18 Frogmore Road
Hemel Hempstead
Hertfordshire
HP3 9RT
UK

Telephone: +44 (0)1442 437500
Fax: +44 (0)1442 437552
www.rsk.co.uk

Our Ref: 133989-L1(1)

28th June 2021

FAO: Drainage Officer, London Borough of Richmond upon Thames

Dear Sir / Madam,

RE: LLFA OBJECTION – 29-31 HIGH STREET, HAMPTON WICK

Further to the comments received in relation to the Flood Risk Assessment (FRA) (ref. 133989-R1(1)) submitted in support of the planning application for the above site, we would like to respond with the following:

- The proposed discharge rate is detailed in Section 7.4.2 of the submitted FRA. The proposed discharge rate is 2l/s, which is a 50% reduction on the Qbar pre-development runoff rate.
- It is acknowledged that rainwater harvesting had not been incorporated into the original drainage strategy. The applicant is now proposing to include water butts in three locations across the site to provide water for the upkeep of the planted areas. Rainwater harvesting for re-use within the building is considered to be disproportionate to the scale of the development, particularly given the significant improvements offered by other SuDS techniques across the site.
- Section 7.4.2 of the FRA details how site constraints limit the use of open above ground SuDS features; their use is limited by the small size of the site and the absence of open landscaped areas within which to include such features. As detailed in the FRA, the use of SuDS generally is also constrained by the shallow groundwater, the requirement for an easement to allow services to run into the site, and the access requirement for a heavy refuse truck. In view of these significant constraints, it is considered that the maximum benefits possible have been achieved, whilst taking a proportionate approach as advocated by national policy.
- The FRA details the constraints to the use of SuDS, which mean that a greenfield runoff rate would not be achievable or proportionate to the scale of the site and development. As discussed in the FRA (Section 7), the greenfield rate is very low given this is such a small site. Limiting the rate to the greenfield rate or 3x the greenfield rate would result in such a low flow as to give rise to the potential for blockages (the greenfield rate is 0.1l/s, 3x the Qbar greenfield rate would be 0.3l/s).
- The SuDS pro-forma gives a discharge rate of 2l/s for the 1 in 100 year plus climate change event, not 3x the greenfield rate as noted in the LLFA objection. Calculations are given in Appendix H of the FRA.
- We would also note that although it is assumed that the whole site will be laid to impermeable hardstanding within the submitted FRA, the applicant is now including a 500mm wide buffer between the parking area and the fence in the southwest of the site. Although the benefits of this soft landscaped area and the proposed water butts have not been quantified, it is noted that they will provide additional improvements to the surface water runoff scenario above those outlined in the submitted FRA.

Overall, it is re-iterated that the proposed discharge rate of 2l/s represents a significant improvement to the current runoff rate, and that the applicant has committed to the incorporation of a range of SuDS techniques despite the significant constraints associated with the site. It is considered that the proposed SuDS Strategy maximises the potential for the use of SuDS, whilst ensuring that the runoff rate is practical (i.e. high enough to prevent blockages) and that a proportionate approach is taken. Additionally, it is noted that the soft landscaping areas and water butts that are now proposed will provide additional benefits beyond those discussed within the FRA.

We trust the above is useful, but should you require any additional information, please do not hesitate to contact the undersigned.

For RSK LDE Limited,

Yours faithfully,

A. Cadge

Alison Cadge
Principal Hydrologist