

Design Note

Project Science and Industry Museum
Subject External Drainage Maintenance Manual
Project no 0054704
Date 10 November 2025

Revision	Description	Issued by	Date	Approved (signature)
P01	For Information	LD	10/11/2025	FR

1 Introduction

This external drainage maintenance manual has been prepared to provide a structured and consistent approach to the management of external drainage systems serving the Science and Industry Museum. Effective drainage maintenance is a critical component of site management, helping to ensure the efficient removal of surface water and prevent flooding.

External drainage systems – including drainage channels, gullies and pipework – are continuously exposed to environmental factors such as sediment, debris and vegetation growth. Without regular inspection and maintenance, these elements can lead to blockages, reduced hydraulic performance, and cause potential damage to infrastructure.

For all external drainage systems, a schedule of regular maintenance inspections should be established.

It must be noted that all inspections and maintenance must be carried out by suitably competent personnel using appropriate equipment and safety procedures. Most of the drainage assets are below ground and are therefore confined spaces with the associated safety hazards.

It is anticipated that most inspections can be carried out from ground level without the need for entry into confined spaces.

Refer to Appendix A for the drainage layout for the Upper Yard.

Refer to Appendix B for the drainage layout for Lower Byrom Street Gateway.

2 Surface Water System

2.1 Gullies and Drainage Channels

Gully grates should be removed and gully pots checked for blockages, silt buildup, or debris that could restrict flow. Any accumulated material should be removed, and gully pot flushed with clean water to confirm free discharge into the connecting drainage system.

Drainage channel grates should be removed and channels checked along their full length for blockages, vegetation growth, silt buildup, or debris. Any accumulated material should be removed.

Each item should be inspected every three months and more frequently during the autumn months. These items should also be checked immediately after a significant storm event.

Clean and unblock with a jet washer if necessary.

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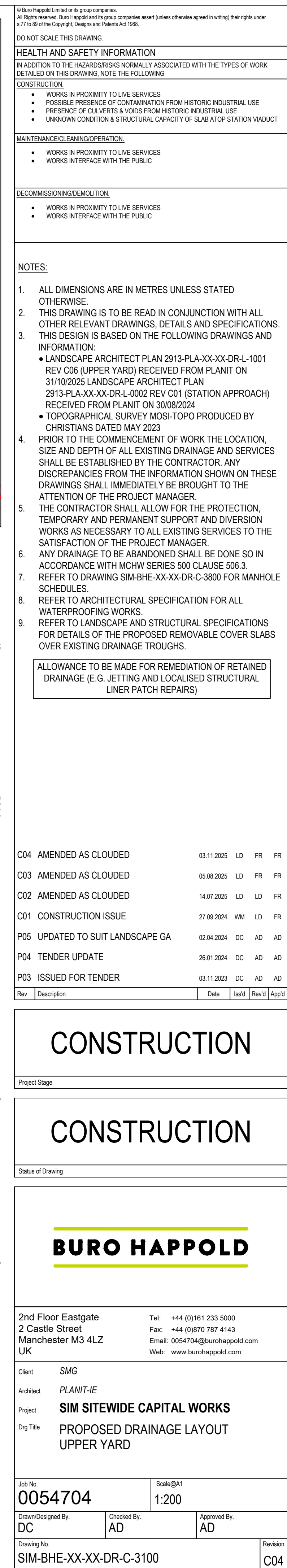
2.2 Inspection Chambers and manholes

Inspection chambers and manhole covers should be lifted and visually inspected annually. Any debris should be removed. If any blockages are found, the pipeline should be rodded or flushed out by jetting and confirm the system is operating effectively.

3 Maintenance Summary Table

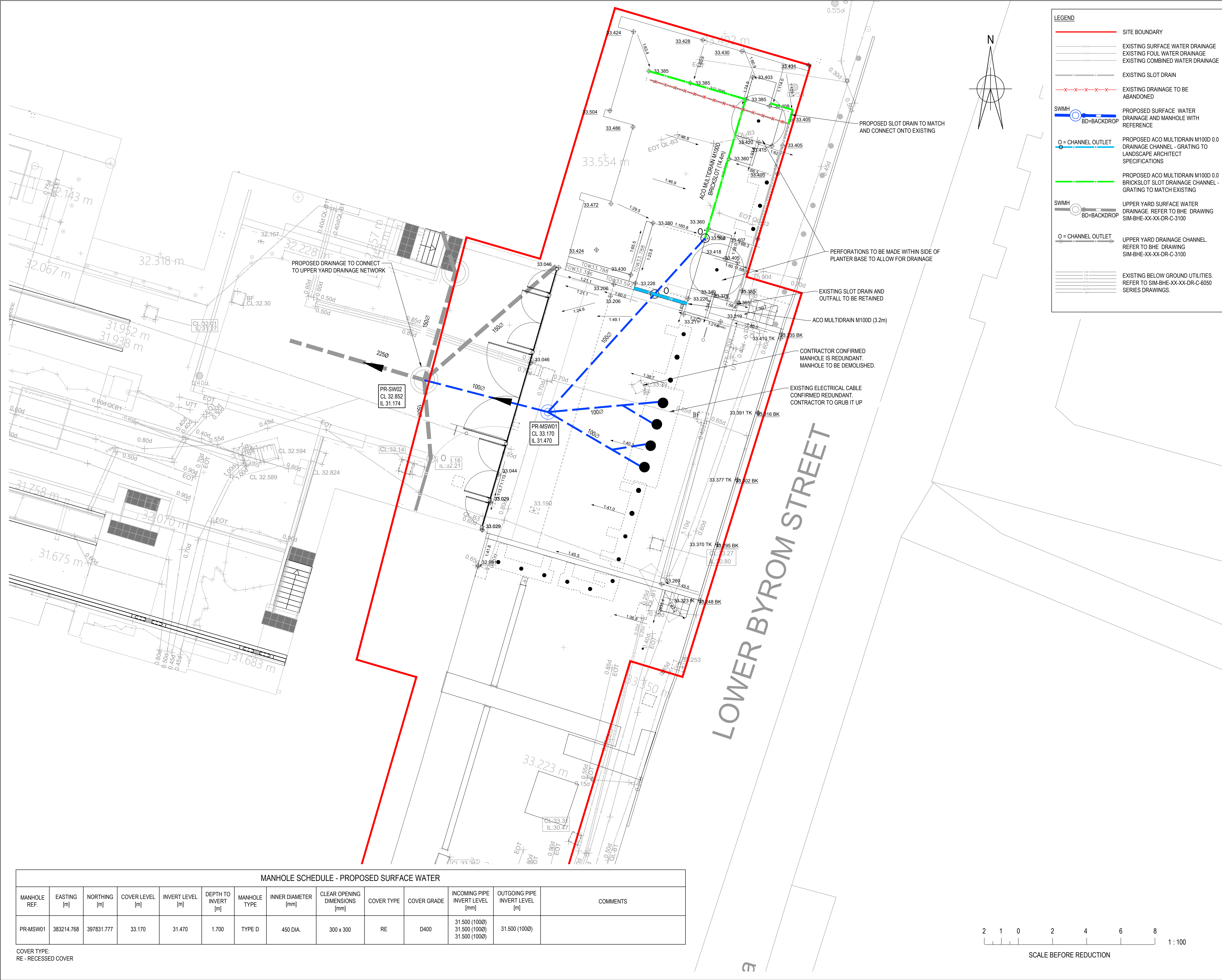
Item	Description	Frequency
Gullies, channel drains & slot drains	Visual inspection and removal of debris	3 months and after significant rainfall
Inspection chambers and manholes	Visual inspection and removal of debris. Rod pipes if necessary	12 months

4 Appendix A Upper Yard Drainage Layout



2nd Floor Eastgate 2 Castle Street Manchester M3 4LZ UK		Tel: +44 (0)161 233 5000 Fax: +44 (0)870 787 4143 Email: 0054704@burohappold.com Web: www.burohappold.com	
Client	SMG		
Architect	PLANIT-IE		
Project	SIM SITEWIDE CAPITAL WORKS PROPOSED DRAINAGE LAYOUT UPPER YARD		
Dwg Title			
Drawing No.	0054704 1:200		Scale@A1
Drawn/Designed By:	DC	Checked By:	AD
		Approved By:	AD
Drawing No.	SIM-BHE-XX-XX-DR-C-3100		Revision
			C04

5 Appendix B Lower Byrom Street Gateway Drainage Layout



LEGEND

- SITE BOUNDARY
- EXISTING SURFACE WATER DRAINAGE
- EXISTING FOUL WATER DRAINAGE
- EXISTING COMBINED WATER DRAINAGE
- EXISTING SLOT DRAIN
- EXISTING DRAINAGE TO BE ABANDONED
- PROPOSED SURFACE WATER DRAINAGE AND MANHOLE WITH REFERENCE
- PROPOSED ACO MULTIDRAIN M100D 0.0 DRAINAGE CHANNEL - GRATING TO LANDSCAPE ARCHITECT SPECIFICATIONS
- PROPOSED ACO MULTIDRAIN M100D 0.0 BRICKSLOT SLOT DRAINAGE CHANNEL - GRATING TO MATCH EXISTING
- UPPER YARD SURFACE WATER DRAINAGE. REFER TO BHE DRAWING SIM-BHE-XX-XX-DR-C-3100
- UPPER YARD DRAINAGE CHANNEL. REFER TO BHE DRAWING SIM-BHE-XX-XX-DR-C-3100
- EXISTING BELOW GROUND UTILITIES. REFER TO SIM-BHE-XX-XX-DR-C-6050 SERIES DRAWINGS.

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DO NOT SCALE THIS DRAWING.

HEALTH AND SAFETY INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION:

- WORKS IN PROXIMITY TO LIVE SERVICES
- POSSIBLE PRESENCE OF CONTAMINATION FROM HISTORIC INDUSTRIAL USE
- PRESENCE OF CULVERTS & VOIDS FROM HISTORIC INDUSTRIAL USE
- UNKNOWN CONDITION & STRUCTURAL CAPACITY OF SLAB ATOP STATION VIADUCT

MAINTENANCE/CLEANING/OPERATION:

- WORKS IN PROXIMITY TO LIVE SERVICES
- WORKS INTERFACE WITH THE PUBLIC

DECOMMISSIONING/DEMOLITION:

- WORKS IN PROXIMITY TO LIVE SERVICES
- WORKS INTERFACE WITH THE PUBLIC

NOTES:

- ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, DETAILS AND SPECIFICATIONS.
- THIS DESIGN IS BASED ON THE FOLLOWING DRAWINGS AND INFORMATION:
 - LANDSCAPE ARCHITECT PLAN 2913-PLA-XX-XX-DR-L-1001 REV C02 (UPPER YARD) RECEIVED FROM PLANT1 ON 18/12/2024
 - LANDSCAPE ARCHITECT PLAN 2913-PLA-XX-XX-M2-L-1002-C01 (MUSEUM ENTRANCE) RECEIVED FROM PLANT1 ON 10/10/2025
 - TOPOGRAPHICAL SURVEY MOSI-TOPO PRODUCED BY CHRISTIANS DATED MAY 2023
 - UTILITY MAPPING SURVEY 5412 PRODUCED BY SEDDON SURVEYS DATED JULY 2023
- PRIOR TO THE COMMENCEMENT OF WORK THE LOCATION, SIZE AND DEPTH OF ALL EXISTING DRAINAGE AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR. ANY DISCREPANCIES FROM THE INFORMATION SHOWN ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
- THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PROJECT MANAGER.
- ALL PROPRIETARY PRODUCTS ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS AND SPECIFICATION.

C01	CONSTRUCTION ISSUE	15.10.2025	LD	FR	FR
P04	ISSUED FOR STAGE 4	11.09.2025	LD	FR	FR
P03	PLANNING ISSUE	04.07.2025	LD	FR	FR
P02	FOR UPDATED ARCHITECT LAYOUT	04.04.2025	HB	FR	FR
P01	ISSUED FOR STAGE 3	07.02.2025	LW	FR	MW
Rev	Description	Date	Iss'd	Rev'd	App'd

CONSTRUCTION

Project Stage

CONSTRUCTION

Status of Drawing

BURO HAPPOLD

2nd Floor Eastgate
2 Castle Street
Manchester M3 4LZ
UK

Tel: +44 (0)161 233 5000
Fax: +44 (0)870 787 4143
Email: 0054704@burohappold.com
Web: www.burohappold.com

Client: SMG
Architect: PLANT-IE
Project: SIM SITEWIDE CAPITAL WORKS
Dwg Title: PROPOSED DRAINAGE LAYOUT LOWER BYROM STREET GATEWAY

Job No: 0054704
Scale: A1
1:100

Drawn/Designed By: LD
Checked By: FR
Approved By: FR

Drawing No: SIM-BHE-XX-XX-DR-C-3110
Revision: C01

MANHOLE SCHEDULE - PROPOSED SURFACE WATER													
MANHOLE REF.	EASTING [m]	NORTHING [m]	COVER LEVEL [m]	INVERT LEVEL [m]	DEPTH TO INVERT [m]	MANHOLE TYPE	INNER DIAMETER [mm]	CLEAR OPENING DIMENSIONS [mm]	COVER TYPE	COVER GRADE	INCOMING PIPE INVERT LEVEL [mm]	OUTGOING PIPE INVERT LEVEL [m]	COMMENTS
PR-MSW01	383214.768	397831.777	33.170	31.470	1.700	TYPE D	450 DIA.	300 x 300	RE	D400	31.500 (1000) 31.500 (1000) 31.500 (1000)	31.500 (1000)	

COVER TYPE:
RE - RECESSED COVER

