Apex Consulting Engineers
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Our reference: 1305-ACE-ZZ-XX-TN-S-0001

7th August 2024

RG Group

Dear Sirs,

The Hale, Tottenham Hale – Condition 10 Drainage Strategy Technical Note

Consented Proposals

The original drainage strategy proposed basement level attenuation tanks to manage surface water runoff. However, due to the location and depth of the surface water connection provided by Thames Water, installing an attenuation tank in the basement has become impractical. We are therefore proposing an alternative solution in the form of a blue roof system.

Proposed Change

The appended letter (and separate asset plan) from Thames Water reference DS6119087, DTS-67852 dated 24th June 2024 identifies points of gravity connection for foul water (FWMH TQ348926YQ) and surface water (TQ348926YS). Also, as stated, discharge to the surface water network is restricted to 2.0 l/s in accordance with current CIRIA guidance.

Due to the location and depth of the surface water point of connection offered by Thames Water, an attenuation tank located in the basement will be onerous. An alternative in the form of blue roofs offers a viable, sustainable solution which will be of no detriment to any other consented requirements. An alternative in the form of blue roofs offers a viable, sustainable solution which will be of no detriment to any other consented requirements.

The implementation of blue (and green) roofs is a widely recognised and accepted sustainable solution for attenuating surface water runoff. The system proposed (Polypipe Permavoid) is an engineered system of high strength modular cells, interlocked to create a structural raft with exceptionally high tensile and compressive strength under load. The cells sit in a recess in the roof slabs (in this case 85mm) and surface finishes are then applied above (soft or hard landscaping, plant and equipment, suspended floors etc). The enclosed Polypipe datasheet provides further technical information.

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Impact of Change

1. **No Material Impact on Design or Appearance:**
   The blue roof will be integrated into the existing roof design, maintaining the building's overall height and visual appearance. There are no changes to the external look or structure of the building.

2. **Compatible with Existing Roof Features:**
   The blue roof can be installed alongside the existing and planned roof features, such as solar panels and green roofs, without compromising their function or design.

3. **No Adverse Impact on Biodiversity or Wind Environment:**
   The blue roof will continue to support the building's sustainability goals by managing water at its source, without negatively impacting biodiversity or the wind environment around the development.

4. **Compliance with Thames Water Requirements:**
   The blue roof system meets Thames Water's discharge requirements, ensuring compliance with the approved drainage strategy and no need for changes to the overall site design.

Conclusion

The proposed blue roof system is a simple, effective, and non-material change to the drainage strategy. It does not alter the building's design or functionality and continues to meet planning and regulatory requirements.

Yours faithfully

For and on behalf of
APEX CONSULTING ENGINEERS

David Spacey BEng CEng FICE
Regional Director
Enc.

TWA DS6119087 Confirmation of Capacity

TWA DS6119087 Site

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