

Site Address:

Land Adjacent to 11 Ferrymoor,
Ham,
Richmond,
TW10 7NB

Date: 10 June 2022

Your Ref:

Our Ref : TV/3502/14368_Rev2

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Flood Risk Assessment

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Herrington Consulting Ltd have been commissioned to undertake an appraisal of the risk of flooding to the proposed development at **Land Adjacent to 11 Ferrymoor, Ham, Richmond, TW10 7NB.**

The purpose of this report is to provide the findings of the assessment that has been undertaken to appraise the risk of flooding from all sources, in particular groundwater, demonstrating that the site is at low risk of flooding from all sources. It would not be expected for the development proposals to increase the risk of flooding to the surrounding area.

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Site Location

The site is located at OS coordinates 516807, 172155, off Ferrymoor in Ham, Richmond-upon-Thames. The site covers an area of 309m² and currently comprises garages and car parking area.

Proposed Development

The proposals for development are for the demolition of the existing garage block and redevelopment of the site to comprise 2no. three-storey, four-bed townhouses (Class C3), with associated amenity space, car and cycle parking and refuse stores.

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Assessment of Flood Risk

Within this section, the risk of flooding from a range of sources has been appraised.

Risk of Flooding from Groundwater: The Council has identified that the site is located within an area at between 50-74.9% susceptible to groundwater flooding, as shown by the Environment Agency's (EA) "Area Susceptible to Groundwater Flood map" (Figure 1).

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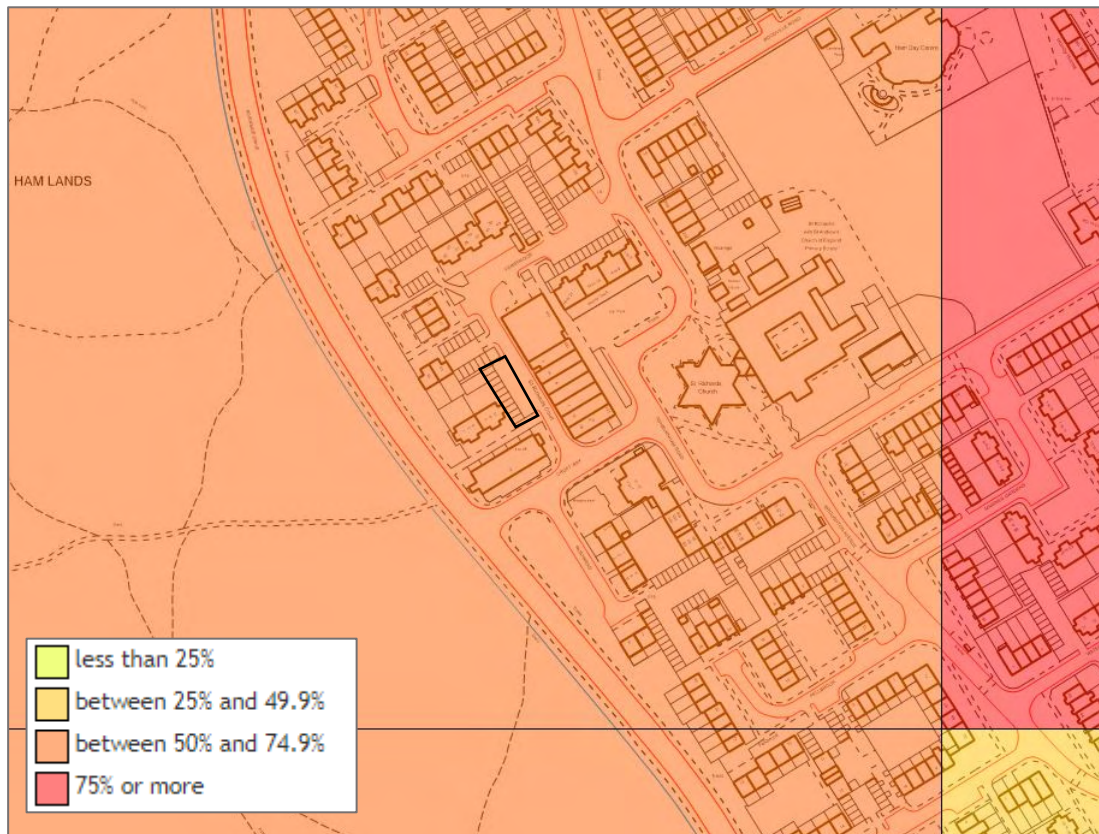


Figure 1 – EA’s “Area Susceptible to Groundwater Flood” map. Extracted from the Richmond-Upon-Thames Council online mapping. Site boundary delineated in black. (© Environment Agency).

This mapping is a high level strategic map, with low-resolution, and not ideally suited to assessing the risk of flooding on a site specific scale. Instead, this mapping is intended to provide an indication of the general areas which could be at risk from this source.

When considering the risk of flooding from groundwater to the site in more detail (site specific assessment), firstly, the bedrock geology underlying the site is London Clay Formation (clay and silt) which is not typically associated with groundwater flooding. Furthermore, the Defra Groundwater Flood Scoping Study (May 2004) indicates that no groundwater flood events were recorded in the very wet periods of 2000/01 or 2002/3 and the site is not located in an area where groundwater emergence is predicted.

This is further supported by additional mapping provided as part of the SFRA, which shows that the site is not located in a groundwater throughflow catchment area, nor is the site located in an area where above ground flooding from groundwater is predicted.

The site is currently 100% impermeable and the development does not include the introduction of any below ground structures. On this basis, and taking into account all of the evidence above, it is concluded that the risk of flooding from this source is low, and that the development is not expected to increase the risk of flooding to the surrounding area.

Risk of Flooding from Rivers, Ordinary and Man-Made Watercourses: Inspection of OS mapping and the EA’s ‘Flood Map for Planning’ (Figure 2) identifies that the site is located within Flood Zone 1 (i.e. and area with less than 0.1% chance of being affected by flooding in any given year). Consequently, the risk of flooding from this source is considered to be *low*.

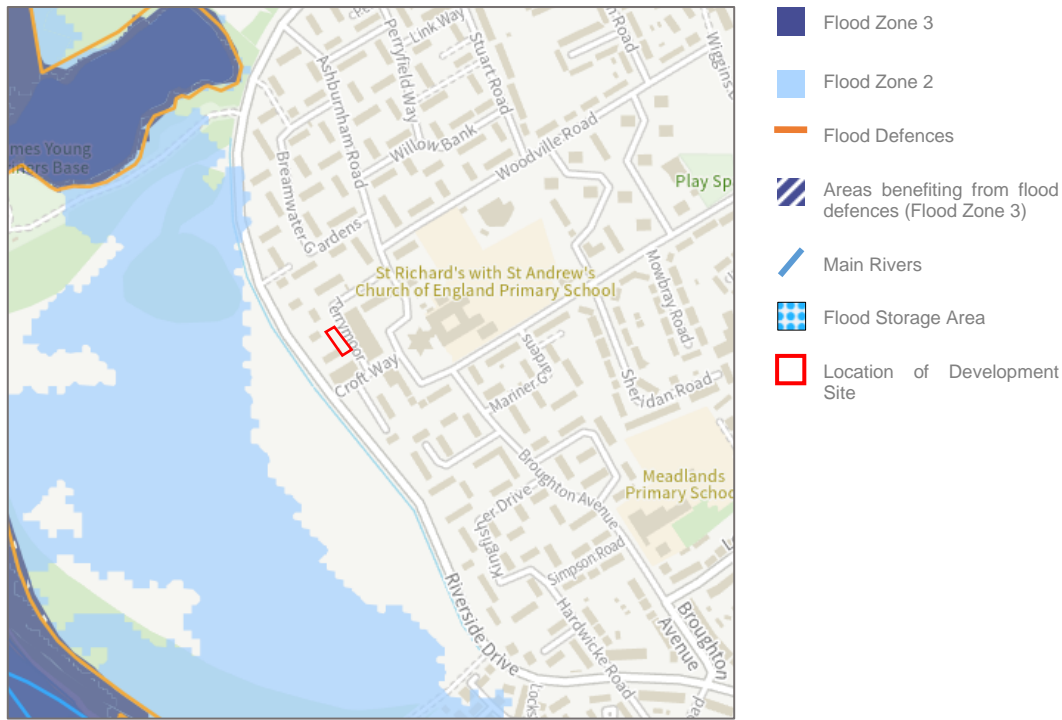


Figure 2 – EA's 'Flood Map for Planning' (© Environment Agency).

Risk of Flooding from the Sea: The site is located a significant distance inland and is elevated well above the predicted extreme tide levels. Consequently, the risk of flooding from this source is considered to be *low*.

Risk of Flooding from Surface Water: Inspection of the EA's 'Flood Risk from Surface Water' map (Figure 3) indicates that the site is in an area considered to be at 'very low' risk from surface water flooding. The proposals also reduce the impermeable area of the site by the inclusion of gardens for the proposed dwellings. It is therefore concluded that the risk of flooding from this source is *low*.

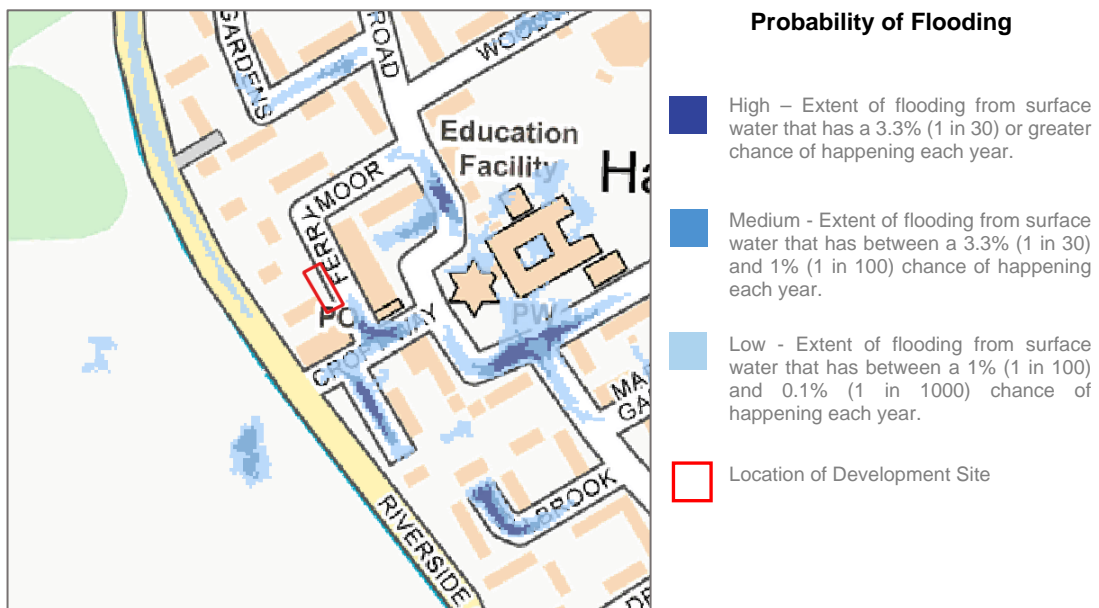


Figure 3 - EA's 'Flood Risk from Surface Water' map (© Environment Agency).

Risk of Flooding from Sewers: Inspection of the asset location map provided by Thames Water (Figure 4) indicates that there are separate foul and surface water sewers present in the area. In the event floodwater was to exit the sewer network, it would likely flow away from the site towards the lower lying land on the corner of Ferrymoor Road and Croft Way. As a result, flooding to the site from this source is considered unlikely and the risk is low.



Figure 4 – Asset Location Mapping provided by Thames Water.

Risk of Flooding from Reservoirs, Canals and Other Artificial Sources: The site is located in an area considered to be at risk of flooding from reservoirs, in the event that there is also flooding from rivers at the same time (simultaneously).

When considering the risk of flooding from this source it is necessary to take into account the fact that these reservoirs are located a significant distance from the site and are owned and operated by the relevant water companies, who have a duty under the Reservoirs Act to ensure that they are maintained in a good working order and are inspected regularly. Consequently, due to the high standard of protection the risk of flooding from these man-made water bodies is considered to be *low*.

Conclusion

It has been demonstrated that the site is at low risk of flooding from all sources. Given that the development is not located in an area where groundwater emergence is predicted, nor does the development include the introduction of below ground structures, it is concluded above that the development is not expected to result in an increased risk of flooding offsite.