
Subject Barnes Hospital FRA – Impacts on existing networks

Date 21 November 2018

Job No/Ref 226594-00

1 Introduction

This note is a summary of the impacts the proposed Barnes Hospital development will have on the existing drainage and water networks in the area. This is to be read along with the Barnes Hospital Flood Risk Assessment (FRA) 2nd Issue (November 2018).

Thames Water Utilities Limited (TWUL) is the supplying authority for the drainage and water network in the area.

2 Surface Water

The initial drainage strategy in the FRA has been developed to meet the greenfield run off rate for a 1 in 30-year design storm (5.04 l/s). Since the site is already developed, this new drainage strategy is likely to reduce the peak discharge rate to the existing network, through the use of Sustainable Drainage Systems (SuDS).

The indicative solution for surface water attenuation is shown in Figure 12 and Appendix E of the FRA. This gives an indication to the size and potential location of the surface water attenuation tanks required to meet the 1 in 30-year greenfield run off rate (Appendix B) if no infiltration is allowed and no additional SuDS techniques are implemented in the buildings and public realm.

3 Foul Water

The foul water overall flows and peak flow level are likely to increase since there is a higher building density in the proposed scheme and a wider variety of uses (i.e. residential, medical centre and day school). Despite this, the peak flows are expected to remain relatively small.

It is assumed that there is sufficient capacity within the surrounding foul water network, since the Barnes Hospital site sits at the head of the existing network and the flows will remain relatively small. Consultation with TWUL is required to confirm this assumption.

4 Potable Water

Peak flow and overall demand for potable water in the proposed development are likely to increase from the existing case, as the density and diversity of development will increase. Discussions with TWUL will be required to determine the available capacity in the existing potable water network, and whether any upgrades would be required to enable the proposed development.

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5 Conclusion

Discussions will be commenced with TWUL regarding the new surface water, foul water, and potable water systems.

Surface water peak discharge will be restricted through the application of SuDS and is likely to result in a net decrease of the peak discharge rate from the existing site.

Foul water peak discharge is expected to increase though remain relatively small.

Potable water demand is also likely to increase slightly, and will be tested by TWUL with regard to the existing networks.