Flood Risk Assessment

Address

128 Boileau Road, London, SW13 9BP (single-storey rear extension)

The application site lies in the London Borough of Richmond upon Thames (LBRUT). It comprises a dwelling unit only. This is a predominantly residential area. A location map of the site is shown in Appendix A. The property does not have a basement. The new extension's floor height will be the same height as the existing floor level and will be of an insulated concrete design.

The site is approximately 450 metres from the River Thames. There is a disused reservoir some 650 metres to the west, which lies adjacent to the Thames.

Environment Agency Flood Maps for Planning are shown in Appendix B.

Geology:

The British Geological Survey's online map shows that the solid geology is London Clay, overlain by a stratum of Kempton Park Gravels (sand and gravel). The former is renowned for its low permeability while the gravels are likely to offer at least some porosity and possibly have a high infiltration rate, depending on its depth.

River Flooding (very low risk)

The site is located in Flood Zone 3a in an area benefitting from the presence of flood defences. The Planning Practice Guidance defines Flood Zone 3a as land that has a 'High Probability' of fluvial or tidal flooding without the local flood defences - a greater than 1 in 100 (> 1%) annual probability of river flooding, or a greater than 1 in 200 (> 0.5%) annual probability of sea flooding. The site benefits from the presence of the Thames Tidal Defences that are a collection of walls, embankments, flood gates, pumping stations and barriers designed to protect at-risk properties against flooding from the River Thames. Of these assets, the Thames Barrier is the most significant structure that offers protection against tidal flooding. The barrier provides protection against extremely high tides and storm surges moving from the North Sea down towards the Thames Estuary. The LBRUT Strategic Flood Risk Assessment (v 1.3, March 2021) cites that these flood defences currently protect properties within the floodplain up to a 1 in 1000-year event up to at least the year 2100.

Surface Water Flooding (very low risk)

Such flooding ccurs when excess rainwater does not infiltrate into the ground, or is not intercepted by urban drainage systems, and instead flows across the surface. The EA surface water flood map shows a low/very low risk of surface water flooding. Surface water will continue to discharge directly to the public foul/combined sewer via the existing combined connection.

Groundwater (low risk)

the British Geological Survey suggest that the site overlays London Clay. Being an impervious layer, the risk of groundwater flooding is therefore typically very low.

Other Sources

There is no indication in LBRUT's SFRA that this area has flooded from fluvial or non-fluvial sources (i.e. groundwater, sewer failure, artificial sources or overland flow/surface water flooding). The EA Risk of Flooding from Reservoir map shows the site is at risk of flooding when river flooding also occurs.

Historic Flooding

There is no record of this site having flooded from the EA or the Strategic Flood Risk Assessment (SFRA).

Residual Flood Risk

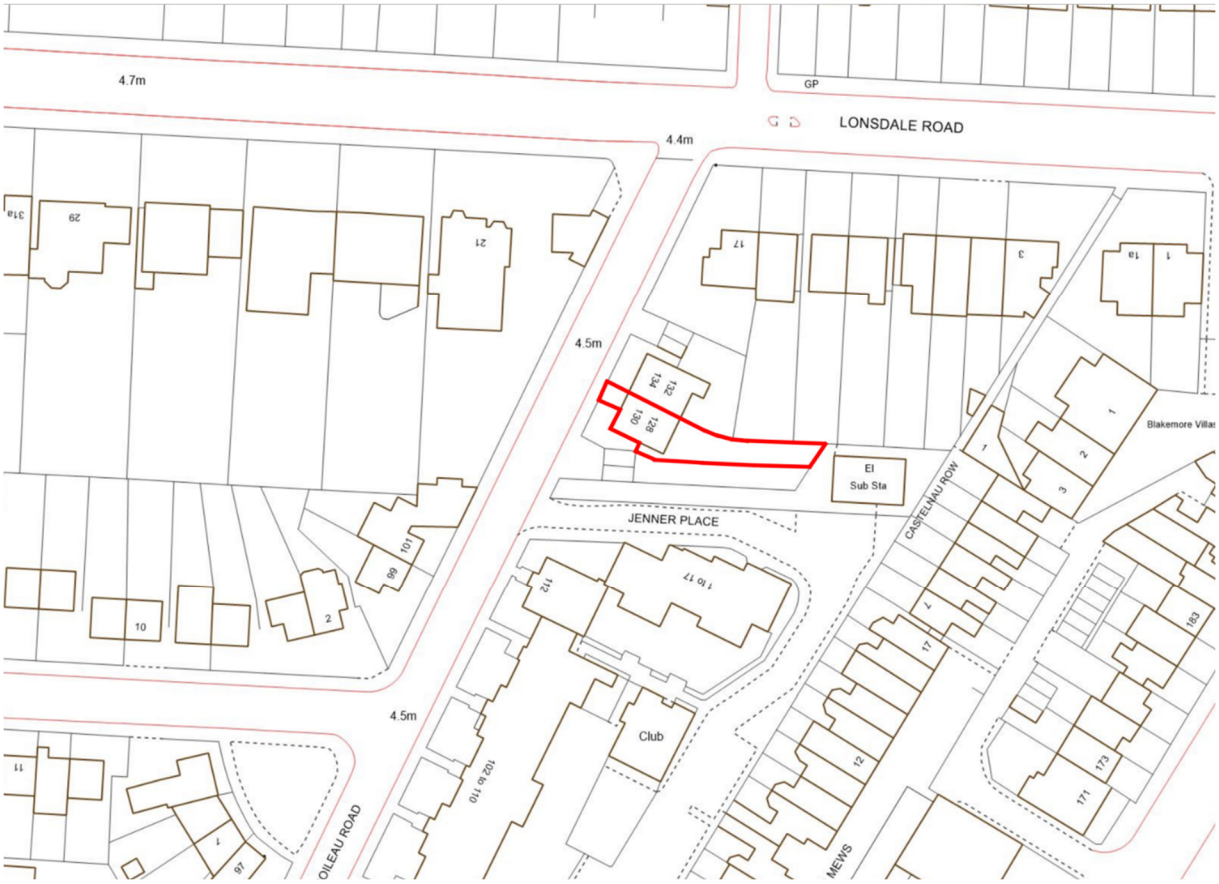
Whilst flood risk can never be entirely eliminated, it is considered that the residual flood risk to the site from all sources is low. Emergency evacuation routes are available to the south. In the event of a flood safe refuge can be taken on the 1st and 2nd floors.

Conclusion

The application site has a Low flood risk profile. The site located within Flood Zone 3 will benefit from the current River Thames flood defences. The defences are in good condition, with a formal plan in place for long-term maintenance.

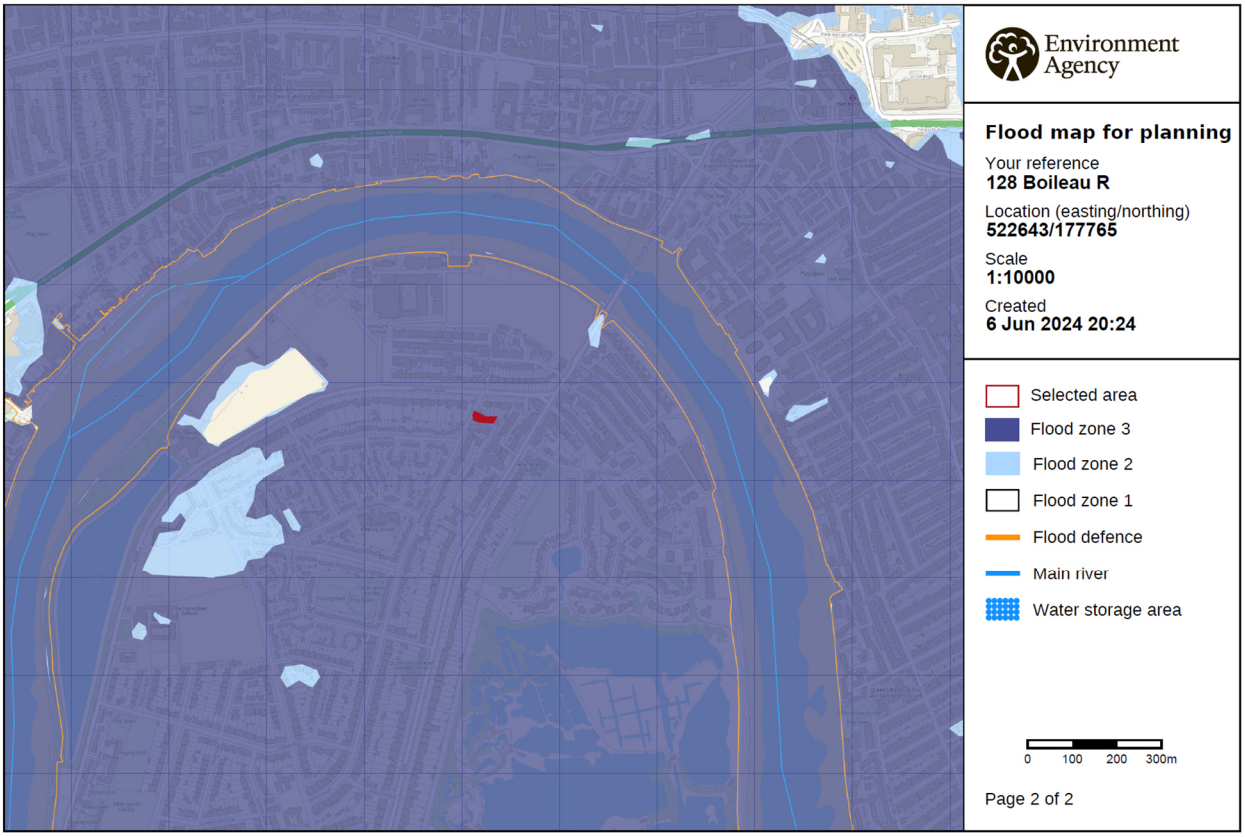
This proposed extension will not increase the flood risk, either on this site or to neighbouring properties, and so complies with the National Planning Policy Framework.

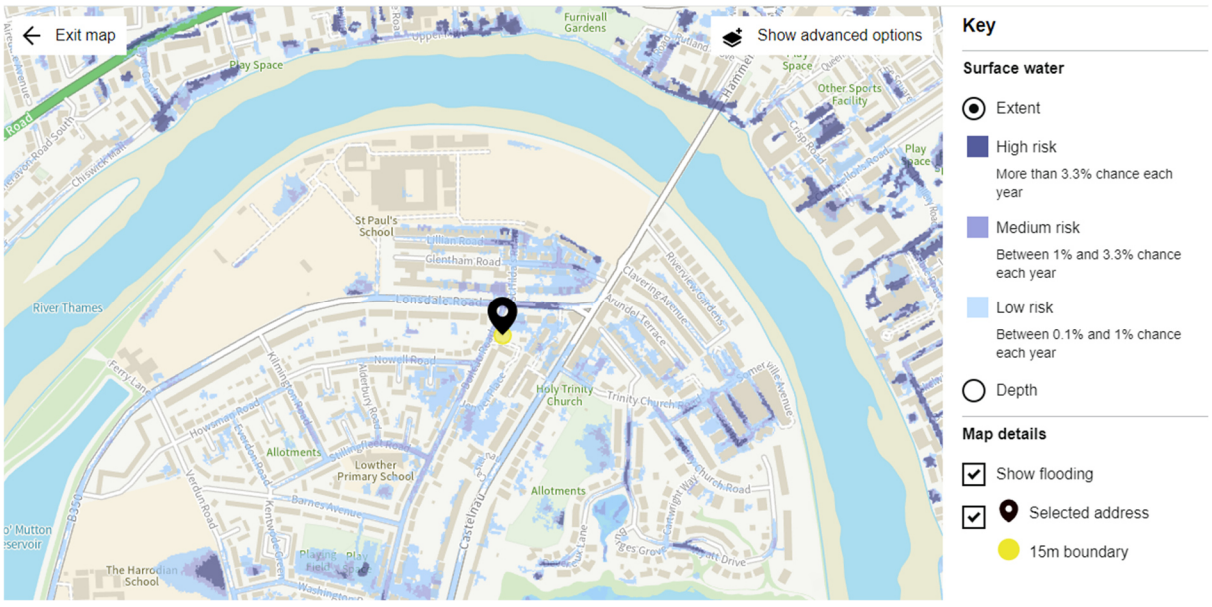
Appendix A



Location Plan

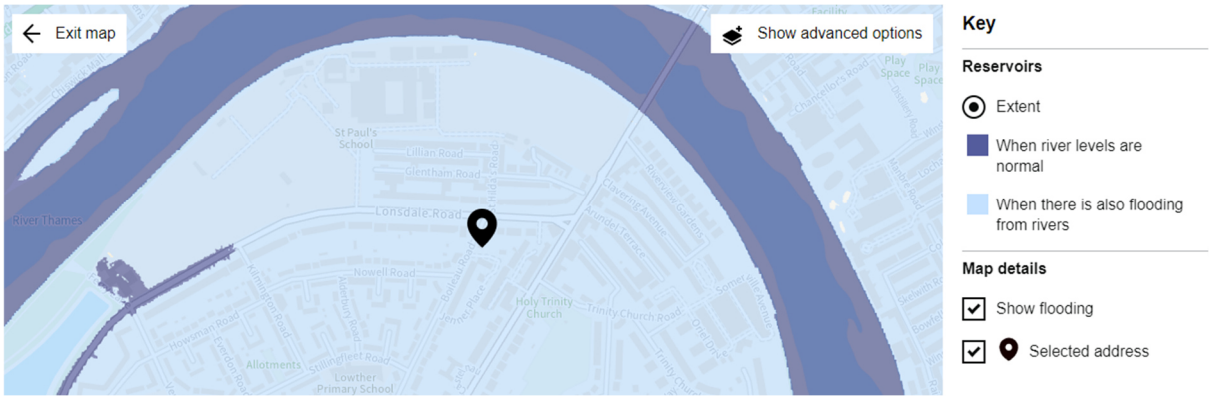
Appendix B





Extent of flooding from surface water

Extent of flooding from rivers or the sea



Maximum extent of flooding from reservoirs