

Flood Risk Assessment
REV_B

65 Elm Grove Road, Barnes SW13 0BX, 14th MAY 2021

The Proposal

The following flood risk assessment [FRA] has been prepared in accordance with the Environment Agency's advisory comments.

Following the Annex E of PPS25 states that flood risks should:

1. Be proportionate to the risk and appropriate to the scale, nature and location of the development.
2. Consider the risk of flooding arising from the development in addition to the risk of flooding to the development.
3. Consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the development may affect drainage system.

Scope of works

The property is to be reconfigured from its existing layout to become a part three storey single dwelling. The property is in the middle of a terrace and is of masonry construction with timber floors to all levels.

Proposed works

- Erection of a rear dormer over the existing rear outrigger and loft conversion.
- The work does not involve the addition of a basement
- The new extension will maintain the existing floor level and will be insulated concrete design.
- See attached Environment Agency form "Householder and other minor extension in Flood Zones 2 and 3".

Site

The site has been identified as within the Flood Zone 3 risk – an area with a high probability of flooding that benefits from flood defences (the area is unlikely to flood except extreme conditions - LOW RISK). This area could be flooded either from the sea or from the river. The chance of flooding from the sea is less than a 0.5% (or 1 in 200) in any year, and river flooding is 1% (a 1 in 100) or greater annual probability any year. Therefore, the chance of flooding each year is 0.5% (1 in 200) or less.

There is a high level of flood protection provided by the Thames Barrier and local river wall defences which defend the site so that the annual probability of flooding from the Thames is 0.1% or less.

Elm Grove Road is in an area that could be at risk of rapid inundation by flood waters in case the flood defences failed or were breached.

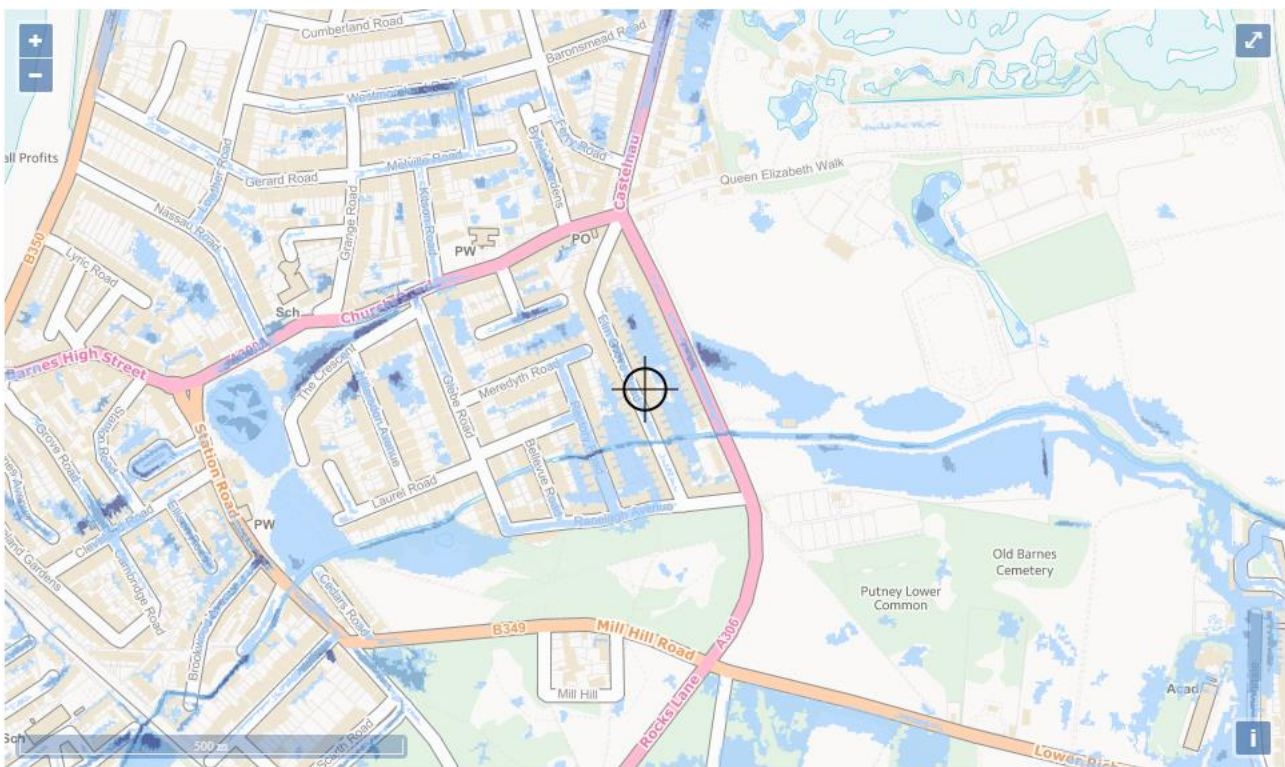


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Risk Limitation & Mitigation

The primary flood risk to the site is from the fluvial River Thames. As a slow responding catchment, there would be significant advance warning of potential flooding (at least several days), during which time any sensitive property could be removed.

From the government flood warning information service, the flood risk from rain or surface water is also low: *“Low risk means that each year this area has a chance of flooding between 0.1% and 1%. 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.”*



Extent of flooding from surface water

● High ● Medium ● Low ○ Very Low ⊕ Location you selected

According to the Environment Agency advises the minimum requirements for an FRA that is submitted to the Local Planning Authority for Residential/Industrial/Commercial extension less than 250m² within Flood zone 2&3 should confirm one of the following:

1. Floor levels within the proposed development will be set no lower than existing levels. and Flood proofing of the proposed development has been considered by the applicant and incorporated where appropriate.
2. Floor levels within the extension will be set 300mm above the known or modelled 1 in 100 annual probability river flood (1%) or 1 in 200 annual probability sea flood (0.5%) in any year. This must be demonstrated by a plan to OS Datum/GPS showing finished floor levels relative to the known or modelled flood level.

The property is a family dwelling and the additional space on the ground floor is predominantly for recreational and ancillary use and is not intended to be 'habitable' such as a self-contained dwelling or sleeping accommodation. The floor level within the proposed development will be set no lower than the existing levels.

65 Elm Grove Road is located in area where many properties have had benefits of recently constructed extensions. This proposal has been identified as very low risk.

Flood Resilience and Resistance Techniques

1. The main drain to the property will be fitted with a flow stop return valve to prevent water flowing into the building.
2. The homeowner will be advised to sign up to with the Environmental Agency's automatic flood warning system.
3. Air Vents will have flood covers to prevent water entry.
4. Non-return valves will be installed in all plumbing (sinks/toilets). Non-return valves will prevent backflow in cases of flooding.

Preservation of life/ means of escape in event of flood

1. The dwelling does not have any sleeping accommodation on the ground floor.

Sustainability and water efficiency

- The proposed alterations and extensions will be constructed in accordance with latest Building Regulations. All new materials used shall meet at least grade D in BRE's green guide.
- Surface waters will continue to be discharged to the existing combined drainage system. Foul waters will be discharged to the existing combined drainage system. The development includes the renewal of the Victorian drains within the premises, improving drainage and ensuring new drainage works efficiently and meets current Building Regulations.
- All new bathrooms and kitchen will be provided with water efficient appliances and fittings to minimise water use and the volume of waste water.

Conclusions

All of the proposed scheme is above ground level and as a result, we consider the risk to life, should flooding occur, to be minimal. The development will not constrain the natural function of the floor plain either by impeding floor flow or reducing storage capacity.