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RESPONSE TO CONSULTEE LETTER PLANNING APPLICATION FLOODING AND SURFACE WATER DRAINAGE ISSUES

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CENTRE FOR RESEARCH INTO RARE DISEASES IN CHILDREN

REVISION RECORD

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Response to Consultee Letter for Planning Application

Flooding

The Flood Risk Assessment states in section 8.1 – 'The proposed development is not considered to create any additional impermeable area on the site'. Therefore the proposed development will not increase the surface water run-off from the site nor increase the flood risk on or off the site.

The following describes how the proposed drainage scheme for the development will deal with potential flooding and reduce the surface water run-off from the site.

1. A 50% betterment in terms of limiting the surface water run-off is adopted in the design of the surface water drainage scheme for the development, thus reducing the 100year run off rate to 20.375 litres/second from a pre-development rate of twice this (40.750 litre/second). This figure is slightly less than that quoted in the FRA due a re-calculation of site areas in the subsequent design process. This 50% betterment significantly reduces the run-off rate during the life span of the building and complies with the standard recommended by the Lead Local Flood Authority.

2. The proposal to achieve the above goal consists of the construction of a underground surface water attenuation tank which will be located in the south west corner of the site with a controlled outlet limiting the discharge into the combined sewer in Millman Mews to 12.755 litres/second. This figure is lower than the 20.375 litres/second mentioned above by some 7.620 litres/second. This is because 20% of the site area (entirely roof) will be discharged un-attenuated into the public sewer in Guildford Street from the north west corner of the development. The peak flow from this area is the difference. The reason for the un-attenuated discharge of roof drainage from the north west corner of the development is because:

    - of the impracticality of routing roof drainage from the north west corner of the building to the attenuation tank location in the south west corner of the site
    - the lack of available space around the building and within the development boundary to locate an attenuation tank, other than the south west corner and limited space for routing external drainage pipelines.

3. The sizing of the attenuation tank is based on a storm of 1 in 100 years frequency, the permitted rate of discharge (12.755 litres/second) and a 20% addition for climate change. The resultant volume to be provided is 95 cubic metres (95,000 litres). This is smaller than the 'outline' figure mentioned in the FRA. This is due to adjustment/re-calculation of the drained area but also because of the un-attenuated discharge to the sewer of the run-off from 20% of the roof mentioned in the previous paragraph.

4. The scheme also includes areas of living (Brown) roof. At present the build-up of this is envisaged to be an average depth of 100mm of media on a 60mm deep drainage layer. However the full extent of this form of construction, in terms of roof area has not yet to be finalised. However irrespective of the size of area so treated, it will provide additional attenuation volume.

5. In addition rainwater harvesting is included in the scheme design. Whilst the volume of the harvesting tank cannot be considered as part of the required attenuation storage volume it will assist in reducing surface water run-off from the development.

6. Both the provision of the attenuation tank, the areas of 'Brown' roof and rainwater harvesting are classified as SuDS techniques/devices and therefore the scheme follows NPPF Planning Practice Guidance by incorporating these. The other approved techniques such as infiltration and above ground attenuation basins and ponds are not appropriate on this site. This is due:

    - to severe constraints on infiltration in the vicinity of the site,
    - a lack of available space between the site boundary and the edge of the building envelope to locate above ground features.

Conclusion

All of the above described measures/features that are to be embedded in the drainage scheme design are designed to cope with potential flooding and substantially reduce run-off from the site thereby not making the situation worse but improving and providing betterment.