

Manchester Metropolitan University, Institute of Sport

Maintenance Strategy

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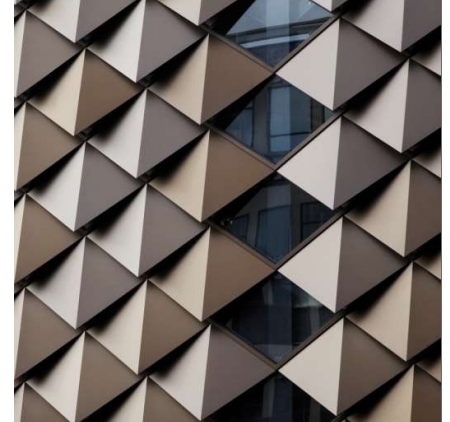
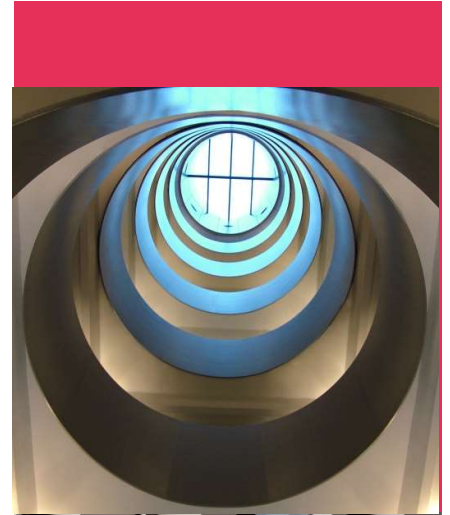
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Client Name: Manchester Metropolitan University

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Control Sheet

Rev	Description	Issued by	Checked	Date
V01	Issued for Information	MW	MW	22/05/20
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<i>Autor</i>	<i>Signature</i>	<i>Date</i>
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Table of Contents

1.0 Maintenance 3

1.2 Components 3

1.3 Inspection, Manhole and Catchpit Chambers 4

1.4 Pipes 4

1.5 Drainage Channels and Gullies 5

1.0 Maintenance

- 1.1.1 This section is intended to give an overview of the operation and maintenance for the drainage features included with the drainage strategy and in relation to typical details. Where proprietary products are specified, the manufacturer's instructions and recommendations should be followed in priority to this document unless specifically noted otherwise due to project constraints.
- 1.1.2 The recommended operations and frequencies are typical only and should be more frequent initially to ensure that there are no unforeseen issues with the operation and then adjusted to suit the site requirements.

1.2 Components

- 1.2.1 The following components have been included within the drainage design for the proposed development:
 - Inspection, Manhole and Catchpit Chambers
 - Pipes
 - Drainage Channels and Gullies
- 1.2.2 A suitable maintenance strategy should be adopted to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.
- 1.2.3 It is assumed that the maintenance of the drainage network will be the responsibility of an on-site facilities management team.
- 1.2.4 A copy of the final construction drainage layout provided in the end of the report.
- 1.2.5 The existing combined water network capacity has been checked and additional manholes added to prevent from flooding up to the 1 in 100 year storm rainfall event plus an allowance for climate change.
- 1.2.6 It is recommended that the drainage system is inspected as a minimum twice a year, with the system also being inspected after any major storm event.
- 1.2.7 Significant sediment deposition is likely in areas used for storage, so a post clean-up operation may be required including the removal of litter, vegetation, sewerage debris and larger objects.
- 1.2.8 During the winter months, drainage features such as gullies and channels should be cleared of ice, snow, debris or litter.

1.3 Inspection, Manhole and Catchpit Chambers

- 1.3.1 The locations of the Inspection Chambers, Manholes are indicated on Curtins drainage drawings.
- 1.3.2 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.
- 1.3.3 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.

1.4 Pipes

- 1.4.1 Pipes are proprietary products and the materials can vary across the site and as such where used the manufacture's recommendations should be followed. Regardless of the product used the pipes will be fully compliant with the Curtins drainage specification.
- 1.4.2 New pipes have been designed to be self-cleaning.
- 1.4.3 The existing combined water drainage will remain as existing where a new connection does not have to be created.
- 1.4.4 Access for maintenance is provided through access chambers and manholes.
- 1.4.5 Regular inspection and maintenance is important to identify areas which may have been obstructed/clogged and may not be drainage correctly thus exposing the development to a greater level of flood risk.

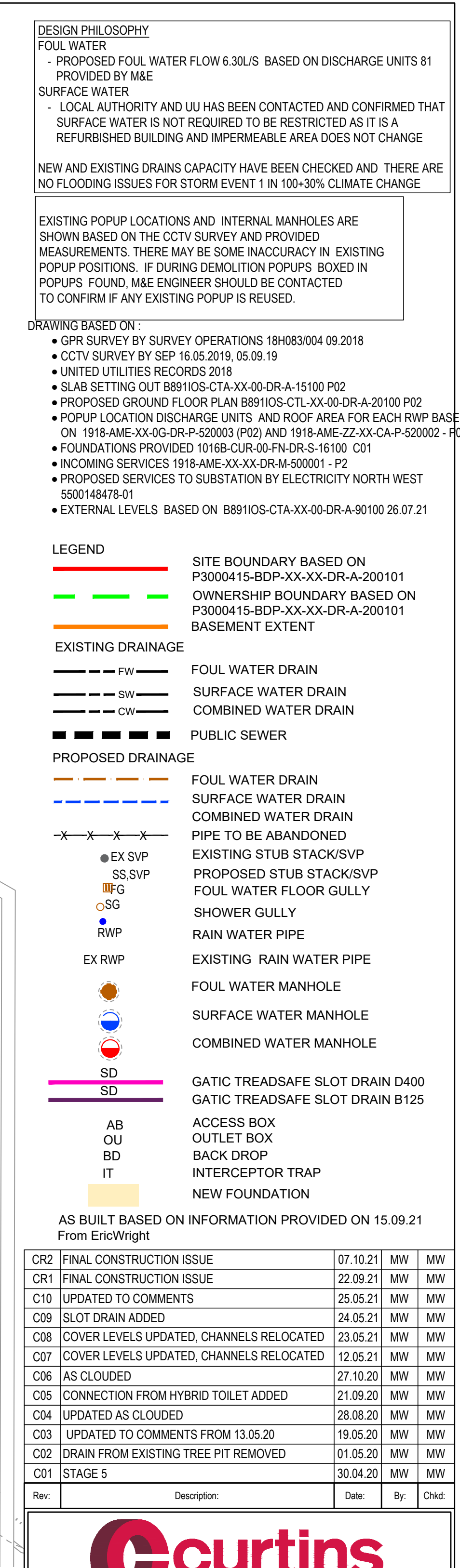
Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Initial Inspection should be provided as post construction CCTV survey.	N/A
Regular maintenance\ inspection	Inspect for evidence of poor operation via water level in chambers. If required take remedial action.	3-monthly, 48 hours after large storms.

	Check and remove large vegetation growth near pipe runs.	Monthly or as required
Remedial Action	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

1.5 Drainage Channels and Gullies

- 1.5.1 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.
- 1.5.2 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.
- 1.5.3 Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas such as the car park channels.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Initial Inspection including channel outlet boxes.	Half yearly and after large storms.
Regular maintenance\ inspection	Litter and debris removal	Monthly or as required.
	Check and remove large vegetation growth near channel runs.	Monthly or as required
	Inspect for evidence of poor operation and/or weed growth. If required take remedial action. Inspect silt accumulation rates and establish appropriate brushing frequencies. Silt can also be caused by adjacent landscaping areas which should be reprofiled to provide a flat area or berm adjacent to the paving.	3-monthly, 48 hours after large storms.
Remedial Action	Inspect access/outlet boxes and rod through poorly performing channels and outlets as initial remediation.	As required.



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