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REPORT FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:

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Revision	Date	Description	Prepared by	Checked by	Approved by
P01	29.01.24	First issue	RA		RA
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1 EXECUTIVE SUMMARY

This maintenance plan has been produced in support of the developments planning approval [Ref 23/01397/DOC] and application to discharge condition 21 in response to Rochdale Borough Council Drainage consultation, received on 23rd January 2024, concerning the Management and Maintenance of Sustainable Drainage Systems.

The maintenance plan is delivered alongside the sites proposed drainage strategy, shown in section 5 of this report. EDGE Drawing:

- 20066-EDGE-XX-XX-DR-C-2001_DRAINAGE LAYOUT[C08]

One of the reports aims is to confirm that the designer has taken maintenance into account and demonstrate the competence of the designer.

This document has been produced to ensure all parties involved in the ongoing operation and maintenance of the drainage infrastructure and SUDs systems understand their functionality as well as the maintenance requirements.

All required inspections and tasks listed in the Maintenance Specification section of this report should comply with all relevant health and safety legislation (Health and Safety at work regulations) including the development of risk assessments for working close to or in water.

The development proposals include construction of 102 residential dwellings together with associated highways infrastructure.

2 SITE DESCRIPTION

The site is located approximately 2.5km South West of Rochdale town centre and is located off the western end of Nixon Street. The former Carcraft car showroom, just outside the western extents of application boundary, was demolished in January 2017 after an arson attack in December 2016. The site has been cleared of buildings with only substations remaining. It is bounded to the North, East and South by existing residential properties where boundaries are marked by brick walls and palisade fencing. Directly to the West is the now demolished Carcraft showroom and further West is greenfield land.

The site area extends to 3.58 ha, is an irregular shape and currently comprises brownfield land made up of large areas of hardstanding, former access road to the car showroom and car display/ parking area.

There is a level difference from East to West of about 0.8m–1.2m and a small fall from South to North. Levels at the Northern boundary are shown around 128.20m AOD and the southern boundary at roughly 128.50m AOD. The Western extents of the site are shown at a level of around 128.30m AOD and the Eastern extents are up at 129.30m AOD

3 EXISTING AND PROPOSED DRAINAGE REGIME

Existing Foul Drainage

United Utilities asset maps indicate existing foul and combined sewers within the site. A 225mm diameter foul sewer bisects the site from South to North to UU manhole ref 7006 in the sites access Road. This sewer is the head of a 375mm combined sewer which runs East toward Nixon street.

Proposed Foul Drainage

It is proposed that the foul flows generated from the development will utilise a traditional gravity system and connect to the existing combined sewer in the access road via new manholes built on the line of the sewer.

The proposals include the relaying of the combined sewer, which heads East toward Nixon Street, at a lower level to accommodate the new infrastructure proposals. Proposals also include the diversion of the 150mm foul sewer entering the southern extents of the site through the proposed roads and connecting into the newly laid combined sewer. Any existing surface water connections to the combined sewer (from within the site) will be cut off/ abandoned so only foul flows will be conveyed to the newly laid combined sewer.

Diversion proposals are in accordance with approval from United Utilities under a S185 agreement.

The proposed foul water drainage network will be adopted by United Utilities.

Existing Storm Water Drainage

There are no watercourses within or near the site and United Utilities sewer maps indicate existing public surface water sewers in the site.

A 300mm surface water sewer enters the site at its South Western Boundary heading North it passes through UU manholes references 7006, 7005, 7004, 7003 all within the site, before leaving the North Western corner of the site heading North via manhole 7002.

It is understood that the large hardstanding area of the former car display/ parking areas making up the site drain to the existing public sewer via gullies and linear drains.

It is possible that some historic surface water connections to the combined sewer are within the site. As part of the proposed residential development any historic connections from any gullies or linear drains serving the existing hardstanding to the combined sewer will be removed.

Proposed Storm Water Drainage

Due to the lack of watercourses and unviability of infiltration, the primary means of surface water discharge will be to the existing surface water sewers in the site.

The construction of the proposed development will result in a reduction of impermeable areas and therefore a corresponding decrease in surface water run-off. To accord with Rochdale Borough Councils SuDs policy and drainage guidance, and to ensure that the site poses no flood risk to proposed or existing properties, a restriction of surface water run-off is proposed.

The minimum expectation for re-developed brownfield sites is a “50% reduction in the rate of discharge for the 1 in 30-year storm” as quoted by the lead local flood authority.

The restriction of surface water runoff will result in volumes of storage being required. Oversized pipes and chambers will be provided to take the 30-year storm volume. Oversized pipes chambers and a high-level pond overflow will be provided to take the 100-year + 40% climate change storm event.

Proposed sewers up to the outfall point will be adopted by United Utilities under a section 104 agreement.

A detailed drainage proposal for the site has been provided alongside this report and the drawing can be found within section 5.

4 MAINTENANCE PLAN OVERVIEW

This plan is provided to support the long-term performance of the infrastructure and SUDs system to meet the design criteria to which they have been designed. Furthermore, this plan will provide a basis for costing the long-term maintenance budget and provide a working document for use on site.

Section 2 provides a description of the site and Section 3 describes the existing and proposed drainage infrastructure. It shows how they work in practice and what they are trying to achieve. Section 3 also indicates any SUDs components and outfall details.

EDGE drawing 20066-EDGE-XX-XX-DR-C-2001_DRAINAGE LAYOUT[C08] shows the drainage proposals and this can be found in Section 5 of this maintenance plan.

The proposed pond and inlet headwall will be private and under a management companies' inspection and maintenance regime.

Section 6, Maintenance Specification, will provide a guide to the management company as to what the maintenance requirements for each drainage infrastructure component and SUDs system are and how to meet them efficiently. It will also detail the frequency of the required tasks whether that be planned maintenance or reactive repairs etc.

5 DRAINAGE PROPOSALS



- KEY:**
- PROPOSED SURFACE WATER SEWER
 - PROPOSED FOUL SEWER
 - PROPOSED SURFACE WATER DIVERSION
 - PROPOSED COMBINED/FOUL DIVERSION
 - GULLY
 - EXISTING COMBINED/FOUL SEWER
 - EXISTING SURFACE WATER SEWER
 - SEWER TO BE ABANDONED

- NOTES:**
- ALL SEWERS ARE DESIGNED IN ACCORDANCE WITH SEWERS FOR ADOPTION 6TH EDITION AND UNITED UTILITIES GUIDELINES AND STANDARD DETAILS.
 - ALL CO-ORDINATES AND LEVELS SHOWN ARE RELATIVE TO THE TOPOGRAPHIC SURVEY.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ANY EXISTING SEWERS ARE IN THE LOCATION INDICATED AND ANY EXISTING GROUND AND INVERT LEVELS SHOWN ON THE DRAWING ARE CORRECT PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY.
 - PRIOR TO THE COMMENCEMENT OF ANY ON SITE WORKS THE CONTRACTOR MUST CONTACT THE STATUTORY UNDERTAKER AND BE IN POSSESSION OF THE LATEST DRAWINGS SHOWING THEIR APPARATUS.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW FOR THE SUPERVISION OF THE CONSTRUCTION WORKS BY UNITED UTILITIES AND/OR ROCHDALE BOROUGH COUNCIL. THE CONTRACTOR WILL NOTIFY THE SUPERVISING OFFICER GIVING NOTICE WHICH WILL BE IN ACCORDANCE WITH THE AUTHORITIES REQUIREMENTS.
 - THE PROPOSED SEWERS WILL BE REINFORCED PVC-U PIPES COMPLYING WITH BS 4350-1 UP TO AND INCLUDING 300MM. PVC-U PIPES TO BE IN ACCORDANCE WITH BS 4660-200 & BS EN 1401-1.
 - ANY PCC PIPE WORK WILL BE IN ACCORDANCE WITH BS EN 1917:2002.
 - ALL MANHOLES AND CHAMBERS SHALL BE IN ACCORDANCE WITH BS EN 1917:2002.
 - SEWERS WITH COVER TO SOFFIT GREATER THAN 1.2m IN ROADS AND 0.9m IN FIELDS SHALL HAVE CLASS 5 BED AND SURROUND ALL IN ACCORDANCE WITH UNITED UTILITIES STANDARD DETAIL STND/05/001.
 - PRIVATE DRAINAGE CONNECTIONS TO THE SEWER WILL BE 150MM DIAMETER AND LAID TO THE SPECIFIED INVERT.
 - THE INVERT LEVELS SPECIFIED AT THE DRAUGHT CHAMBER ARE INCOMING LEVELS.
 - WHEREVER POSSIBLE PRIVATE DRAINAGE RUNS WILL REMAIN WITHIN THE CURTLAGGE OF THE DWELLING FOR WHICH THEY SERVE.
 - THE CONNECTION TO THE ADOPTABLE SEWER SHALL BE MANUFACTURED JUNCTION PIPES A SADDLE CONNECTION IS NOT PERMITTED UNLESS IT IS CLEARLY SPECIFIED.
 - ANY SEWER FOR ADOPTION WITH A COVER OF LESS THAN 1.2m TO PIPE SOFFIT IN ROADS OR 0.9m TO PIPE SOFFIT IN FIELDS WILL HAVE A MINIMUM 150mm GEN 3 CONCRETE BED AND SURROUND WITH FLEXIBILITY MAINTAINED WITH FLEXCELL EXPANSION JOINT FILLER OR SIMILAR APPROVED AT EACH PIPE JOINT.
 - CONCRETE MIX FOR MANHOLE SURROUNDS TO BE GEN3.
 - INSTALL GULLIES, MANHOLES, GRATES, COVERS AND ALL ANCILLARY ITEMS TO MANUFACTURERS SPECIFICATION.
 - ALL MANHOLES INCLUDING 150mm DIAMETER TO BE KITEMARKED AND COMPLY TO BS EN 1917:2002.
 - ALL MANHOLES TO BE INSTALLED IN ACCORDANCE WITH UNITED UTILITIES DETAILS AND HYDRO INTERNATIONAL SPECIFICATION.
 - CONNECTIONS TO THE EXISTING SEWER WILL BE IN ACCORDANCE WITH SECTION 104 APPROVAL GRANTED BY UNITED UTILITIES.
 - SEWERS/MANHOLES TO BE ABANDONED TO BE EITHER GROUTED UP OR GRUBBED OUT. UU INSPECTOR TO SIGN OFF WORKS ON COMPLETION.
 - TOTAL SURFACE WATER DISCHARGE RATE QUOTED IS 30 LITRES PER SECOND. UNITED UTILITIES PRE DEVELOPMENT ENQUIRY RESPONSE TO CONFIRM ALLOWABLE DISCHARGE RATE.

C08 19.06.23 Updated to revised channel levels M.A. R.A.
Rev Date Description By Chk

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DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!

Project Name
**NIXON STREET
ROCHDALE**

Client
HIVE HOMES

Designed
R.A.

Drawn
J.A.

Checked
R.A.

Scale @ A1
1:500

Drawing Title
DRAINAGE LAYOUT

Project No.
20066

Drawing No.
C2001

ISSUED FOR CONSTRUCTION

Revision
C08

6 MAINTENANCE SPECIFICATION

Maintenance requirements for drainage infrastructure and SUDs systems. Preventative maintenance protects the investment of the drainage infrastructure. Furthermore, frequent and thorough maintenance will prevent long term problems, costly repairs and ensure efficient and optimum working order of the drainage infrastructure and SUDs systems.

Each component of the storm water sewer network should be inspected and cleaned dependent upon its maintenance needs.

This maintenance program will help identify any required repairs and the assessments may help judge the future frequency of cleaning and inspections. Effective maintenance can have a significant impact on extending the effective life of the system.

The newly constructed drainage infrastructure will be fully inspected/ surveyed prior to hand over to Zenith, who are the management company for the development, to ensure there are no construction defects and they have been installed in accordance with the approved plans and specifications.

The inspections should ideally be carried out monthly (and no less than 3 monthly), at the same time as other routine maintenance activities.

Component	Maintenance Requirement	Frequency
Headwalls. Inlets and outlets.	• Routine inspection for removal of debris which may be blocking the inlet and outlet pipes. • Inspect inlet and outlet pipes and headwall for structural integrity.	• Monthly or after heavy rain events. • Yearly
Pond.	• Bank mowing. Grass to be cut 2 times annually. Arising's to be raked off and removed to wildlife features, compost facility or to tip. • Inspect sides of pond for evidence of any erosion, and action accordingly. • Pick up all litter and remove from site • Unwanted vegetation and debris removal. • Evaluate sediment level and remove as required.	• Twice a year. (July and September) • Yearly • Monthly • 6 monthly • Yearly