

SuDS Maintenance Strategy

Building Owner / End User

Rev P01

Rochdale Corner Plot

for



Job No. 14834

November 2023

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Rochdale Corner Plot

Introduction

Development at Rochdale Corner Plot consist of the demolition of an existing single storey commercial unit, renovation of existing 3-storey building at 29-31 Maclure Road and construction of new 6-storey mixed commercial / residential building. Refer to Figure 01 for architectural visuals.



Figure 01 – Proposed Architect 3D Visual

Proposed surface water drainage system to the development is described in BKPL document 'Rochdale Corner Plot – Drainage Strategy Report' (report reference 14834-BKP-V1-XX-RP-C-011, dated November 2023), summarised as follows;

- Building roof drainage system to collect surface water run off and transfer down through the existing / new building via new / existing rain water gutter / downpipes (refer to relevant M+E / Architectural information for details)
- External rear yard area to include gulleys to pick up surface water run off
- Below slab attenuation tank to be provided located below ground floor plant space / amenity space, with related access chambers for future maintenance
- Separate below ground surface water system to be installed to rear of existing 3-storey building
- Flow rates off site restricted to 5l/s at the site boundary via provision of flow-restricted manhole chamber (including hydrobrake designed to suit off site flow rates)
- Below ground surface water system to combine with new foul water drainage system to the north-east corner of the development site and outfall to existing Rochdale Council Highways owned combined system within Fire Station Yard (with eventual outfall to United Utilities combine sewer within Fire Station Yard car park area)

Proposed foul water drainage system to the development is described in BKPL document 'Rochdale Corner Plot – Drainage Strategy Report' (report reference 14834-BKP-V1-XX-RP-C-011, dated November 2023), summarised as follows;

- Internal above ground foul drainage system to transfer foul drainage down through the existing / new building (refer to relevant M+E / Architectural information for details)
- Separate below ground foul water system to be installed to rear of existing 3-storey building
- Below ground foul water system to combine with new surface water drainage system to the north-east corner of the development site and outfall to existing Rochdale Council Highways owned combined system within Fire Station Yard (with eventual outfall to United Utilities combine sewer within Fire Station Yard car park area)

For details of below ground drainage systems, refer to BKPL drawings 14834-BKP-V1-XX-C-500 and 501.

Figure 02 – Extract from BKP Drainage GA Drawing

Introduction to Sustainable Drainage Systems (SuDS)

SuDS are an environmentally friendly approach to managing rainfall that uses landscape features to deal with surface water. SuDS aim to:

- control the flow, volume and frequency of water leaving a development area
- prevent pollution by intercepting silt and cleaning runoff from hard surfaces

In order for the SuDS system at Rochdale Corner Plot to properly operate during the development lifetime, it is essential that the entire system is subject to a regular schedule of maintenance. These maintenance regimes will apply during construction works, as well as during the development use.

This document covers maintenance regime requirements following occupation of the buildings, covering maintenance of roof areas and nominal external yard area to the rear of the development. . Responsibility for this maintenance regime lies with the building owner (potentially via third party maintenance contractor).

SuDS at Rochdale Corner Plot

Surface water drainage system at Rochdale Corner Plot involves the collection of surface water from hard-standing areas (including building roofs and nominal external yard area to the rear of the development) by various surface water infrastructure (building rainwater goods, gulleys, etc). Collected surface water run-off is generally carried to the north of the site, with flow-restricted manhole located at north-east corner of the site restricting flow rates to the existing Rochdale Council Highways combined drainage system, with outfall to United Utilities combined sewer within Fire Station Yard car park to the north-east of the development. On site below ground attenuation is provided positioned under the building ground floor slab, designed to attenuate surface water runoff in the event of significant storm event and allow controlled release to the from the site to highways / UU combined sewer.

Responsibility for maintenance of private drainage systems is to be carried out on a regular basis by the building owner and records of maintenance works retained through the building lifetime

Where maintenance is not carried out in accordance with this document, this may lead to potential for above ground flooding during severe rainfall events.

This document also covers prohibited activities that may compromise / damage the SuDS system and measures to be implemented in the event of significant pollution incident which may impact on SuDS system.

The above SuDS strategy has been developed based on proposed site use as commercial / residential development. This takes into account likely levels of pollution from general site activities (in accordance with Ciria C753 SuDS Manual, Simple Index Approach, Table 26.2) as follows;

Water Quality Risk Assessment – Pollution Hazard Classification				
Land Use	Pollution Hazard Level	Total Suspended Solids Index	Metal Index	Hydro-Carbon Index
Residential roof areas	Very Low	0.2	0.2	0.05
External rear yard area (considered as individual car park / low traffic road)	Low	0.5	0.4	0.4

SuDS mitigation measures included in the overall strategy are as follows (Table 26.3);

Water Quality Risk Assessment – SuDS Mitigation Measures			
Mitigation Measures	Total Suspended Solids Index	Metal Index	Hydro-Carbon Index
Conventional gully and pipe system (conservative against values given in Table 26.15)	1.0	1.0	1.0

For worst case land use (external rear yard area), mitigation index are greater than pollution hazard classifications.

Managing the SuDS Drainage System

The SuDS drainage infrastructure at Rochdale Corner Plot have been designed for easy maintenance to comprise:

- Regular care – litter / construction debris collection, clearance of localised silt / sediment build ups, gutter cleaning and maintenance, clearance of minor pollution incidents (minor oil / fuel spillages from vehicles, etc, where relevant to rear yard area), management of materials storage on site
- Occasional tasks – schedule of private drainage infrastructure cleaning (including general cleaning of roof areas, removal of silt / sediment from private gulleys, clearing / jetting out of any blocked drainage)
- Remedial work – repairing damage where necessary

SuDS Maintenance Plan

Point of Entry Maintenance Plan

The SuDS sequence begins with collection of surface water from new hard-standings, including building roof areas and rear yard area.

Throughout the building lifetime it is important that the surface water drainage system is maintained to ensure this is working as intended. Regular maintenance and inspection to be carried out as follows and recorded (refer to Inspection Maintenance Checklist – Appendix A). Records of maintenance to be included as annual report in individual owners O+M information.

Regular Maintenance Actions:

- External yard areas to be subject to regular removal of rubbish / debris
- Use of de-icing salts to be in accordance with good practice guidance to rear of building (where relevant to building end-user / owner)
- All maintenance subcontractors to be made aware of locations of drainage infrastructure, along with awareness of prohibited actions and emergency procedures prior to commencement of works on site (see below)

Regular Maintenance (Point of Entry)	
Regular Maintenance	Frequency
Litter/ Debris Removal External Areas	Monthly
Localised silt / sediment removal from hardstanding surfaces if required	Monthly (as required)
Good practice use of de-icing salts (where relevant)	Ongoing
Subcontractor inductions and awareness of SuDS system	Ongoing

Occasional Maintenance Actions:

- General inspections of private drainage infrastructures to be carried out throughout building lifetime, including surface water gully, manhole covers, building rainwater good, etc. Any localised areas of damage to be recorded and repaired.
- Below ground private infrastructures to be visually inspected, including removal of access covers and visual inspection of gully pots, manholes, attenuation tanks, etc. Any localised

areas of damage to be recorded and repaired. Where localised silt / sediment is recorded this it to be removed (by suitable suction plant)

- Maintenance of drainage systems, including attenuation system and flow control system in accordance with manufacturer's requirements
- Cleaning and maintenance of accessible roof areas (note cleaning and maintenance of PV panels subject to additional considerations below)

Occasional Maintenance (Point of Entry)	
Occasional Maintenance	Frequency
Drainage infrastructure inspections (gulleys, manhole covers, building rainwater goods)	6 monthly
Visual inspection of below ground infrastructure and removal of silt / sediment build ups	6 monthly
Cleaning and maintenance of accessible roof areas	6 monthly
Inspection and cleaning of attenuation and flow restriction systems	6 monthly or as advised by manufacturer

Remedial Actions:

- Where defects / damage to drainage infrastructure is identified in 6 monthly occasional maintenance regime, these are to be repaired in accordance with engineers' drawings / specification. Repair works required to be recorded and evidence of further similar defects monitored.

Remedial Works (Point of Entry)	
Remedials	Frequency
Remedial repair works carried out to any defects / damage drainage infrastructure identified during occasional maintenance inspections	As identified during monthly inspections

SuDS Prohibited Actions

Surface drainage system to all areas of the site (including building roof areas) is intended to effectively outfall to existing United Utility combined sewer via on site separate surface water system.

The overall drainage strategy includes a number of measures to minimise potential for minor contamination sources entering the watercourse. These measures have been implemented to allow general low-level contamination from the development site to be controlled prior to water outfalling to the existing sewer system.

It is noted however that these measures are not sufficient to effectively deal with more significant / accidental spillages of contaminated materials or washing down of potential contaminants into the surface water system. As such, it is advised that the following prohibited actions are relayed to all maintenance / management personnel and a strategy for reporting and containing any accidental spillages, etc, is developed. Where prohibited materials accidentally enter the surface water drainage system, refer to below emergency measures section.

Prohibited Actions / Control Measures		
Description	Prohibited Action	Control Measure
Significant fuel / oil spillage to new rear yard area	Do not wash down spillage to surface water system	External rear yard area generally not considered suitable for vehicle movements and is part of private gated access road only. Where vehicle movements are required, these are anticipated to be short-term only. Where any related spillages occur, these are to be immediately reported to management team. Employ localised clearing up of any spillages using suitable absorbent mats or similar and minimise any contamination of surface water system
Accidental spillage of other potentially contaminating materials (chemicals, cleaning agents, etc)	Do not wash down spillage to surface water system Do not wash down unauthorised materials to foul drainage system	Maintenance contractors to be made aware of restrictions in use of cleaning materials and locality of surface water infrastructure. Roof maintenance contractors to be made aware of restrictions; cleaning of roof level PV panel infrastructure to be carried out with clean water only. Key maintenance areas, including bins stores and plant rooms to be provided with foul washdown gulleys (connected to on site foul system).

End users to also note potential for future site alterations to impact on SuDS strategy. Minor alterations to be carried out in consultation with qualified engineering input to ensure SuDS system is not compromised by works. Major alterations (including extensions, new hard-standings, etc) to be carried out in consultation with Rochdale Borough Council.

SuDS Emergency Actions

In the event of significant accidental spillage of potentially contaminating materials into the surface water system, the following actions are to be undertaken;

- Immediate reporting of event to building owner / management team
- Isolating of contamination source to prevent further contaminated materials entering the surface water system (providing safe access can be provided)
- Surface water outfall manhole to north-east of site to be bunged to prevent outfall of contaminated material off site. Any evidence of contaminated materials entering the existing watercourse to be reported to the United Utilities as soon as possible
- Upstream drainage system affected by spillage to be cleaned by specialist (including controlled jetting / steam cleaning of affected pipe runs and manholes, gulleys, etc). Cleaning works to be carried out on a controlled basis
- Outfall bung to be removed following removal of all contaminated materials

Appendix A – SuDS Maintenance Checklist

b o o t h k i n g
PARTNERSHIP LIMITED
CONSULTING DATA AND STRUCTURAL ENGINEERING

SuDS Maintenance Inspection Checklist - Building Owner / End User For Rochdale Corner Plot

General Information		
Site ID	Rochdale Corner Plot	
Type of development	Mixed commercial / residential development	
Elements forming SuDS scheme	Private surface water system (including roof drainage and rear external yards), with slow restricted outfall to existing Rochdale Council Highways combined sewer (with eventual outfall to United Utilities combined sewer in Fire Station Road car park area)	
Inspection Frequency	6 Monthly (minimum)	
Approved drawing references	14834-BUP-VI-XSC-S03, 14834-BUP-VI-XSC-S01	
Approved specification references		

Inspection Date	Y/N	Details	Action Required	Date Complete
Private Areas				
Is there evidence of any accidental spillages, oils or other contamination to rear external yard area, etc. that drain into surface water system?				
Is there evidence of silt / sediment accumulation to rear external yard areas? If so, record on 6 monthly basis where required as per SuDS maintenance strategy document.				
Is there evidence of litter accumulation to drainage system generally (usually surface water pulpit)? Is it cleaned on a monthly basis as per SuDS maintenance strategy document?				
Are items of general infrastructure in good condition and free of significant silt build ups (including manhole covers, gutters and catchpits, building rainwater goods, etc.)? Record any defects.				
Is there evidence of any accidental damage to the system?				
Is there evidence of litter, debris or silt-build-up to accessible roof areas? To be cleaned on a 6-monthly basis as per SuDS maintenance strategy document).				
Are there any other matters that could affect the performance of the system in respect of requirements for hydraulic design quality, conveyance and issue aspects? (Specify)				
Have any health and safety risks been identified to either the public or maintenance operatives (including items identified in SuDS maintenance strategy document regular maintenance actions?)				
Inspection information supplied (including photographic record of inspection and any significant remedial works, sketches, etc)				
Reliability of current maintenance regime? Y = continue at monthly intervals / No consider increased inspections (state proposed alternative frequency and reason)				
Inspector signature and date				
Proposed next inspection date				