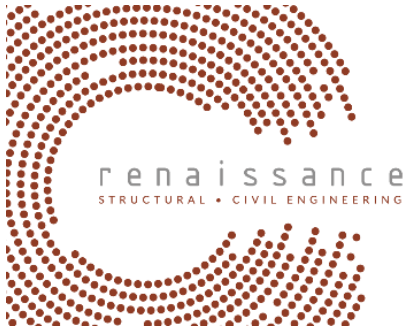




DESIGN NOTE No 2: SUDs STATEMENT

Project: **BRUNSWICK STREET, MANCHESTER**

Project No: 2004-04

Date: 16/06/2020

Author: Helen Gribbon

This design note covers the key Sustainable Urban Drainage (SUDs) features being adopted for the management of surface water on the redevelopment of Brunswick Street.

The surface water management for the site includes the adoption of a Bluroof. The capacity and discharge rate have been designed and detailed by a specialist to meet the requirements of the FRA for limiting surface water discharge from the site to less than 5l/s, as per the approved surface water drainage strategy for the site.

Bluroofs are considered to be an active SUDs feature for any site as detailed in Part D, Chapter 12, of “The SUDs Manual”, CIRIA Guide C753.

SUDS MANAGEMENT PLAN

The Sustainable Urban Drainage features are to be maintained by the Building Management Company selected by the client. The building management company will be required to maintain the SUDs features in line with the following recommendations and suppliers’ requirements.

The following operation and maintenance requirements for the Bluroof incorporated into the development is to be adopted by the Building Management Company. These requirements are general and have been extracted from the CIRIA Guide C753.

*Table 12.5 - Operation and maintenance requirement for green roofs
(also applies to blue roofs)*

The Main Contractor delivering the development will update the general requirements to reflect the product specific requirements of the as installed proprietary SUDs and incorporate these into the Operation & Maintenance manual for the building.

TABLE 12.5 Operation and maintenance requirements for green roofs

Maintenance schedule	Required action	Typical frequency
Regular inspections	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes and roof structure for proper operation, integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Annually and after severe storms
	Inspect underside of roof for evidence of leakage	Annually and after severe storms
Regular maintenance	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (ie year one), replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment, replace dead plants as required (where > 5% of coverage)	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required
	Mow grasses, prune shrubs and manage other planting (if appropriate) as required – clippings should be removed and not allowed to accumulate	Six monthly or as required
Remedial actions	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	As required

CONCLUSIONS

The final design of the surface water management has been developed for construction adopting a Bluerroof in lieu of providing below ground surface water attenuation storage.

The benefits of this are: -

- The viability of the proposed raft foundation would not be possible with an attenuation tank below ground
- The maintenance of the attenuation tank is no longer a requirement – access for maintenance was prohibitive given its location under the building footprint.
- Certain design features proposed for the attenuation tank below ground were not possible due to its location within the building footprint, for example, vertical vent pipework to an external location.

