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Flood Risk Assessment

71 Clarence Road Teddington TW11 0BN

This Flood Risk Assessment has been prepared on behalf of the applicant and in accordance with the *The Flood Risk Supplementary Planning Document* (SPD) 2016.

Site Information

- The proposed development site is located at 71 Clarence Road Teddington TW11 0BN and its use is currently residential. Looking over the lifetime of the proposed development, the site lies within **Flood Zone 1**. This means it has a low probability of flooding from rivers and the sea.

'Land within flood zone 1 has a low probability of flooding from rivers and the sea. Most developments that are less than 1 hectare (ha) in flood zone 1 do not need a flood risk assessment (FRA) as part of the planning application.'

Proposed Development

- The development proposals for the above site are: Demolition of existing extensions to be replaced by new single storey rear and side / wrap-around extension, addition of proposed 2 roof dormers to the rear (alike the dormers from No.69), and 1 roof dormer to the side (alike the dormer from No.73). Remodelling of existing outbuilding. Demolition of existing lean-to / roof overhang and extension on the footprint of existing lean-too roof. The overall height remains the same at 2.5m external. According to Section 3.1 and Appendix 1 of the Flood Risk SPD, the proposed development is therefore classified as *More Vulnerable*.

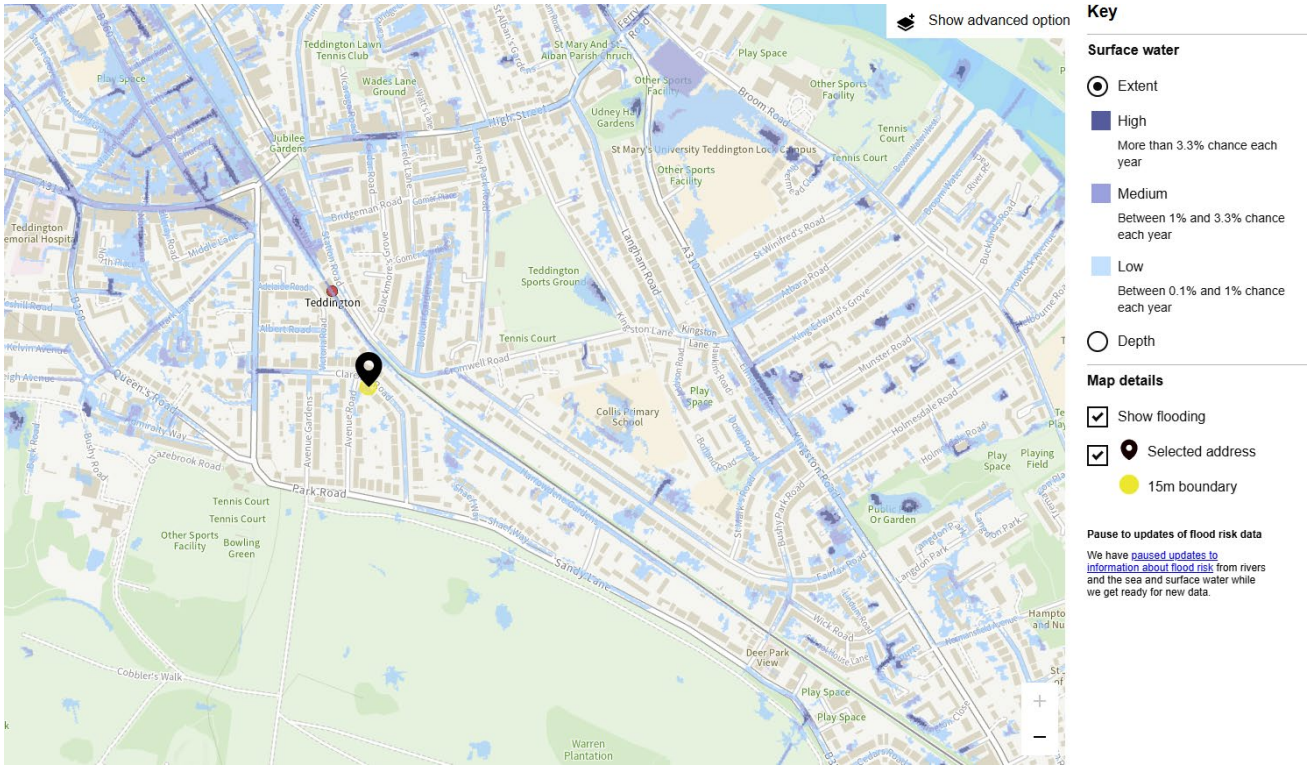
- The lifetime of the proposed development is assumed to be 100 years.

Assessing Flood Risk

- This site is in an area of low flood risk, as can be seen from the risk maps taken from the Environment Agency's data meaning that the potential risk of flooding is 0.1% to 1%. The site-specific flood hazards from all potential sources of flooding over the lifetime of the proposed development are listed below:

1. Surface Water: Very Low

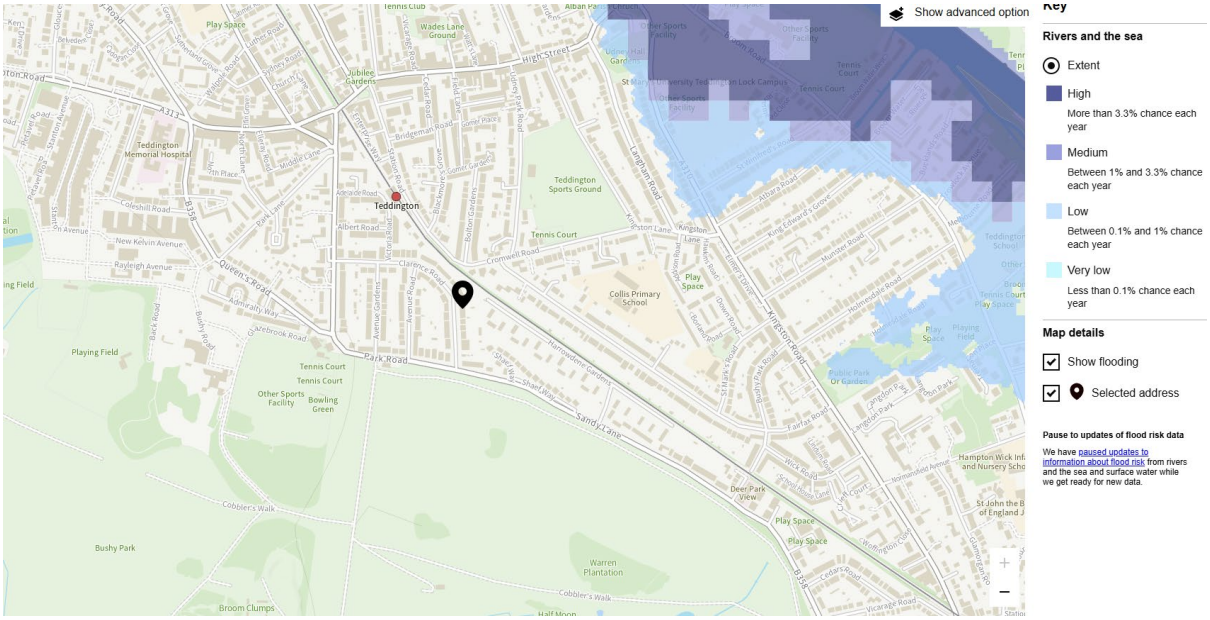
Very Low risk means that each year this area has a chance of flooding of between 1% and 3.3%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.



2. *Rivers and the sea: Very Low Risk*

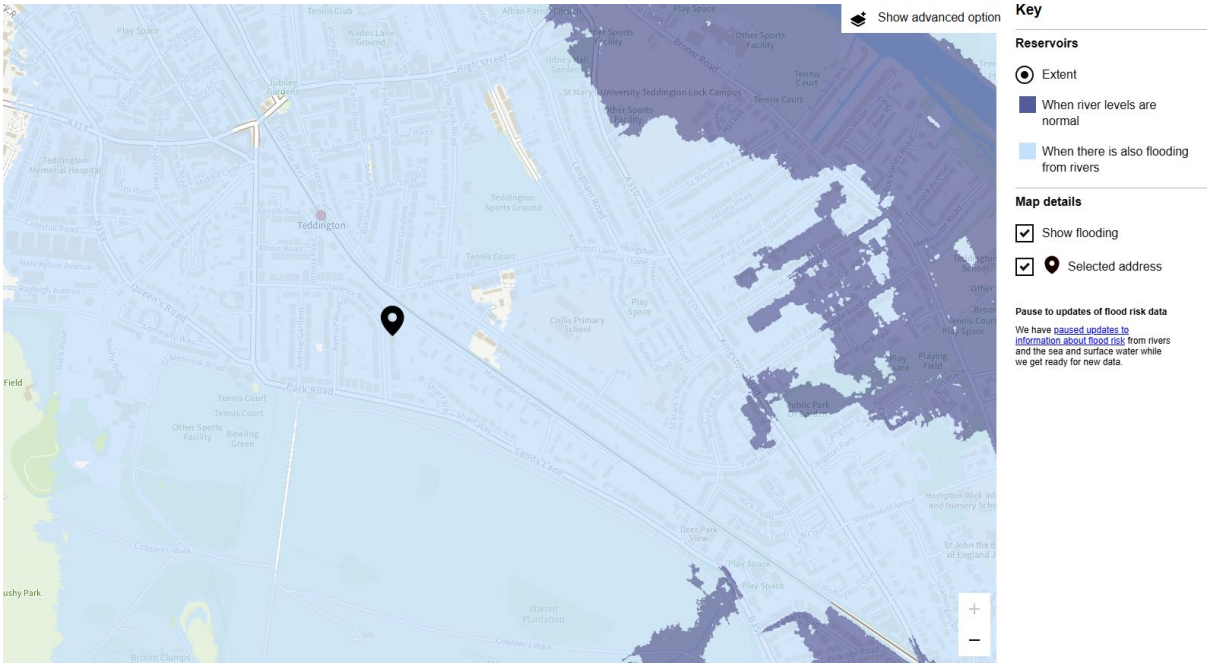
The environment Agency website confirms the location to be a 'Very Low risk area' regarding flood risk from seas, rivers and surface water, which means that each year this area has a chance of flooding of less than 0.1%. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

- The proposal is not within 20m of a river.



3. Other flood risks: Reservoirs

- There is a risk of flooding from reservoirs in this area.
- Flooding from reservoirs is extremely unlikely. An area is considered at risk if people's lives could be threatened in the event of a dam or reservoir failure.



Considerations

- There have been various extensions within the local vicinity of a similar nature and scale.

- Most of existing plot (over 70% of the site) is occupied by permeable surfaces.

Managing and mitigating Flood Risk

- The proposal will incorporate drainage measures to manage rainfall and surface water, in order to manage flow rates and runoff volumes emitted from a site, providing a downstream flood risk reduction.

- To prevent the scheme from negatively impacting the flood risk, the ground floor levels of the development will be set at the same level as the current ground floor level

- The proposal will include SuDs infiltration techniques to ensure that the development reduces the risk of flooding within the area and to neighbouring properties.

- Surface water from the roofs will be directed to local soakaways, situated a minimum distance of 5.0m away from the dwelling and 7.0m from neighbouring properties via 110mm diameter UPVC pipes surrounded in 150mm granular fill. Those will take all the surface water off the roofs of the new extensions and mimic the natural hydrological process.

- The soakaways to be minimum of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with geotextile surround to prevent migration of fines.

- The new floor construction will be in-situ concrete slab with screed over, which reduces the risk of flood water penetration in comparison to a suspended floor. It will also provide an effective seal against water rising up through the floor.

- External wall steel components will be specified as stainless steel or galvanised in order to reduce corrosion.

Conclusion

- The development has been carefully designed and laid out to ensure that it is safe
- The risk from flooding will be minimised following the above integrated mitigation measures