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Date: 17<sup>th</sup> April 2024

Rev: P01

Client

Built Developments

71 – 73 Hyde Road

Manchester

M12 6BH

Site Address

Haven Lane

Moorside

Oldham

Greater Manchester

OL4 2QQ

Document Title

SuDS Management &  
Maintenance Plan



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## Revision History

| Issue | Date     | Status      | Prepared By                       | Signature   |
|-------|----------|-------------|-----------------------------------|---|
| P01   | 17.04.24 | First Issue | Will Sparrow-Saunt<br>BEng (Hons) |  |

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## 1.0 Introduction

### 1.1 Overview

1.1.1 This plan has been prepared to set out the Maintenance and Management for the Sustainable Drainage Systems (SuDS) that form part of the drainage to the proposed residential development at Haven Lane, Oldham.

### 1.2 Purpose

1.2.1 The purpose of this plan is to set out the requirements of maintenance to the drainage in order to ensure the body responsible for maintenance is entrusted with a robust inspection and maintenance programme, ensuring the optimum operation of the surface water drainage network is continually maintained for the lifetime of the assets.

1.2.2 The activities listed in this plan are specific to this site and represent minimum maintenance and inspection requirements. However, additional tasks or varied maintenance frequency may be required. Specific maintenance needs of the drainage should be monitored, and maintenance schedules should be adjusted to suit requirements.

1.2.3 All those responsible for maintenance should follow relevant health and safety legislation for all activities and risk assessments and method statements should always be provided.

### 1.3 SuDS and Drainage at Haven Lane, Oldham

1.3.1 The surface water drainage utilises SuDS to manage rainfall and deal with surface water runoff.

1.3.2 The scheme comprises SuDS components including:

- Connecting pipe network, manholes & inspection chambers
- Geocellular Attenuation Tank
- Pumping Station

1.3.3 Refer to drawing 2893-BCL-00-XX-DR-D-0100 for the Proposed Drainage Layout.

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## 2.0 Management

### 2.1 Overview

2.1.1 There are two levels of inspection proposed in this plan:

- Yearly inspection. Consists of a site walkover and visual inspection of the drainage.
- 5 yearly inspection. Consists of a site walkover and visual inspection, and review of a CCTV drainage survey.

2.1.2 There are three categories of maintenance activities referred to in this plan.

- Regular maintenance (including inspections and monitoring). Consists of basic tasks done on a frequent and predictable schedule.
- Occasional maintenance. Comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than routine tasks.
- Remedial maintenance. Comprises intermittent tasks that may be required to rectify faults associated with the system, although the likelihood of faults can be minimised by good design. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events.

### 2.2 Responsibilities

2.2.1 As all the drainage within the development will remain private, an appointed management and maintenance company will take on the responsibility for inspection and maintenance of all the proposed drainage and SuDS elements.

2.2.2 Any man-entry into the system and silt removal should be carried out by trained personnel with adequate personal protective equipment. Approved safety procedures must be followed in accordance with the Health and Safety Act.

### 2.3 Funding

2.3.1 A new Management and Maintenance Company will be set up by the developer with the occupier of each dwelling contributing to the ongoing funding of it.

2.3.2 Full details of the Management and Maintenance company will be provided once set up.

---

### 3.0 Inspection

#### 3.1 Yearly

3.1.1 The below table provides recommendations to be included within the management and maintenance companies regular inspection regime for the structure.

|    | Yearly inspection  |
|----|--|
| Y1 | Manholes and inspection chambers.<br>Annual visual inspection of chambers to check free flowing from ground level. |
| Y2 | Pumping Station<br>Annual visual inspection by specialist company.   |
| Y3 | Geocellular attenuation tank<br>Annual visual inspection of all incoming pipes, outlets and vents.                 |

#### 3.2 5 yearly

3.2.1 In addition to the yearly inspection, all drainage should be surveyed by a specialist drainage CCTV company and a report should be provided to document the condition of the drainage and make any recommendations for remedial repair works.

## 4.0 Maintenance Strategy

### 4.1 Inspection, Manhole and Catchpit Chambers

4.1.1 Access points have been located at the head of each run, at a change in direction and at a change of pipe size in accordance with Building Regulations Part H.

4.1.2 The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole and the appropriate permits should be obtained from the Maintenance Manager prior to any access.

### 4.2 Pipes

4.2.1 Pipes are proprietary products, and the materials can vary across the site and as such where used the manufacturer's recommendations should be followed. Regardless of the product used, the pipes will be fully compliant with the drainage specification.

4.2.2 Pipes are intended to be the main conveyance across the development and where oversized they form the attenuation volume required by the limitation of the discharge rate. They are intended to be dry except for during rainfall events. These have been designed to be self-cleaning where possible for smaller diameter pipes, and for larger diameters the risk is reduced due to the overall pipe size.

4.2.3 Access for maintenance is provided through access chambers and manholes.

4.2.4 Regular inspection and maintenance are important to identify areas which may have been obstructed / clogged and may not be draining correctly thus exposing the development to a greater level of flood risk.

### 4.3 Channels & Gullies

4.3.1 Channels and gullies should be inspected and cleaned in accordance with the manufacturer's details. Channel units can be cleaned through the use of a high-pressure hose; this can be fed into the channel system through access units strategically placed along the channel run. The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of surface water into the drainage channel and any debris within the throat should be removed.

4.3.2 Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If covers are allowed to move within their frame, this may cause damage to the frame or seating.

| Maintenance schedule   | Required action   | Typical frequency   |
|------------------------|---|---|
| Regular Maintenance    | Remove manhole and chamber covers to sewers and pumping station on network– inspect to ensure water is flowing freely and that the water flow route is unobstructed.<br><br>Remove debris and silt as required. | Half Yearly<br><br>Undertake one of these inspections after leaf fall in autumn |
| Occasional Maintenance | None required   |   |
| Remedial Actions       | Re-line or replace pipework if unable to clear blockages by jetting.  | As required   |
| Monitoring             | Inspect chambers for build-up of silt and debris  | Half yearly   |

*Table 1 – Operation & maintenance requirements for pipe network, manholes & inspection chambers, drainage channels & gullies.*

#### 4.4 Geocellular Attenuation Tank

- 4.4.1 Geocellular tanks are modular storage systems made with plastic units. These units can be assembled to achieve the required volume and usually on multiple layers. Generally, the units have 95% of voids content and are used to create an efficient below ground structure to store surface water.
- 4.4.2 The geocellular units and geotextile are proprietary products and therefore manufacturer’s recommendations should also be taken into consideration.
- 4.4.3 Access for maintenance should be provided by an access shaft located on the tank and from the manhole chambers downstream of the tank.
- 4.4.4 Regular inspection and maintenance are important for the effective operation of attenuation tanks as designed. As the feature is buried, a regular inspection regime is very important to ensure the correction functionality of the surface water drainage network.



| Maintenance schedule | Required action  | Typical frequency                    |
|----------------------|--|--------------------------------------|
| Regular Maintenance  | Inspect and identify any areas that are not operating correctly. If required, take remedial action.  | Monthly for 3 months, then annually. |
|                      | Remove debris from the catchment surface (where it may cause risks to performance).  | Monthly.                             |
|                      | For systems where rainfall infiltrates into the tank from above, check surface of filter for blockages by sediment, algae or other matter; remove and replace surface infiltration medium as required. | Annually.                            |
|                      | Remove sediments from pre-treatment structures and/or internal forebays.   | Annually, or as required.            |
| Remedial Actions     | Repair/rehabilitate inlets, outlets, overflows and vents.  | As required.                         |
| Monitoring           | Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed.  | Annually                             |
|                      | Survey inside of tank for sediment build-up and remove if necessary.   | Every 5 years or as required.        |

Table 2 – Operation & maintenance requirements for attenuation storage tanks - Based on CIRIA SuDS Manual 2015

#### 4.5 Pumping Station

4.6.1 The pumping station pumps the surface water to the new culvert to the east of the site, and acts as the means of controlling the flow rate of the surface water being discharged. The pump designer has designed the pump to suit the required flow rate and design head.

4.4.5 The pumping station is a proprietary product and therefore manufacturer’s recommendations should also be taken into consideration.

| Maintenance Schedule  | Required Action   | Typical Frequency                                     |
|---|---|---|
| Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required). | Inspect inlets for blockages, and clear if required. If faults persist jetting and CCTV survey may be required. | Monthly and after large storms.                       |
| Regular maintenance\ inspection   | Inspect and identify any areas that are not operating correctly. If required, take remedial action.             | Monthly for 3 months, then six monthly.               |
|   | Debris removal from catchment surface (where may cause risks to performance).                                   | Monthly   |
|   | Remove sediment from pre-treatment structures and flow control chambers.  | Annually (or as required after heavy rainfall events) |
| Remedial Actions  | Repair/rehabilitation of inlets.  | As required.  |

Table 4 – Operation & maintenance requirements for Flow Controls - Based on CIRIA SuDS Manual 2015

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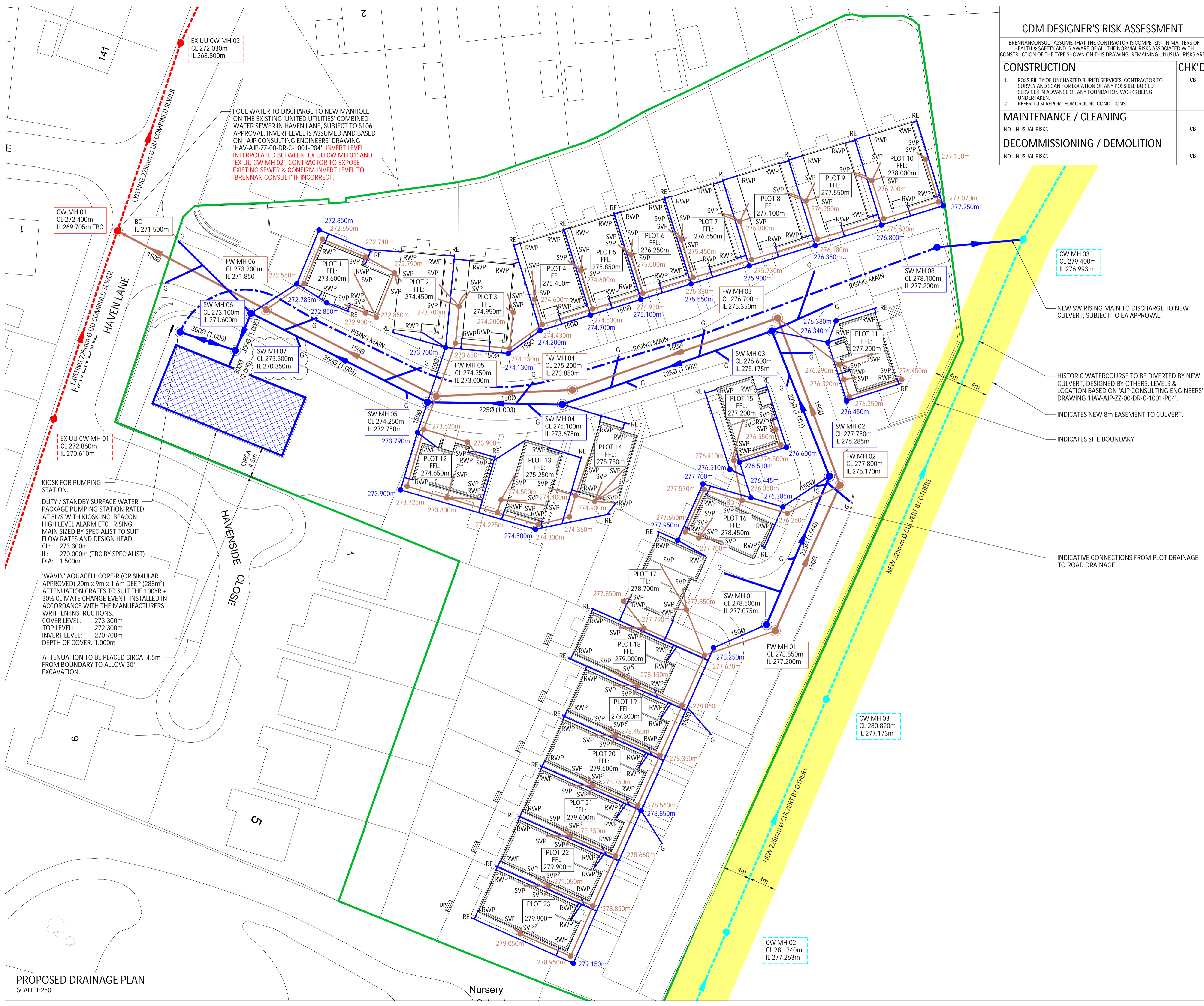


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## Appendix A – Brennan Consult Drawings

- 2893-BCL-00-XX-DR-D-0100 – Drainage GA





**PROPOSED DRAINAGE PLAN**  
SCALE 1:250

| CDM DESIGNER'S RISK ASSESSMENT  |       |
|---|-------|
| BRENNANCONSULT ASSUME THAT THE CONTRACTOR IS COMPETENT IN MATTERS OF HEALTH & SAFETY AND IS AWARE OF ALL THE NORMAL RISKS ASSOCIATED WITH CONSTRUCTION OF THE TYPE SHOWN ON THIS DRAWING. REMAINING UNUSUAL RISKS ARE:      |       |
| CONSTRUCTION  | CHK'D |
| 1. POSSIBILITY OF UNCHARTERED BURIED SERVICES. CONTRACTOR TO SURVEY AND SCAN FOR LOCATION OF ANY POSSIBLE BURIED SERVICES IN ADVANCE OF ANY FOUNDATION WORKS BEING UNDERTAKEN.<br>REFER TO SI REPORT FOR GROUND CONDITIONS. | CB    |
| MAINTENANCE / CLEANING  | CB    |
| NO UNUSUAL RISKS  |       |
| DECOMMISSIONING / DEMOLITION  | CB    |
| NO UNUSUAL RISKS  |       |

| GENERAL NOTES   |  |
|---|--|
| 1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ASSOCIATED DRAWINGS. ANY DISCREPANCY TO BE RAISED PRIOR TO CONSTRUCTION. ANY CONSTRUCTION WORKS WHICH COMMENCE BEFORE THESE DRAWINGS ARE APPROVED ARE AT THE RISK OF THE BUILDING CONTRACTOR. |  |
| 2. ALL DIMENSIONS ARE IN MILLIMETERS (mm). DO NOT SCALE FROM THIS DRAWING. WORK TO STATED DIMENSIONS ONLY.  |  |
| 3. BUILDING CONTRACTOR TO ENSURE ALL WORKS COMPLY WITH THE CURRENT EDITION OF THE BUILDING REGULATIONS. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPROVED DOCUMENT REGULATION 7.   |  |
| 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND SHALL PROVIDE ALL TEMPORARY BRACING AS NECESSARY TO MAINTAIN STRUCTURAL STABILITY DURING CONSTRUCTION.                                |  |
| 5. IF THE CONTRACTOR CONSIDERS THAT HE DOES NOT HAVE SUFFICIENT INFORMATION TO SAFELY COMPLETE THE WORKS DETAILED ON THIS DRAWING, HE SHOULD CONTACT THE ENGINEER.  |  |

| DRAINAGE NOTES   |  |
|--|--|
| 1. ALL PRIVATE DRAINAGE WITHIN THE SITE IS TO COMPLY WITH THE REQUIREMENTS OF BS EN 752 AND BUILDING REGULATIONS PART H.   |  |
| 2. DETAILS OF EXISTING SEWERS SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE PRIOR TO THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHOULD CHECK THE LEVELS OF ALL NEW OUT FALLS IN RELATION TO EXISTING SEWERS PRIOR TO ANY CONSTRUCTION TO ENSURE THE PROPOSED DESIGN CAN BE ACHIEVED. |  |
| 3. THE CONTRACTOR SHALL ASCERTAIN THE DEPTHS, SIZES AND LOCATIONS OF ALL SERVICES TO BE CROSSED BEFORE EXCAVATION COMMENCES. ANY CONFLICT IN LEVELS BETWEEN NEW AND EXISTING SEWERS PRIOR TO ANY CONSTRUCTION TO ENSURE THE PROPOSED DESIGN CAN BE ACHIEVED.   |  |
| 4. ALL PIPES, CONNECTIONS, GULLIES, ACCESS FITTINGS, INSPECTION CHAMBERS, AND MANHOLES ARE TO COMPLY WITH THE BUILDING REGULATIONS.  |  |
| 5. PIPE BEDDING MATERIAL TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, TAKING ACCOUNT OF THE DEPTH & LOADING IN RELATION TO THE PIPE STRENGTH, AND MODIFIED IF NECESSARY WHERE BELOW WATER LEVEL BEDDING PROPOSALS ARE TO BE ISSUED FOR CONSIDERATION.   |  |
| 6. PIPES CONNECTED TO CHAMBERS ARE TO HAVE SOFFITS LEVEL U.N.O. PIPES 150mm IN DIAMETER OR SMALLER MAY BE LOWERED TO CENTRE LINES LEVEL.   |  |
| 7. ALL RWP CONNECTIONS TO BE 100mm DIAMETER U.N.O. LAID TO A FALL NO FLATTER THAN 1:40 AND WITH ROD ACCESS AT THE BASE.  |  |
| 8. ALL BRICKWORK IN CONNECTION WITH DRAINAGE IS TO BE SOLID CLASS B ENGINEERING BRICK TO BS9221.   |  |
| 9. ALL PRECAST CONCRETE PIPES, CHAMBER PRODUCTS AND ROAD GULLIES SHALL BE TO BS5911 AND BE KITE MARKED.  |  |
| 10. ALL INSITU AND CONCRETE PRODUCTS SHALL COMPLY WITH CLASS DS1 REQUIREMENTS FOR SULPHATE EXPOSURE IN ACCORDANCE WITH BRE SPECIAL DIGEST 1, CONCRETE IN AGGRESSIVE GROUND (2001) PART 1: TABLE 2.   |  |
| 11. UPON COMPLETION OF THE WORKS THE CONTRACTOR SHALL CLEAN ALL DRAINAGE BY JETTING, REMOVING ALL DEBRIS FROM SITE. NO DEBRIS SHALL BE PERMITTED TO ENTER THE EXISTING DRAINAGE SYSTEM.  |  |
| 12. ALL PROPRIETARY PRODUCTS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.  |  |
| 13. ALL RWPs TO DISCHARGE BY DIRECT CONNECTION INTO ROADABLE ACCESS GULLY, WITH INTEGRAL TRAP.   |  |
| 14. ALL SVP'S & WWP'S POP UPS TO CONSIST OF SLOW BENDS.  |  |

| DRAINAGE LEGEND           |                                |
|---------------------------|--------------------------------|
| INDICATES NEW FW DRAINAGE | INDICATES EXISTING FW DRAINAGE |
| INDICATES NEW SW DRAINAGE | INDICATES EXISTING SW DRAINAGE |
| INDICATES NEW CW DRAINAGE | INDICATES EXISTING CW DRAINAGE |

- ALL HIGHWAY MANHOLES TO BE 1200mmØ (UNO) PRECAST CONCRETE, D400 LOAD RATING, REFER TO DETAIL ON DRAWING 2893 - 0101.
- ALL MANHOLES IN FOOTPATHS & GARDENS TO BE 450mmØ (UNO) CONCRETE ENCASED PPIC'S, B125 LOAD RATING, REFER TO DETAIL ON DRAWING 2893 - 0101.

| REV | REVISION DESCRIPTION                                | BY | DATE         | CHECKED |
|-----|---|----|--------------|---------|
| P08 | SW MH 07 INVERT LEVEL AMENDED                       |    | WSS 10.04.24 | CB      |
| P07 | BACKDROP ADDED TO NEW MANHOLE IN HAVEN LANE         |    | WSS 20.03.24 | CB      |
| P06 | RISING MAIN BREAK CHAMBER MOVED IN FRONT OF PLOT 10 |    | WSS 14.09.23 | CB      |
| P05 | GULLIES IN SHARED DRIVEWAYS AMENDED                 |    | WSS 26.07.23 | CB      |

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**HAVEN LANE, MOORSIDE,  
OLDHAM, MANCHESTER, OL4 2QQ**

**RESIDENTIAL DEVELOPMENT  
DRAINAGE PLAN**

| Status: PRELIMINARY |            |       |        |         |        |          |
|---------------------|------------|-------|--------|---------|--------|----------|
| Project No.         | Originator | Zone  | Level  | Type    | Role   | Revision |
| 2893                | BCL        | 00    | XX     | DR      | D      | 0100     |
|                     |            |       |        |         |        | P08      |
| Scale               | Size       | Drawn | Date   | Checked | Passed |          |
| 1:250               | A1         | WSS   | MAY 23 | CB      | CB     |          |