

Our ref: 7588SMP

SuDS Management Plan

for

Chatsworth Mill at
Williams Road

Gorton, Manchester

For : Chatsworth Mill
Williams Road
Gorton
Manchester
M18 7AY

18August 2022

SuDS Management Plan Chatsworth Mill, Gorton

Document Verification

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Report Reference	Date	Description	Prepared	Checked and Approved
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1.0 Introduction

Coopers (Chester) Ltd have been appointed by Mangrove Developments Ltd to prepare a SuDS Management Plan for the proposed residential development in Manchester. The site is located at Chatsworth Mill, Gorton off Williams Road.

The surface water drainage system provides storage for up to a 100-year storm event plus 40% climate change allowance within tanked permeable paving and oversized pipework and manholes. The flow is restricted using a vortex flow control device fitted in the last manhole before flows leave the site. A flow rate of 5.0 l/s has been agreed with United Utilities.

All components will be maintained by a management company for which this report sets out the inspection and maintenance requirements.

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2.0 Operation and Maintenance

As with any drainage system, SuDS require regular inspection and maintenance to ensure that they continue to operate as designed and are fully functional at all times. The Chatsworth Mill Development SuDS components will consist of a flow control device, tanked permeable paving, silt trap, trapped gullies and associated pipework and inspection chambers.

The SUDS manual, CIRIA report C753, states that there are three types of maintenance activities associated with SUDS.

1. Regular Maintenance – ‘basic tasks undertaken on a frequent and predictable schedule’ including vegetation management, litter and debris removal, and inspections.’
2. Occasional Maintenance – ‘tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example).
3. Remedial Maintenance – ‘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, and as such timings are difficult to predict.

Pipe sizes and gradients have been designed to be self-cleansing albeit regular maintenance and inspections will be required to ensure the long-term efficiency of the systems.

Maintenance for the pipes and manholes includes:

- Inspection, cleaning and removal of sediments and obstructions etc. to restore hydraulic capacity and to prevent blockages; Jetting/vacuum of sewers to be undertaken as often as necessary to remove silts and/or ordinary debris.
- Local repair or replacement of damaged pipes in order to maintain the function of the onsite system and to prevent blockages.
- In the event that any extraordinary issues are encountered during an inspection, further information may be required such as a CCTV survey report to locate the exact cause of the issue.
- Maintenance to be undertaken on an annual schedule.

The SuDS components require regular inspection/clearing to prevent blockages due to accumulation of silt and debris. In general, it is recommended that they are initially inspected and cleared by a suitably trained person every 6 months for at least the first 2 years of operation and then establish a long-term regular inspection/clearing regime appropriate for the site.

Maintenance requirements tables presented in CIRIA C753 The SuDS Manual provides a more detailed maintenance schedule. See Section 3 of this report for more information. Inspection/clearing should also be carried out after every major storm event and to the manufacturer’s recommendations.

If regular excessive accumulation of silts and debris is found in manholes/silt-traps/catchpits, a CCTV inspection should be undertaken. Notwithstanding the above, a CCTV inspection of the main sewers and manholes should be undertaken at least every ten years.

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Any man-entry into manholes should be by trained personnel with adequate personal protective equipment. Approved safety procedures must be followed.

Any debris obstructing or in danger of obstructing the surface water flow should be removed within a period not exceeding two weeks from inspection. Any blockage or partial blockages reported to the managing organisation should be removed within a period not exceeding two weeks.

This maintenance plan is to be incorporated within the Health and Safety file, which, in addition to the details mentioned here, should include all the installed manufacturer's details and maintenance recommendations. In addition, it should hold the records of any inspections, together with any remedial measures undertaken. The drainage maintenance plan should be made available for inspection by the council if requested.

Monitoring and maintenance of the SuDS components will be the responsibility of the maintenance company. Details are as follows:

TBC

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3.0 Maintenance schedule**TABLE 20.15 Operation and maintenance requirements for pervious pavements**

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48 h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

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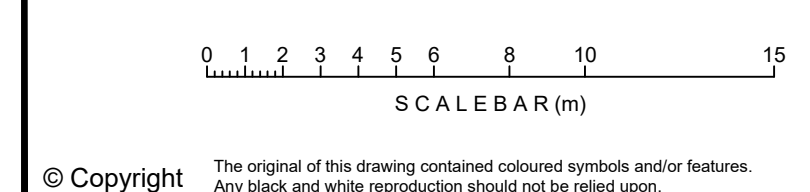
TABLE 14.2 An example of operation and maintenance requirements for a proprietary treatment system

Maintenance schedule	Required action	Typical frequency
Routine maintenance	Remove litter and debris and inspect for sediment, oil and grease accumulation	Six monthly
	Change the filter media	As recommended by manufacturer
	Remove sediment, oil, grease and floatables	As necessary – indicated by system inspections or immediately following significant spill
Remedial actions	Replace malfunctioning parts or structures	As required
Monitoring	Inspect for evidence of poor operation	Six monthly
	Inspect filter media and establish appropriate replacement frequencies	Six monthly
	Inspect sediment accumulation rates and establish appropriate removal frequencies	Monthly during first half year of operation, then every six months

Extracts from CIRIA C753 ‘The SuDS Manual’

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4.0 Reference Drawings



- Legend**

	Development Boundary
Existing	
	Existing Combined Sewer
	Existing Highway Drain
Proposed	
	Private Surface Water Sewer
	Private Foul Sewer
	Adoptable Combined Sewer
	Permeable Paving & Distributor Box
	Flow Control Device Manhole
	Catchpit Manhole
	Shallow Rain Garden
	Private Surface Water Drain
	Private Foul Drain
	SVP
	RWP
	Rodding Eye
	Private Road Gully
	Private Foul Gully
	Plot Slab Level

F	23.06.22	Updated to suit LLFA comments	LW	LW
E	14.06.22	Chamber dia added	PW	LW
D	07.06.22	Additional stack positions added	PW	LW
C	05.05.22	Layout updated	LW	LW
B	19.04.22	Updated to suit revised design	LW	LW
A	25.03.22	Updated to suit revised outfall	LW	LW
Rev.	Date	Revision	By	Appd.

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Client MANGROVE ESTATES LTD			
Project CHATSWORTH MILL, WILLIAMS ROAD, GORTON.			
Title Proposed Drainage Layout			
DRAWING NUMBER		SCALE at A1	
7588 / 08		1:200	
		DATE	11.01.22
		DRAWN	LW
		CHECKED	AJ
		REVISION	
		F	