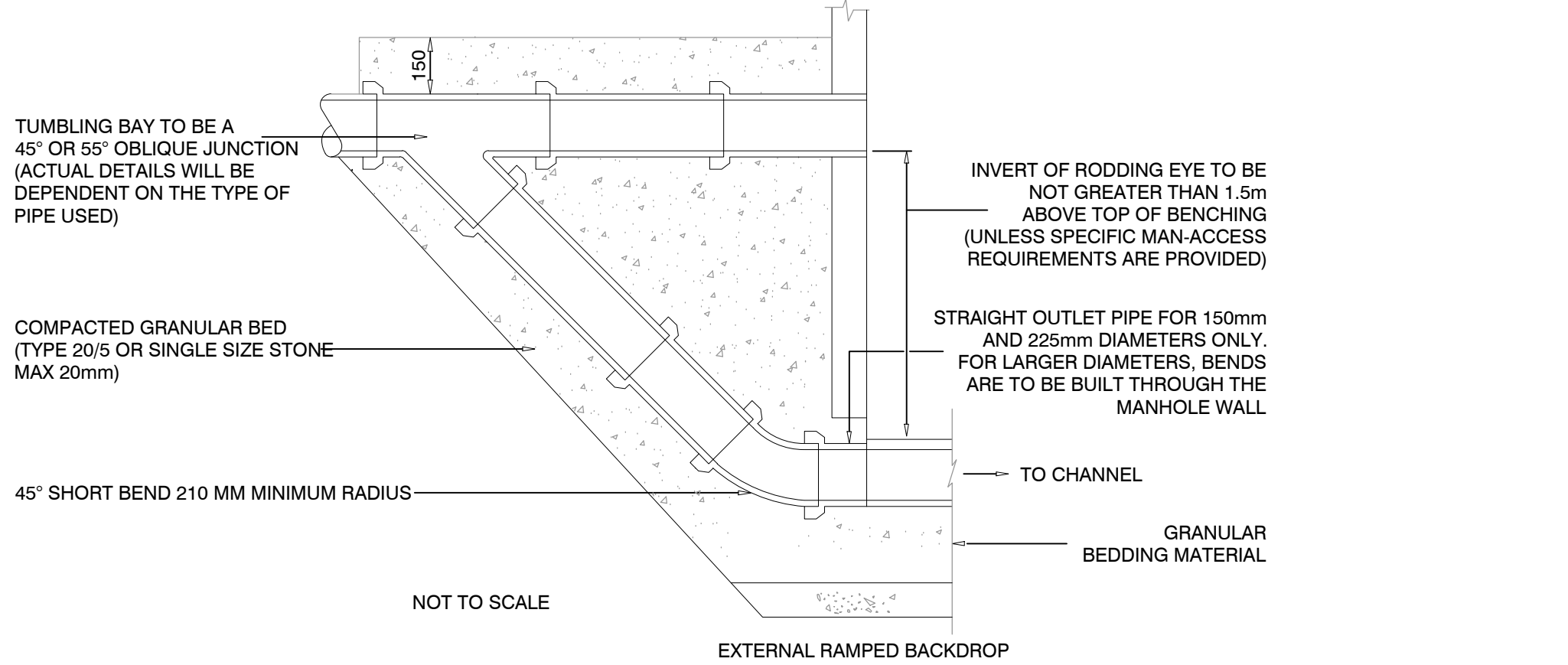


### TYPICAL PERMEABLE PAVED DETAIL (PATIO) (SCALE 1:20)



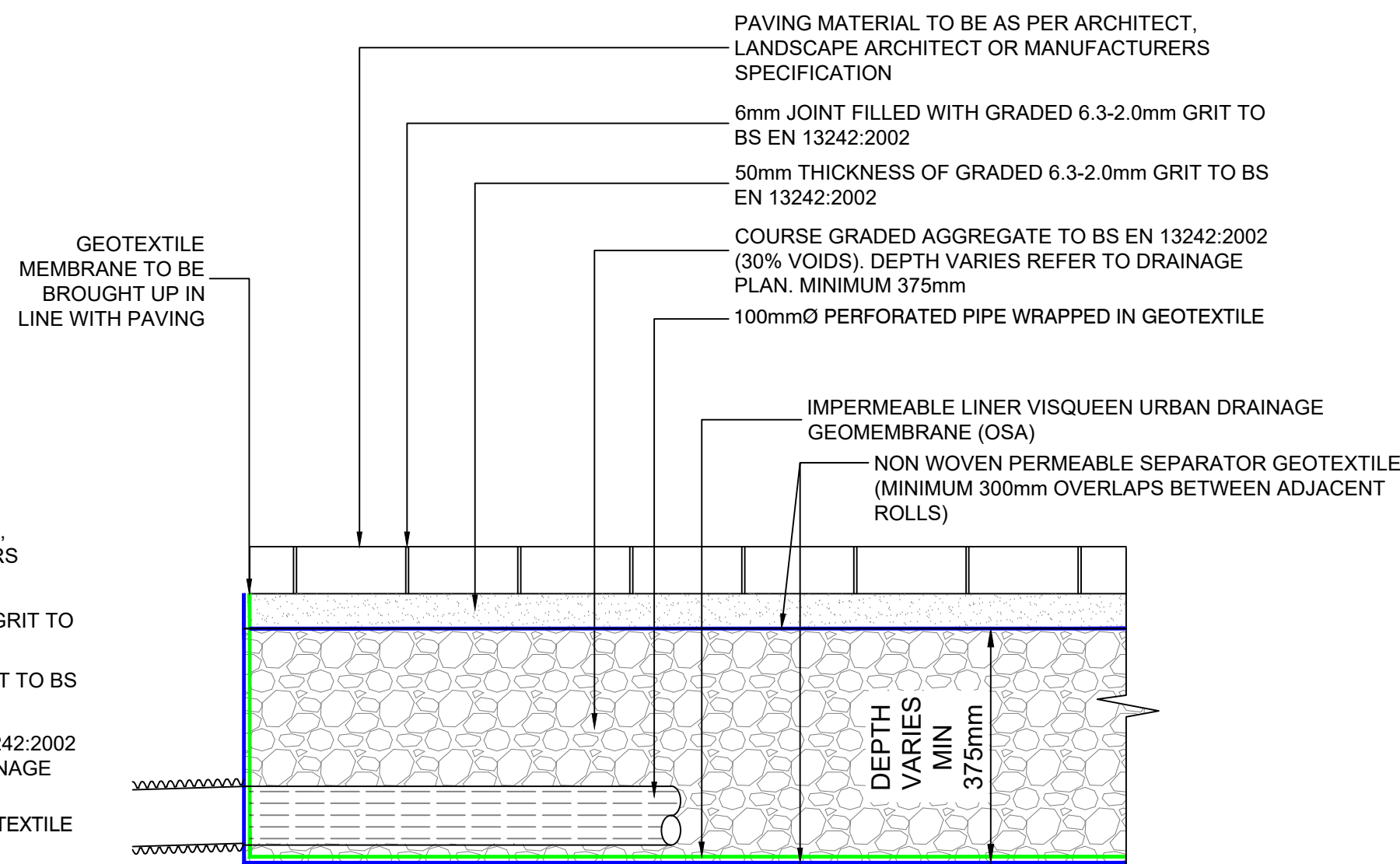
DETAIL TO BE CONFIRMED WITH MANUFACTURER FOR SITE SPECIFIC REQUIREMENTS

### FLOW CONTROL AND NON RETURN VALVE MANHOLE DETAIL (SCALE 1:20)

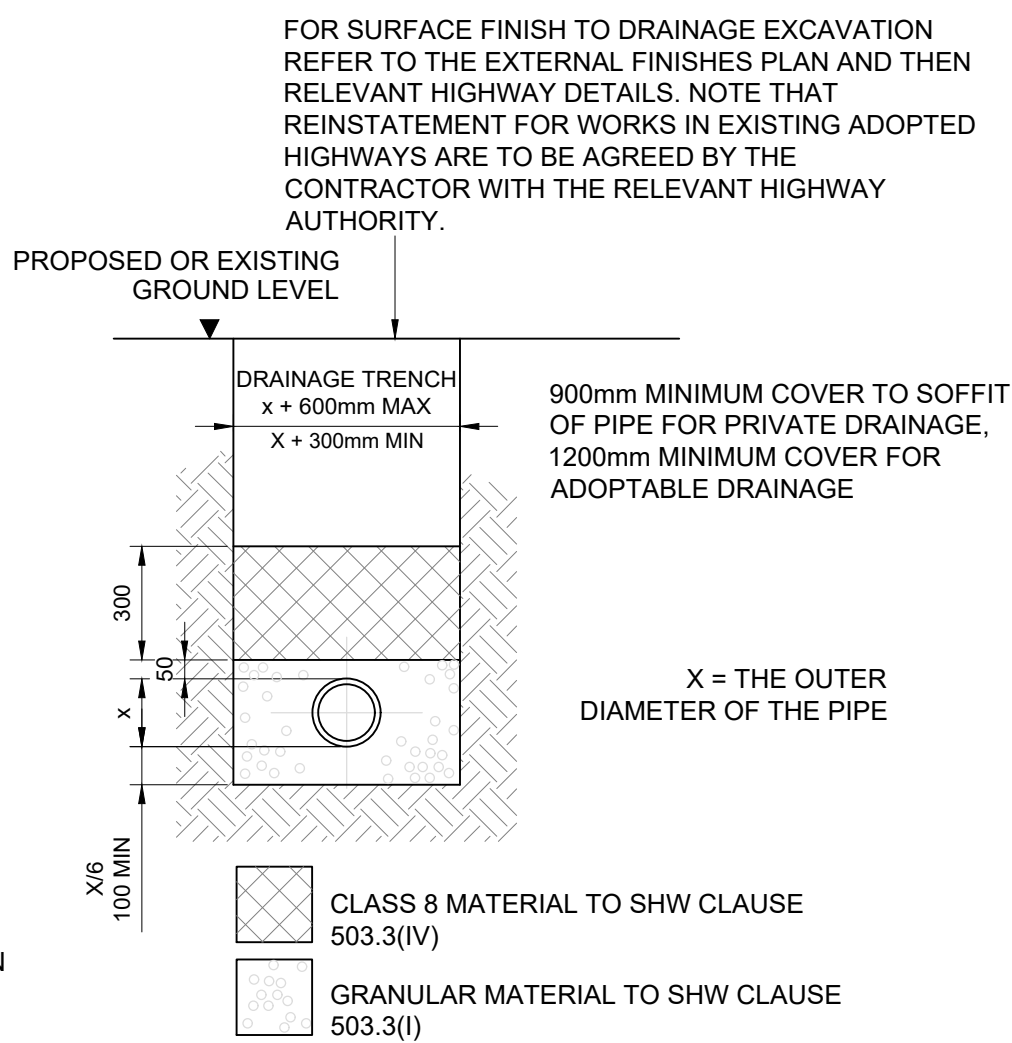


### TYPICAL VERTICAL AND RAMPED BACKDROP DETAIL (FLEXIBLE MATERIALS) - FOR USE IN MANHOLE TYPES A TO D

NOTE: STEEPER GRADIENTS ARE PREFERRED TO THE USE OF BACKDROPS.  
TYPE OF BACKDROP TO BE USED TO BE AGREED WITH THE SEWERAGE COMPANY.

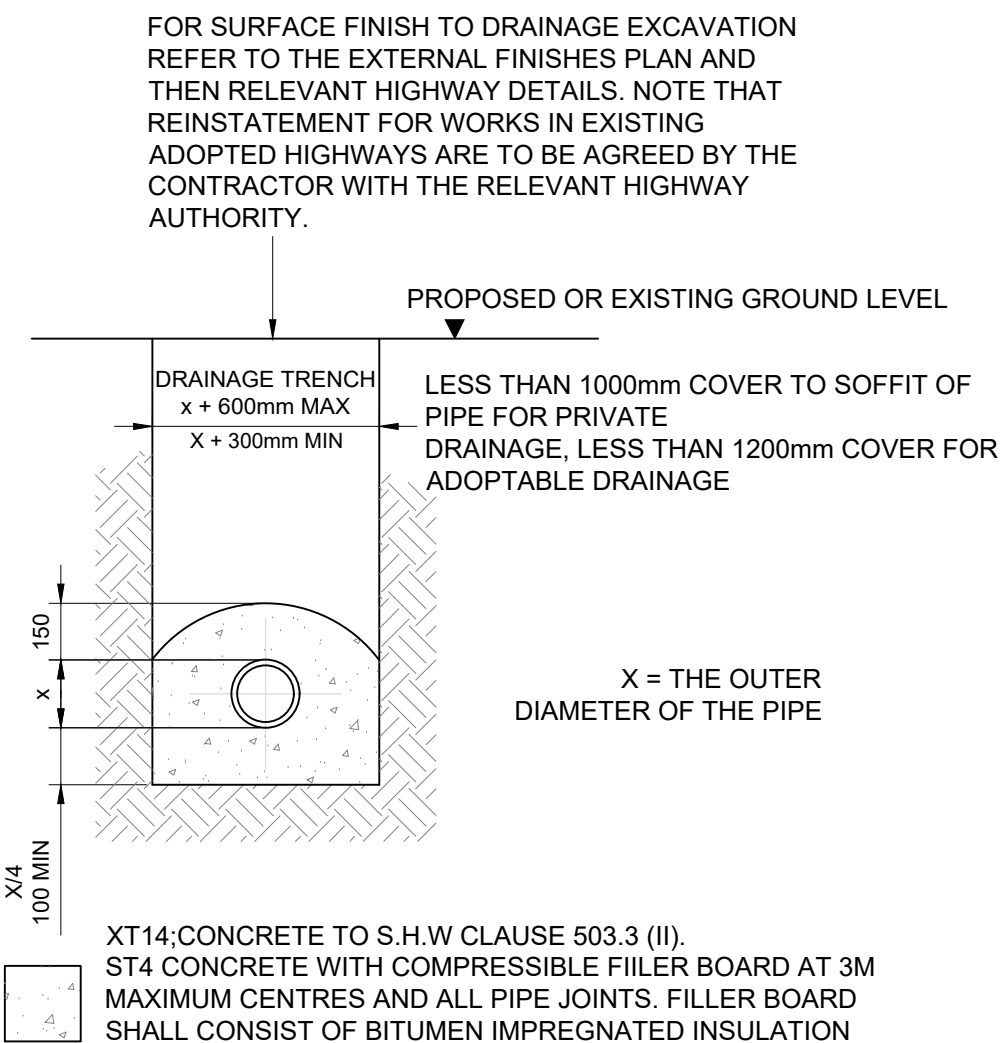


### TYPICAL PERMEABLE PAVED DETAIL (DRIVEWAY) (SCALE 1:20)



NOTE: CLASS 'S' BEDDING FOR USE WITH ALL ADAPTABLE DRAINAGE WITH COVER TO SOFFIT OF PIPE GREATER THAN 1200mm. PRIVATE DRAINAGE WITHIN LANDSCAPED AND OTHER NON-TRAFFICKED AREAS WITH COVER GREATER THAN 1000mm TO THE PIPE SOFFIT MAY USE PIPE BEDDING CLASS 'T' REFER TO DRAWING F1 (SHW) HIGHWAY CONSTRUCTION DETAILS.

### CLASS 'S' PIPE BEDDING



NOTE: CLASS 'Z' BEDDING FOR USE WITH ALL ADAPTABLE DRAINAGE WITH COVER TO SOFFIT OF PIPE LESS THAN 1200mm.

### CLASS 'Z' PIPE BEDDING

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY.  
THE CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON SITE.  
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IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE TO AN APPROVED METHOD STATEMENT.

THIS DRAWING IS FOR DISCHARGE OF CONDITION ONLY AND NOT FOR CONSTRUCTION SUBJECT TO WATER AUTHORITY TECHNICAL APPROVAL

A01 13.10.25 FIRST ISSUE AC

Rev Date Description By

Client

YS BUILDING SERVICES LTD

Project

131 RADCLIFFE NEW ROAD, WHITEFIELD

Title  
PROPOSED DRAINAGE CONSTRUCTION DETAILS

Project No. Drawing No. Revision  
AEG8058 CIV-050 A01

Drawn Checked Approved Date Scale @ A1  
AC DB JM OCT 2025 AS SHOWN

Drawing Status  
DISCHARGE OF CONDITION

aegaea  
water, civils and environment

# Appendix E - Proposed Surface Water Drainage Calculations

### Design Settings

|                       |                   |                                      |               |
|-----------------------|-------------------|--------------------------------------|---------------|
| Rainfall Methodology  | FSR               | Maximum Time of Concentration (mins) | 30.00         |
| Return Period (years) | 2                 | Maximum Rainfall (mm/hr)             | 50.0          |
| Additional Flow (%)   | 0                 | Minimum Velocity (m/s)               | 1.00          |
| FSR Region            | England and Wales | Connection Type                      | Level Soffits |
| M5-60 (mm)            | 20.000            | Minimum Backdrop Height (m)          | 0.200         |
| Ratio-R               | 0.400             | Preferred Cover Depth (m)            | 1.200         |
| CV                    | 1.000             | Include Intermediate Ground          | ✓             |
| Time of Entry (mins)  | 5.00              | Enforce best practice design rules   | x             |

### Nodes

| Name          | Area<br>(ha) | T of E<br>(mins) | Cover<br>Level<br>(m) | Diameter<br>(mm) | Easting<br>(m) | Northing<br>(m) | Depth<br>(m) |
|---------------|--------------|------------------|-----------------------|------------------|----------------|-----------------|--------------|
| S1            | 0.006        | 5.00             | 104.600               | 450              | 379800.058     | 406568.276      | 0.625        |
| S2            | 0.004        | 5.00             | 104.600               | 450              | 379796.204     | 406552.804      | 1.140        |
| S3            | 0.012        | 5.00             | 104.300               | 600              | 379787.813     | 406552.519      | 0.900        |
| S4            | 0.008        | 5.00             | 104.400               | 450              | 379785.624     | 406559.306      | 0.950        |
| EXISTING MH01 |              |                  | 103.820               | 1200             | 379784.135     | 406551.333      | 0.580        |

### Links

| Name  | US<br>Node | DS<br>Node    | Length<br>(m) | ks (mm) /<br>n | US IL<br>(m) | DS IL<br>(m) | Fall<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | T of C<br>(mins) | Rain<br>(mm/hr) |
|-------|------------|---------------|---------------|----------------|--------------|--------------|-------------|----------------|-------------|------------------|-----------------|
| 1.000 | S1         | S2            | 15.945        | 0.600          | 103.975      | 103.460      | 0.515       | 31.0           | 150         | 5.15             | 50.0            |
| 1.001 | S2         | S3            | 8.396         | 0.600          | 103.460      | 103.400      | 0.060       | 139.9          | 150         | 5.31             | 50.0            |
| 1.002 | S3         | EXISTING MH01 | 3.864         | 0.600          | 103.400      | 103.240      | 0.160       | 24.2           | 100         | 5.35             | 50.0            |
| 2.000 | S4         | S3            | 7.131         | 0.600          | 103.450      | 103.400      | 0.050       | 142.6          | 150         | 5.14             | 50.0            |

| Name  | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s) | US<br>Depth<br>(m) | DS<br>Depth<br>(m) | Σ Area<br>(ha) | Σ Add<br>Inflow<br>(l/s) | Pro<br>Depth<br>(mm) | Pro<br>Velocity<br>(m/s) |
|-------|--------------|--------------|---------------|--------------------|--------------------|----------------|--------------------------|----------------------|--------------------------|
| 1.000 | 1.816        | 32.1         | 1.1           | 0.475              | 0.990              | 0.006          | 0.0                      | 19                   | 0.846                    |
| 1.001 | 0.847        | 15.0         | 1.8           | 0.990              | 0.750              | 0.010          | 0.0                      | 35                   | 0.576                    |
| 1.002 | 1.577        | 12.4         | 5.4           | 0.800              | 0.480              | 0.030          | 0.0                      | 46                   | 1.528                    |
| 2.000 | 0.839        | 14.8         | 1.4           | 0.800              | 0.750              | 0.008          | 0.0                      | 31                   | 0.530                    |

### Pipeline Schedule

| Link  | Length<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | Link<br>Type | US CL<br>(m) | US IL<br>(m) | US Depth<br>(m) | DS CL<br>(m) | DS IL<br>(m) | DS Depth<br>(m) |
|-------|---------------|----------------|-------------|--------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
| 1.000 | 15.945        | 31.0           | 150         | Circular     | 104.600      | 103.975      | 0.475           | 104.600      | 103.460      | 0.990           |
| 1.001 | 8.396         | 139.9          | 150         | Circular     | 104.600      | 103.460      | 0.990           | 104.300      | 103.400      | 0.750           |
| 1.002 | 3.864         | 24.2           | 100         | Circular     | 104.300      | 103.400      | 0.800           | 103.820      | 103.240      | 0.480           |
| 2.000 | 7.131         | 142.6          | 150         | Circular     | 104.400      | 103.450      | 0.800           | 104.300      | 103.400      | 0.750           |

| Link  | US<br>Node | Dia<br>(mm) | Node<br>Type | MH<br>Type | DS<br>Node    | Dia<br>(mm) | Node<br>Type | MH<br>Type |
|-------|------------|-------------|--------------|------------|---------------|-------------|--------------|------------|
| 1.000 | S1         | 450         | Manhole      | Adoptable  | S2            | 450         | Manhole      | Adoptable  |
| 1.001 | S2         | 450         | Manhole      | Adoptable  | S3            | 600         | Manhole      | Adoptable  |
| 1.002 | S3         | 600         | Manhole      | Adoptable  | EXISTING MH01 | 1200        | Manhole      | Adoptable  |
| 2.000 | S4         | 450         | Manhole      | Adoptable  | S3            | 600         | Manhole      | Adoptable  |

### Simulation Settings

|                      |                   |                                         |        |
|----------------------|-------------------|-----------------------------------------|--------|
| Rainfall Methodology | FSR               | Analysis Speed                          | Normal |
| Rainfall Events      | Singular          | Skip Steady State                       | x      |
| FSR Region           | England and Wales | Drain Down Time (mins)                  | 240    |
| M5-60 (mm)           | 20.000            | Additional Storage (m <sup>3</sup> /ha) | 0.0    |
| Ratio-R              | 0.400             | Starting Level (m)                      |        |
| Summer CV            | 1.000             | Check Discharge Rate(s)                 | x      |
| Winter CV            | 1.000             | Check Discharge Volume                  | x      |

### Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

| Return Period<br>(years) | Climate Change<br>(CC %) | Additional Area<br>(A %) | Additional Flow<br>(Q %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 2                        | 0                        | 0                        | 0                        |
| 30                       | 0                        | 0                        | 0                        |
| 100                      | 45                       | 10                       | 0                        |

### Node S3 Online Orifice Control

|                          |         |                   |       |                       |       |
|--------------------------|---------|-------------------|-------|-----------------------|-------|
| Flap Valve               | x       | Design Depth (m)  | 0.900 | Discharge Coefficient | 0.600 |
| Replaces Downstream Link | x       | Design Flow (l/s) | 1.0   |                       |       |
| Invert Level (m)         | 103.400 | Diameter (m)      | 0.023 |                       |       |

### Node S1 Carpark Storage Structure

|                             |         |                           |         |               |       |
|-----------------------------|---------|---------------------------|---------|---------------|-------|
| Base Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 104.150 | Slope (1:X)   | 500.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) | 20      | Depth (m)     | 0.150 |
| Safety Factor               | 2.0     | Width (m)                 | 1.900   | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 11.900  |               |       |

### Node S4 Carpark Storage Structure

|                             |         |                           |         |               |       |
|-----------------------------|---------|---------------------------|---------|---------------|-------|
| Base Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 103.950 | Slope (1:X)   | 500.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) | 56      | Depth (m)     | 0.150 |
| Safety Factor               | 2.0     | Width (m)                 | 9.000   | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 3.000   |               |       |

### Node S3 Carpark Storage Structure

|                             |         |                           |         |               |       |
|-----------------------------|---------|---------------------------|---------|---------------|-------|
| Base Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 103.575 | Slope (1:X)   | 25.0  |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |         | Depth (m)     | 0.350 |
| Safety Factor               | 2.0     | Width (m)                 | 11.000  | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 10.000  |               |       |

**Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%**

| Node Event       | US Node       | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute summer | S1            | 10          | 103.996   | 0.021     | 1.4          | 0.0034        | 0.0000     | OK         |
| 60 minute winter | S2            | 50          | 103.810   | 0.350     | 1.1          | 0.0557        | 0.0000     | SURCHARGED |
| 60 minute winter | S3            | 51          | 103.810   | 0.410     | 2.9          | 2.1326        | 0.0000     | SURCHARGED |
| 60 minute winter | S4            | 50          | 103.810   | 0.360     | 0.9          | 0.0573        | 0.0000     | SURCHARGED |
| 60 minute winter | EXISTING MH01 | 51          | 103.256   | 0.016     | 0.7          | 0.0000        | 0.0000     | OK         |

| Link Event (Upstream Depth) | US Node | Link  | DS Node       | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|---------|-------|---------------|---------------|----------------|----------|---------------|--------------------|
| 15 minute summer            | S1      | 1.000 | S2            | 1.4           | 0.348          | 0.043    | 0.1525        |                    |
| 60 minute winter            | S2      | 1.001 | S3            | 0.9           | 0.094          | 0.061    | 0.1478        |                    |
| 60 minute winter            | S3      | 1.002 | EXISTING MH01 | 0.7           | 0.830          | 0.056    | 0.0032        | 4.8                |
| 60 minute winter            | S4      | 2.000 | S3            | 0.7           | 0.108          | 0.048    | 0.1255        |                    |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%**

| Node Event       | US Node       | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute summer | S1            | 10          | 104.004   | 0.029     | 2.6          | 0.0046        | 0.0000     | OK         |
| 60 minute winter | S2            | 60          | 103.965   | 0.505     | 2.1          | 0.0803        | 0.0000     | SURCHARGED |
| 60 minute winter | S3            | 60          | 103.965   | 0.565     | 5.8          | 5.6669        | 0.0000     | SURCHARGED |
| 60 minute winter | S4            | 60          | 103.965   | 0.515     | 1.7          | 0.1791        | 0.0000     | SURCHARGED |
| 60 minute winter | EXISTING MH01 | 60          | 103.258   | 0.017     | 0.8          | 0.0000        | 0.0000     | OK         |

| Link Event (Upstream Depth) | US Node | Link  | DS Node       | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|---------|-------|---------------|---------------|----------------|----------|---------------|--------------------|
| 15 minute summer            | S1      | 1.000 | S2            | 2.6           | 0.382          | 0.081    | 0.1592        |                    |
| 60 minute winter            | S2      | 1.001 | S3            | 1.8           | 0.105          | 0.123    | 0.1478        |                    |
| 60 minute winter            | S3      | 1.002 | EXISTING MH01 | 0.8           | 0.869          | 0.066    | 0.0036        | 9.2                |
| 60 minute winter            | S4      | 2.000 | S3            | 1.5           | 0.090          | 0.098    | 0.1255        |                    |

**Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 97.20%**

| Node Event        | US Node       | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 120 minute winter | S1            | 118         | 104.258   | 0.283     | 1.6          | 0.6959        | 0.0000     | SURCHARGED |
| 120 minute winter | S2            | 118         | 104.258   | 0.798     | 2.5          | 0.1268        | 0.0000     | SURCHARGED |
| 120 minute winter | S3            | 118         | 104.258   | 0.858     | 7.4          | 14.2010       | 0.0000     | FLOOD RISK |
| 120 minute winter | S4            | 118         | 104.258   | 0.808     | 2.2          | 1.3235        | 0.0000     | FLOOD RISK |
| 120 minute winter | EXISTING MH01 | 118         | 103.259   | 0.019     | 1.0          | 0.0000        | 0.0000     | OK         |

| Link Event (Upstream Depth) | US Node | Link  | DS Node       | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|---------|-------|---------------|---------------|----------------|----------|---------------|--------------------|
| 120 minute winter           | S1      | 1.000 | S2            | 1.5           | 0.316          | 0.046    | 0.2807        |                    |
| 120 minute winter           | S2      | 1.001 | S3            | 2.3           | 0.133          | 0.156    | 0.1478        |                    |
| 120 minute winter           | S3      | 1.002 | EXISTING MH01 | 1.0           | 0.923          | 0.082    | 0.0042        | 18.3               |
| 120 minute winter           | S4      | 2.000 | S3            | 2.5           | 0.139          | 0.165    | 0.1255        |                    |