

#### Flood Risk Assessment for 59 Ennerdale Rd, Richmond TW9 2DN

- 1. The property is located within the London Borough of Richmond Upon Thames close to River Thames. It is proposed to build a single storey rear extension. This will add 22 square meters to the ground floor living space.
- 2. The property is located within a flood zone 2 and 3. It has a very low risk of flooding from rivers and sea.
- 3. The rear extension will be built wholly at ground level. The floor levels within the proposed development will be set no lower than the existing floor levels. There will be no accommodation below the external ground level.
- 4. Dence concrete blockwork will be used below ground level to foundation level reducing the risk of flood penetration.
- 5. The below slab DPM will be dressed up the wall with a positive overlap with the DPM.
- 6. The ground floor construction to be concrete slab and foundations with finishes either a screed or tiled. This will inherently reduce the effects of any flood penetration into unseen voids and cavities.
- 7. All wall ties and metal mechanical fixings will be specified as stainless steel or galvanised to avoid any possibility of corrosion.
- 8. Cavity wall insulation will be specified as foil faced to reduce the risk of water penetration into the board.
- 9. The cavity wall will be partially filled with insulation with a 25mm air gap. This will allow any moisture penetration to drain down the cavity wall and out of low-level perp-end drainage holes.
- 10. A drainage gulley / channel will be located outside the external door and external patio doors to drain away any water that may lead towards these opening.
- 11. Additionally electrical switches and sockets will be at least 1m above finished floor level. Use lime plaster instead of gypsum on walls. Fit stainless steel or plastic kitchen instead of chipboard ones if possible. Position heating system boiler 1.5 meters above ground level. Use white aluminium window / doors instead of wooden. Sealing joints between walls and frames of doors.
- 12. If the property is at risk of rapid flooding, the occupants can take refuge on the upper floor of the building.



# Householder and other minor extensions in Flood Zones 2 and 3

Applications for planning permission should be accompanied by a completed form. An electronic version can be submitted by 'printing' it to a PDF writer.

This guidance is for domestic extensions and non-domestic extensions where the additional footprint created by the development does not exceed 250 sq. metres. It should NOT be applied if an additional dwelling is being created, e.g. a self contained annex.

We recommend that:

#### Planning Authorities:

- 1) Refer the applicant to the standing advice pages on the Environment Agency website or provide them with a copy of this page for them to include as part of the planning application submission.
- 2) Check the planning application to ensure that one or other of the mitigation measures from the table below has been incorporated.

#### Applicants:

Complete the table below and include it with the planning application submission. The table, together with the supporting evidence, will form the Flood Risk Assessment (FRA) and will act as an assurance to the Local Planning Authority (LPA) that flood risk issues have been adequately addressed.

Applicant to choose one or other of the flood mitigation measures below	Applicant to provide the LPA with the supporting Information detailed below as part of their FRA	Applicant to indicate their choice in the box below. Enter 'yes' or 'no'
Either;  Floor levels within the proposed development will be set no lower than existing levels AND, flood proofing of the proposed development has been incorporated where appropriate.	Details of any flood proofing / resilience and resistance techniques, to be included in accordance with `Improving the flood performance of new buildings' CLG (2007)	YES.
Floor levels within the extension will be set 300mm above the known or modelled 1 in 100 annual probability river flood (1%) or 1 ir 200 annual probability sea flood (0.5%) in any year. This flood level is the extent of the Flood Zones	-	

### Subterranean/basement extensions

Due to the risk of rapid inundation by floodwater basements should be avoided in areas at risk of flooding. The LPA may hold additional guidance for basement extensions.

Self-contained basement dwellings are `highly vulnerable' development and should not be permitted in Flood Zone 3. We are fundamentally opposed to these developments.

#### Continued...

<sup>&</sup>lt;sup>1</sup> Ordnance Datum or the abbreviation 'OD' is the mean level of the sea at Newlyn in Cornwall from which heights above sea level are taken. The contour lines on Ordnance Survey maps measure heights above OD for example, though these are not accurate enough for a flood risk assessment..

Completive impact of minor extensions and the removal of Permitted Development rights.

PPS25 paragraph D16 highlights the potential for the cumulative impact of minor extensions to have a significant effect on flood risk. Where local knowledge (Strategic Flood Risk Assessment held by the LPA/information provided by the parish council) suggests this is the case the guidance contained in FRA guidance note 2 should be applied. FRA guidance note 2 can also be applied where permitted development rights have been removed for flood risk reasons. The Environment Agency does not usually comment on minor development in this category.

Permeable paving and changes to permitted development rights for householders
On the 1st October 2008 the General Permitted Development Order (GPDO) in England was amended by the Government (Statutory Instrument 2008 No. 2362).

e of the changes introduced by the GPDO amendment is the removal of permitted development rights for householders wishing to install hard surfacing in front gardens which exceeds 5sq. metres (i.e. 1m x 5 m) without making provision to ensure permeability. This means that use of traditional materials, such as impermeable concrete, where there is no facility in place to ensure permeability, requires an application for planning permission.

In order to help and advise householders of the options for achieving permeability and meeting the condition for permitted development status the Department for Communities and Local Government (CLG) has produced guidance on permeable paving which can be found on the following link <a href="http://www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens">http://www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens</a>

The Environment Agency support this change to the GPDO as it is in line with the recommendations of the Pitt Report regarding the need to better tackle the impact of surface water flooding. However, Local Planning Authorities should determine these applications in accordance with the CLG guidance **without** consulting the Environment Agency.

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# 59, ENNERDALE ROAD, RICHMOND, TW9 2DN

# Rivers and sea

# Very low risk

risk

Very low risk means that this area has a chance of flooding of less than 0.1% each year.

# Surface water risk

#### Medium risk

Medium risk means that this area has a chance of flooding of between 1% and 3.3% each year.

Lead local flood authorities (LLFA) manage the risk from surface water flooding and may hold more detailed information. Your LLFA is **Richmond upon Thames**.

## Reservoir risk

There is a risk of flooding from reservoirs in this area, reservoirs that can affect this area are:

- Brent (aka Welsh Harp Reservoir)
- Queen Elizabeth II
- Queen Mary
- Queen Mother
- Staines North
- Staines South
- Walton Bessborough
- Walton Knight
- Wraysbury

Groundwater risk

Flooding from groundwater is unlikely in this area