

Technical Memo

Land at Former Spire Manchester Hospital, Russell Road, Manchester M16 8 AJ

Application number: 140556/FO/2024

Planning Condition 7

Prior to the commencement of the development hereby approved, a surface water drainage scheme in accordance with Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards, shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include:

- 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.

Designer's Response:

Consultations with United Utilities undertaken, enquiry ref no UU REF 06675705. Response from UU to the proposed discharge rate and points of discharge received on 27 November 2024.

Refer to:

C1811 Russell Road UU Response

- Details of surface water attenuation to align with the Manchester, Trafford and Salford Strategic Flood Risk Assessment. For brownfield sites a minimum of 50% betterment is required for reduction in runoff rate compared to the existing rates with the aim of reducing to the Greenfield runoff rates.

Designer's Response:

Post development SW drainage proposal, including attenuation and allowable discharge rate is based on the hydraulic calculations that assume a 50% betterment for reduction in run-off rate compared to the existing rate. Following the consultation with United Utilities, it has been agreed that 50l/s rate for the post-development run-off is acceptable, therefore the drainage proposal allows for 65% betterment.

Refer to:

SW Discharge Rate Calculation Extract from FRA

- A finalised drainage layout showing all components, outfalls, levels and connectivity.

Designer's Response:

A detailed drainage strategy including proposed levels, volumes and type of storage, outfalls and points of connection is attached.

Refer to:

C1811-SGI-ZZ-XX-DR-C-102-SW Drainage Strategy

C1811-SGI-ZZ-XX-DR-C-112-Drainage Details Sheet 1

C1811-SGI-ZZ-XX-DR-C-113-Drainage Details Sheet 2

Additional Survey Details of the existing outfalls:

MH 14 Back

MH13 Front

MH25 Back

MH25 Front

- Hydraulic calculations of the proposed drainage system, including all design parameters. Calculations must include Critical Storm Events for the 1 in 2, 1 in 30 and 1 in 100 + 45% Climate Change. Results must demonstrate no surcharge for the 1 in 2, no flooding in the 1 in 30 and no flooding of buildings for the 1 in 100 + 45% Climate Change.

Designer's Response:

Microdrainage Hydraulic Calculations attached for information. Hydraulic model is completed for the 1 in 2, 1 in 30 and 1 in 100y events assuming 45% change.

Refer to:

SW Network 1&2 Drainage Strategy – All Storm Result

SW Network 1&2 Drainage Strategy – Critical Storm Result

SW Network 3 Drainage Strategy – All Storm Results

SW Network 3 Drainage Strategy – Critical Storm Result

- A plan indicating surface water overland flow routes for extreme events to ensure flows are diverted away from existing and proposed buildings (including basements).

Designer's Response:

A plan showing the SW exceedance route is provided. The excess run-off during the events greater than 1 in 100 year will be directed away from the dwellings and routed along the proposed roads or into the Greenfield areas within the courtyard.

Refer to:

C1811-SGI-ZZ-XX-DR-C-104-Exceedance Flow Route

- Construction details of flow control and SuDS elements.

Designer's Response:

Details of the 2 no proposed hydrobrake chambers and hydobreaks specifications are provided.

In regards to the proposed SuDS, a Polystorm Modular Cell is proposed to store the post development SW run-off from site. A detailed drawing of the site specific storage proposal, data sheet for the proposed product and a Polystorm Technical Guide are attached and include:

- ✓ *Product overview*
- ✓ *Testing & Certification*
- ✓ *Design Protocol*
- ✓ *Installation Procedures*
- ✓ *Maintenance*

Refer to:

C1811-SGI-ZZ-XX-DR-C-114-Drainage Details Sheet 3
SCU-0126-2000-1065-2000_Hydraulic_Characteristics
SCU-0149-3000-1855-3000_Hydraulic_Characteristics
Polystorm Modular Cell Datasheet
Polystorm Technical Guide

- A plan indicating easements. SuDS features (including attenuation tanks) should be appropriately positioned, including a 2.5m easement from the existing highway and a 5m easement from any dwellings, guaranteeing accessibility for future maintenance and contingency for asset failure. This practice is in accordance with SuDS Manual (C753).

Designer's Response:

The proposed cellular storage is positioned >5m away from the building and >2.5m away from the site boundary. Drawing showing the easements and offset is provided.

Refer to:

C1811-SGI-ZZ-XX-DR-C-105-Easements