FLOOD RISK ASSESSMENT REPORT.

PREPARE FOR:

MR DALJIT SINGH

LOCATION:

53 Ashford Avenue,
Hayes.
UB4 0NA

REFERENCE NO :

2025-030

DATE

2ND APRIL 2025

FLOOD RISK ASSESSMENT REPORT.

53 Ashford Avenue, Hayes. UB4 0NA

The property stated above falls within the Flood Zone 2. Locations in flood zone 2 have a medium probability of flooding. This means in any year land has between a 1% and 0.1% chance of flooding from rivers and between a 0.5% and 0.1% chance of flooding from the sea This represents the 1 in 1000-year probability flooding Of the properties within the Flood Zone 2(Appendix 1). land has a less than 0.1% chance of flooding from rivers or the sea.

Information obtained from surveys and Ordnance Survey maps indicates this property is already above Ordnance Datum. Also, it has been foundminimal Barriersare located along the Riverbank, however, these provide sufficient Defences in case of an increase of the river. This, with contribution from the slope of the land indicates the property has a good protection from River level rise and flooding. These indicate the Defences in place provide suitable protection from Flooding and/or Rise in River Levels.

It has also been found; the property is a substantial distance above the existing Sea Level. This indicates there is only a small chance of flooding from Sea. Additionally, River levels nearby are also much lower than the indicated Ground Level. With the property (FFL) being on high land, Flooding from Rivers and or Sea would not have anysignificant implications.

As the property is within a Flood Zone 2, there is a Medium Risk of Flooding from Surface water (Appendix 2). 'Medium' means between 1% and 3.3% chance of a flood each year.
. As the proposed Site is more inland, the chances of Flooding are minimal.

Existing Floor level is higher than ground floor by 450mm. Therefore, ensuring Flooding will have minimal impact on the property.

It has been found Barriers located along the River Bank provide sufficient Defences in case of an increase of the River. This, with contribution from the slope of the land indicates the property has a good protection from River level rise and flooding.

As the proposal is to be designed not to Alter Ground Levels of the Neighbouring properties, there will be no increase in risk of Flooding. The proposal is consistent with the current surrounding and would not have any bearing on Flooding.“We have no record of this site being effected by flooding in the past…”, as indicated by the Environment Agency.

Information obtained from EA has indicated Thames Water Services are in the process of creating a long-term scheme worth up to £80 million to improve the sewage drainage system to reduce the impact of major flash storms.

The property has been designed to provide an easy escape route in case of a flood evacuation. Two escape routes, located to the front and rear of the property create alternative escape routes. The Rear escape route leads to a side access way, providing an escape route to the Front.

In addition to the above safety measures, a connection to the Environmental Agency Flood Line will be installed. This gives an early warning of any flooding within the area. Electrical wiring and components will be installed above Ground level to ensure no damage is caused. Solid concrete flooring will provide a strong resilient material against flooding.

As the proposed development is to be designed with respect of the neighbouring properties, the Ground Level has been made tomatch. Therefore, this indicates the risk of flooding is minimal, as there are no significant occurrences in recent history.

The proposed development is to be used as a residential building, therefore reducing the chances of Flooding. Additional Water-proofing/Weather-proofing measures will be taken to ensure minimal impact in case of Flooding.

As noted above, the proposed development will be designed to provide adequate safety measures in case of Flooding, such as, Solid Concrete Flooring, a connection to the Environmental Agency Flood Line and above Ground Electrical Wiring.

In addition to the above stated measures, the FFL will be made to higher than existing lower ground floor the Ground Finish Level. This will ensure minimal impact will be created in case of Flooding.

With respect to the obtained figures and information, we believe the property in discussion will not be affected during the rise of river level and flooding. Alternatively, the property has adequate means of escape and emergency access.

Also, at the site is already above the Sea Level, there is a minimal risk of Flooding from River Level. Many of the nearby properties have been developed in similar ways by providing additional space following extensions.

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In addition to the above safety measures, a connection to the Environmental Agency Flood Line will be installed. This gives an early warning of any flooding within the area. Electrical wiring and components will be installed above Ground level to ensure no damage is caused. Solid concrete flooring will provide a strong resilient material against flooding.

As the proposed development is to be designed with respect of the neighbouring properties, the Ground Level has been made to match. Therefore, this indicates the risk of flooding is minimal, as there are no significant occurrences in recent history.

Flood Proofing Measures:

 All service pipes entering the building will be sealed with waterproof materials. The external walls will be built with a continuous damp-proof course situated at least 150mm above ground

level.

 The floor slab damp-proof membrane and external wall damp-proof course will be effectively joined to provide continuous protection.

 The main drain to the property will be fitted with a flow stop return valve to prevent water flowing into the building

SOLID FLOOR INSULATION OVER SLAB

To meet min U value required of 0.22 W/m²K

Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200mm gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000.

25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.

Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed

FULL FILL CAVITY WALL

To achieve minimum U Value of 0.28W/m²K
New cavity wall to comprise of 105mm facing brick to match existing. Full fill the cavity with 150mm Rockwool Cavity insulation as manufacturer's details. Inner leaf to be 100mm lightweight block, K value 0.16, (Aircrete, Celcon solar, Topblock toplite standard). Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

TANKED PROTECTION.

Vandex Super
Type A waterproofing in accordance with BS 8102: 1990 to give a protection level of grade 2 (suitable for concrete surfaces and storage areas only as detailed in BBA certificate).

Ensure that all materials and products are compatible. Assess structure for suitability of tanking system and ensure substructure is free draining. The concrete surface must be examined for defects and repaired in accordance with manufacturer's details if required. All retaining elements are to be detailed by a Structural Engineer.

All materials and products to be installed by a competent contractor strictly in accordance with the manufacturer's recommendations, BS 8102 and BBA certificate.

Concrete surfaces to be prepared for waterproofing system by being bush hammered, scabbled or sandblasted and then wetted down.
Apply two coats of Vandex Super Crystalline Waterproofing, to the wall and floor slab surface with a trowel or suitable spray equipment.
Provide a coved fillet with a suitable mortar at wall and floor junction Ensure continuity between wall and floor waterproofing and around the structure.

Penetrations through waterproofing to be kept to a minimum and detailed by specialist waterproofing manufacture where unavoidable.
Vandex Premix to be used as a final coat in areas where enhanced resistance to mechanical abrasion is required.
Provide 77.5mm Celotex PL4000 insulated plasterboard dry-ling and floor finish as required strictly in accordance with manufacturer's recommendations.

Executive Summary

A All surface water arising can be managed on site. There has been a single storey side and rear extension constructed in Past.

B All surface water arising from roofed areas is controlled by direct infiltration through soakaways for the single storey side & rear extension. AS the proposed extension will be built on top of the existing area therefore there will be no change to the existing SUDS in place.

C All planted areas will be adapted to include bio-retention planting as existing.

D There is no design outfall away from the site.

E All SuDS on site are already installed with full consideration to long term maintenance.

F Exceedance flows and flows arising from system failure can be accommodated on site.
G The use of SuDS techniques on site will mitigate and treat the run-off volumes.

Surface water disposal strategy

Design Criteria

In line with the SuDS management train, the following hierarchy will be considered in applying the use of SuDS into the proposed development scheme.
The surface water disposal strategy will be required to manage the run off from:
• Flat roofs
• Parking areas
• Footpaths and driveways

Infiltration devices

Due to the good infiltration rates associated with the local geology, Section 2.3, infiltration devices appear ideally suited for this site. Therefore, they can be designed to accommodate design rainfall events (designed in line with BRE365 and Part H of the Building Regulations and at least 5m away from any structure).

Design

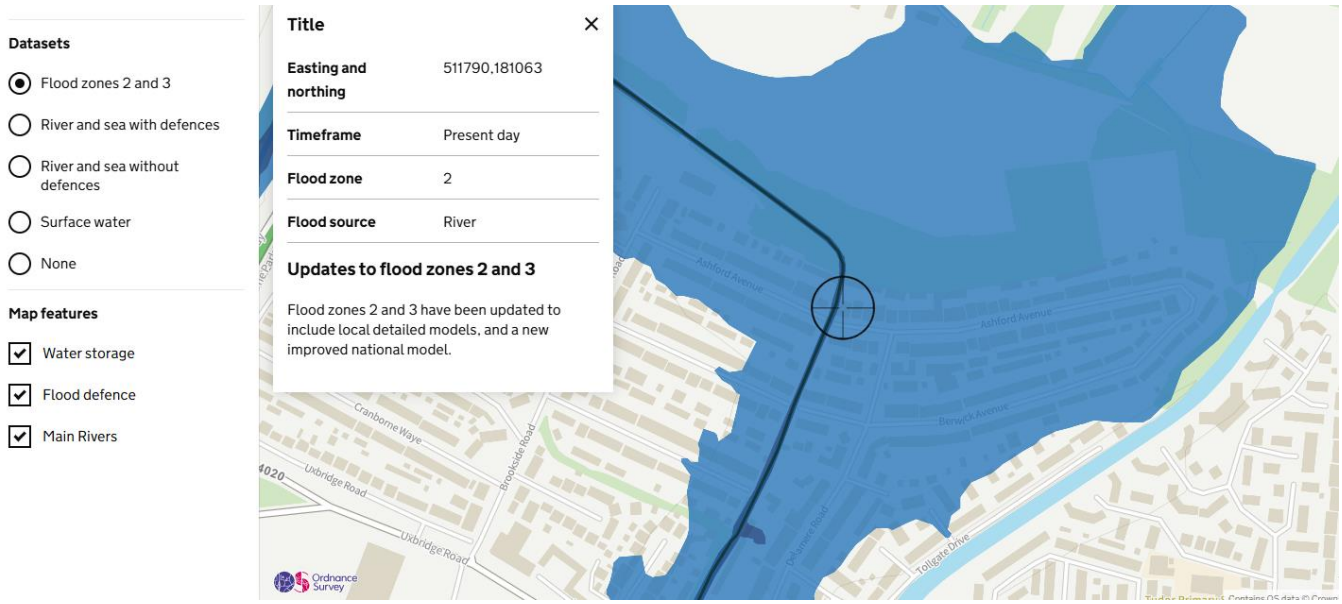
All surface water arising from roofed areas is controlled by direct infiltration through soakaways.

Notes:
• For this report the drained area to the soakaways arises from the area of roof plus a x1.1 allowance for urban creep.
• The soakaways are designed for all events up to and including the M100 6hr event.
• An allowance of x 1.4 is made for climate change in line with current best practice.
• A 100mm diam balance pipe will link the 1 rear unit only for the NEW EXTENSION.
The existing soakaway will retain as its provided to the main dwelling.

NOTE: THERE IS ALREADY A SOAKAWAY AT THE REAR OF THE PROPERTY

AS THE EXTENSION IS ON TOP OF THE EXISTING FLOOR THEREFORE THERE WILL MINIMAL FLOOD RISK.

Appendix 1


Datasets
Flood zones 2 and 3
River and sea with defences
River and sea without defences
Surface water
None
Map features
Water storage
Flood defence
Main Rivers
Title
Easting and northing
511790,181063
Timeframe
Present day
Flood zone
2
Flood source
River
Updates to flood zones 2 and 3
Flood zones 2 and 3 have been updated to include local detailed models, and a new improved national model.
Ashford Avenue
Cranborne Waye
Brookside Road
Uxbridge Road
Berwick Avenue
Tollgate Drive
Ordnance Survey

Appendix 2

Flood risk from surface water

'Medium' means between 1% and 3.3% chance of a flood each year.