

Technical Note 1

Project Name:	16 Saxon Street
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Originated by:	J Yusuf MEng CEng MStructE
Client:	Sandton London EC1Y Limited
Content:	Drainage Strategy

1 Overview

This technical note has been prepared to summarise the drainage strategy for surface water drainage at 16 Saxon Street, Manchester. The development proposes to provide 2 semi-detached properties to within the garden of an adjacent house.

A proposed drainage layout is appended to this document.

2 Planning conditions

Planning condition 4 of decision notice 130846/FO/2021 states:

No development shall commence until a surface water drainage layout for the site, based on sustainable drainage principles has been submitted to and approved in writing by the City Council as Local Planning Authority. This shall include:

- 1. A surface water drainage layout for the drainage system. To include all components, connectivity, levels and discharge points;*
- 2. CCTV survey of existing drainage network to determine condition and connectivity;*
- 3. Demonstrate maximised integration of green SuDS components such as rain gardens and rainwater harvesting;*
- 4. Where surface water is connected to the public sewer, agreement in principle from United Utilities is required that there is adequate spare capacity in the existing system taking future development requirements into account. An email of acceptance of proposed flows and/or new connection will suffice;*

5. Details of how the scheme shall be maintained and managed after completion, including responsible party;
6. Any proposed new hardstanding front driveway surfacing above 5m² must be designed and constructed using permeable materials such as permeable paving or asphalt - <https://www.gov.uk/government/publications/permeable-surfacing-of-front-gardens-guidance>.

3 Consideration of drainage discharge hierarchy

National Planning Policy Framework Guidance states 'Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable. Options for managing surface water are considered below in order of preference until a viable solution is found.

1. **into the ground (infiltration);** Based on the constraints of the site, there is not enough distance between boundaries and buildings to install soakaways. **Infiltration is not a suitable means of discharging surface water.**
2. **to a surface water body;** There are no surface water bodies on or near site. **Discharge to a surface water body is a viable means of discharging surface water.**
3. **to a surface water sewer;** There are no surface water sewers in close proximity to the site. **Discharge to a surface water sewer is a viable means of discharging surface water.**
4. **to another drainage system;** There are no other drainage systems in close proximity to the site. **Discharge to another drainage system is not a viable means of discharging surface water.**
5. **to a combined sewer;** There is a combined sewer adjacent to the site. **Discharge to a combined sewer is a viable means of discharge surface water.**

4 Consideration of green SuDS

Current policy and best practice encourage the use of SuDS and in particular, infiltration systems. SuDS techniques are not suitable for all sites; therefore, an assessment of the site is required so that SuDS limitations can be determined. Green SuDS are particularly favoured by Local Authorities.

The below table considers the use of Green SuDS in a dense urban environment.

Consideration of SuDS within the constraints of a dense urban environment	
Element	Viability
Green roofs rather than standard roof construction.	Within the scope of the scheme, the use of green roofs is not deemed viable owing to steep pitched roofs, and requirement for roofs to be of similar materials to adjacent properties.
Runoff harvesting in tanks for non-potable use.	Rainwater harvesting for internal use is not considered financially viable within the context of this estate housing, as the pay back period exceeds 10 years.

	Water butts can be included for within the surface water drainage for use in the domestic gardens.
Landscape irrigation and urban horticulture.	Water butts can be included for within the surface water drainage for use in the domestic gardens.
Rainwater harvesting as a resource for water features and recreational play areas.	NA – not relevant in the context of a small number of domestic dwellings.
Use of permeable surfaces and/or sub-bases.	Owing to the anticipated ground conditions, infiltration is not deemed viable.
Use of bioretention systems, open water amenity features and tree pits.	NA – not relevant in the context of a small number of domestic dwellings.
Inclusion of tree pits, landscaping planters, rain gardens, bioretention systems or swales provide storage and treatment of runoff.	NA – not relevant in the context of a small number of domestic dwellings.
Front or back gardens to be designed as bioretention planters to capture roof runoff or configured to include rainwater harvesting systems.	NA – United Utilities have confirmed that they will not accept an overflow from a raingarden into a combined sewer. This is owing to contamination risk when the sewer surcharges. Refer to appended confirmation.
Flow control devices included to store water and/or provide treatment in confined spaces.	NA – not relevant in the context of a small number of domestic dwellings.

5 Management and maintenance

Management and maintenance of SuDS features is to be the responsibility of the private land owner. The suggested management and maintenance is summarised on the below ground drainage drawing. This drawing will be included in the 'As Built' information provided when the house is sold.

6 Surcharge protection measures

The extent of flooding from surface water, and thus the risk of flooding from surcharged combined sewers is considered very low. Therefore it is not proposed to provide an flood protection measures.

Refer to appended information.

Appendix A - Proposed drainage layout

LM21162-DYSE-XX-ZZ-DR-C-1001 P03 Below Ground Drainage Layout.

Appendix B - CCTV drainage survey

Appendix C - United Utilities correspondence

Appendix D - Surface water flood risk