OAKMAN
ARCHITECTURE.

7 DENHAM WAY
DENHAM
UB9 5AX
WWW.OAKMANLTD.COM
INFO@OAKMANLTD.COM

FLOOD RISK ASSESSMENT

10 St. Stephens Road, Yiewsley UB7 7RL

1. Introduction

This Flood Risk Assessment (FRA) and Drainage Statement has been prepared in support of a planning application for the demolition of the existing bungalow at 10 St Stephens Road, Yiewsley, UB7 7RL and the construction of a pair of semi-detached three-storey dwellings.

The site is located within Flood Risk Zone 1, an area that is considered to be at low risk of flooding, according to the Environment Agency's Flood Mapping. The aim of this assessment is to evaluate the potential flood risk associated with the development and ensure that the proposal complies with relevant national, regional, and local planning policies, including the London Plan 2021 and the Hillingdon Local Plan Part 2 (2020)

The site is not located within an area prone to flooding, and the assessment concludes that the development will not result in an increased flood risk either on-site or to surrounding areas.

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2. Site Description

The application site currently comprises a single residential bungalow situated within an established residential area of Yiewsley. The surrounding area is characterised predominantly by residential development with associated gardens, hardstanding and local roads.

The site is located in Flood Risk Zone 1, as identified on the Environment Agency's Flood Map for Planning. Flood Risk Zone 1 is defined as land with a less than 1 in 1,000 annual probability of river or sea flooding (<0.1% probability), which is considered to be at low risk of flooding.

The proposed development will replace the existing dwelling with two semi-detached residential dwellings together with associated access, parking and landscaping works.

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3. Planning Policy Context

This assessment has been prepared having regard to:

3.1. The London Plan 2021

The proposed development is consistent with the following policies in the London Plan 2021:

- Policy SI 12 – Flood Risk Management: This policy encourages development to be located and designed in a way that reduces the risk of flooding and ensures that flood risk is properly managed. The proposal complies with this policy by being located in Flood Risk Zone 1, an area at low risk of flooding. Furthermore, the development will incorporate SuDS to manage surface water runoff and ensure that no additional flood risk is posed to the surrounding area.

3.2. Hillingdon Local Plan Part 2 (2020)

The proposal also complies with relevant policies in the Hillingdon Local Plan Part 2 (2020), including:

- DMEI 9 and DMEI 10 This policy supports developments that incorporate sustainable drainage systems to manage surface water and reduce flood risk. The proposal includes SuDS features to ensure that surface water runoff is managed effectively and to mitigate any potential flood risk.

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4. Sources of Flood Risk

Potential sources of flooding relevant to the site include:

River Flooding

Flooding from rivers and watercourses occurs when water levels exceed channel capacity.

The site is not located adjacent to a main river or watercourse and is not considered to be significantly affected by fluvial flood risk.

Surface Water Flooding

Surface water flooding can occur during intense rainfall events when rainfall exceeds the capacity of drainage systems or infiltration rates.

Appropriate drainage measures have therefore been incorporated into the design of the proposed development.

Groundwater Flooding

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Groundwater flooding can occur where water tables rise to the ground surface.

No evidence is known of significant groundwater flooding affecting the site.

Sewer Flooding

Flooding may occur where public sewers become overloaded.

The proposed development will reduce reliance on conventional drainage systems through the use of Sustainable Drainage Systems (SuDS).

5. Proposed Development and Flood Resilience Measures

The proposed dwellings have been designed to minimise flood risk and improve site drainage performance.

Finished Floor Levels

The proposed dwellings will provide level access arrangements while ensuring that threshold locations are protected through the incorporation of proprietary ACO drainage channels.

The drainage channels will intercept surface water runoff before it reaches building entrances, reducing the risk of water ingress during periods of heavy rainfall.

Site Layout

The development has been designed to ensure that surface water is directed away from buildings and managed within the site boundary through sustainable drainage measures.

6. Surface Water Drainage Strategy

Sustainable Drainage Systems (SuDS)

The proposed development will incorporate Sustainable Drainage Systems (SuDS) to manage rainfall runoff.

Surface water generated from roofs, paved areas and hardstanding will be collected and directed to soakaway systems located within the front and rear garden areas of the site.

The use of soakaways will:

- Promote infiltration of rainwater into the ground;
- Replicate natural drainage processes;
- Reduce runoff rates from the site;
- Reduce pressure on local drainage infrastructure;

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- Contribute to improved flood resilience.

The soakaway systems will be designed in accordance with current drainage standards and Building Regulations requirements.

Prior to construction, infiltration testing should be undertaken to confirm ground conditions and verify soakaway sizing requirements.

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7. Construction Phase Considerations

During construction, temporary measures will be implemented to prevent sediment, debris and uncontrolled runoff from leaving the site.

These measures may include:

- Protection of drainage routes;
- Appropriate storage of construction materials;
- Temporary drainage controls where necessary;
- Good site management practices.

Construction activities are expected to be temporary and will not result in any significant increase in flood risk.

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8. Impact on Flood Risk Elsewhere

The proposed development will not increase flood risk to neighbouring properties or surrounding land.

The use of SuDS soakaways will ensure that rainfall runoff is managed on-site through infiltration rather than increasing discharge to local drainage networks.

The drainage strategy will therefore maintain or improve existing drainage conditions and contribute positively to sustainable water management.

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9. Maintenance

The SuDS features and drainage infrastructure will be maintained by the future property owners.

Routine maintenance will include:

- Periodic inspection of ACO drainage channels;

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- Removal of debris and silt accumulation;
- Inspection of drainage pipework;
- Periodic inspection and maintenance of soakaway systems where necessary.

Regular maintenance will ensure the long-term effectiveness of the drainage system.

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10. Conclusion

This Flood Risk Assessment and Drainage Statement has considered the potential flood risks associated with the redevelopment of 10 St Stephens Road, Yiewsley, UB7 7RL.

The assessment concludes that:

- The proposed residential development is suitable for the site from a flood risk perspective;
- The dwellings will incorporate level access with ACO drainage channels at threshold locations to prevent surface water ingress;
- Surface water runoff will be managed through Sustainable Drainage Systems (SuDS) incorporating soakaways located to the front and rear of the site;
- The development will not increase flood risk on-site or elsewhere;
- The proposed drainage strategy represents a sustainable and effective means of managing rainfall runoff.

Subject to detailed drainage design and implementation, the proposed development is considered acceptable in flood risk and drainage terms and complies with national and local planning policy objectives.

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