



SGi Consulting have been asked to provide a set of responses to get **prior to commencement of enabling works Planning Condition 8** discharged for the planning application ref: **132416/FO/2021**.

Pre-Commencement Condition Discharge

- (a) the development shall not commence until a scheme for the drainage of surface water from that phase of the new development shall be submitted for approval in writing by the City Council as the Local Planning Authority. This shall include:

Identification of flood resilient construction techniques which will be implemented for buildings levels below the 1 in 1000-year flood event.

The 1 in 1000-year flood level is 30.46mAO with the lowest FFL set at 29.0m AOD. All Floor construction will be solid with Tile finishes. Where required, walls will be finished in Flood resilient Wedi board (or equivalent product) to ensure that in the unlikely event of the 1 in 1000-year flood level occurring, the unit can be cleaned dried and put back into operation promptly.

Confirmation that the 300mm surface water sewer within the site can be abandoned following further investigation - ensuring that no offsite areas are compromised.

The culvert report Referenced: '(IDB) 20220011jt(C1467)Culvert Report 20.1.2022 Rev A BOUND', submitted with the original application, provides a response into the investigation of the possible existing surface water sewer running cross the site.

The report provides a set of actions as part of the first phase remediation works that will confirm the existence of the 'possible' 300m surface water sewer and whether the sewer can be abandoned without any offsite areas being compromised. These set of actions can be found on page 9 of the said report.

Consideration of alternative green SuDS solution within the public realm areas and assessment of the potential for green roof implementation if practicable.

Due to the brownfield nature of the site, a sealed underground SuDS system has been implemented within the surface water scheme. The use of green roofs has been discounted due to, the increased weight of the roof structure and the minimal available space for such roof systems.

SuDs solutions used in the proposed surface water drainage system include a flow control, geocellular storage and a downstream defender which is shown in the proposed surface water drainage plan referenced: DN0107-SGI-ZZ-00-DR-C-2000-P03 Drainage Layout (Surface Water).

Construction details for the flow control and geocellular tanks can be found in:

DN0107-SGI-ZZ-00-DR-C-4001-P01 Flow Control Manhole

DN0107-SGI-ZZ-00-DR-C-2007-P01 Typical Attenuation Tank Detail



Evidence that the drainage system has been designed (unless an area is designated to hold and/or convey water as part of the design) so that flooding does not occur during a 1 in 100 year rainfall event with allowance for 40% climate change in any part of a building.

File reference 'DN0107-SGI-ZZ-00-DR-C-2000 - Drainage Simulation' attached is a microdrainage simulation that provides the results of how the proposed drainage scheme copes with 1, 30 and 100 year + 40% climate change storms.

This microdrainage simulation has been produced based on the drainage scheme detailed on drawing reference: DN0107-SGI-ZZ-00-DR-C-2000-P03 Drainage Layout (Surface Water)

Assessment of overland flow routes for extreme events that is diverted away from buildings (including basements). Overland flow routes need to be designed to convey the flood water in a safe manner in the event of a blockage or exceedance of the proposed drainage system capacity including inlet structures. A layout with overland flow routes needs to be presented with appreciation of these overland flow routes with regards to the properties on site and adjacent properties off site.

An overland flow route plan can be found in attached drawing - DN0107-SGI-ZZ-00-DR-C-4000-P01 Overland Flow Routes.

The plan shows overflow routes based on the levels provided by the landscape architects in the event of an extreme flood. Levels surrounding the proposed building fall away with low points placed beside landscaping areas or away from the proposed structure.