Flood Risk Assessment - 29 Hartington Road, Twickenham, TW1 3EL

Proposed First Floor Extension and Rebuild of Existing Ground Floor Rear Wall and Roof

Description of Development

29 Hartington Road is a two-storey dwelling house of single occupancy, situated on a residential road. The proposed application includes a 7m2 first floor rear extension, plus a rebuild of the ground floor rear wall with no change to footprint.

The London Borough of Richmond upon Thames is the Local Planning Authority and Lead Local Flood Authority. Thames Water (TW) is the Drainage Undertaker and Water Authority.

Flood Zone Classification

The Environment Agency (EA) classifies the site as Zone 1 (see appendix 1) but due to the risk of surface water identified in the Richmond Strategic Flood Risk Assessment (SFRA) (March 2021) this proposal will be assessed as per Zone 2.

Policy LP21

Policy LP21 of the Local Plan states 'A. All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere.'

Sequential Test

The National Planning Policy Framework paragraph 174 states:

> *"Applications for some minor development and changes of use [60] should not be subject to the sequential or exception tests but should still meet the requirements for site-specific flood risk assessments set out in footnote 59.'*
>
> *(60) This includes householder development, small non-residential extensions (with a footprint of less than 250m2) and changes of use"*

As a physical extension of an existing dwelling, proposals at the site are considered as 'minor development'. The National Planning Practice Guidance (NPPG) supplements the NPPF, outlines 'minor development' in a householder development context as;

> *"sheds, garages, games rooms etc within the curtilage of the existing dwelling, in addition to physical extensions to the existing dwelling itself. This definition excludes any proposed development that would create a separate dwelling within the curtilage of the existing dwelling e.g. subdivision of houses into flats".*

As such, the proposal is not required to undergo the Sequential or Exception Test processes.

Site Vulnerability

Table 2 of the NPPG classifies the residential site use as 'more vulnerable' to flooding. Table 2 also clarifies that 'more vulnerable' sites are compatible with Zone 2.

The NPPG identifies minor developments are unlikely to raise significant flood risk issues unless:

- they would have an adverse effect on a watercourse, floodplain or its flood defences;
- they would impede access to flood defence and management facilities, or;
- where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows.

The proposal will not have an adverse effect on a watercourse, flood plain, impede access to flood management facilities, or contribute to cumulative impact which would have a significant effect on local flood storage capacity or flood flows.

The EA standing advice on flood risk assessment has been followed to ensure the development is designed and constructed in an appropriate manner.

Direct discharge of surface water via existing private infrastructure to the adjacent Thames Water controlled combined foul and surface water sewer network is the most appropriate means of draining the site. The discharge rates from the site will not be affected by the proposals.

Environment Agency - Householder and other minor extensions in Flood Zones 2 and 3 Guidance

The Environment Agency 'Householder and other minor extensions in Flood Zones 2 and 3' guidance document was completed and is shown in Appendix 2. An excerpt is shown below, highlighting that the "Floor levels within the proposed development will be set no lower than existing levels AND, that flood proofing of the proposed development has been incorporated where appropriate."

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
Or; 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 flood level is the extent of the Flood Zones	This must be demonstrated by a plan that shows finished floor levels relative to the known or modelled flood level. All levels should be stated in relation to Ordnance Datum[1]	No

Flood Proofing and Resilience

In line with 'Improving the flood resilience of buildings through improved materials, methods and details (CLG 2007)' The building design will ensure that flood water will be excluded where possible and will speed recovery in the event that water enters the property.

Where possible, new building materials for the extension and construction will be non-permeable, will not experience lasting damage by water and will facilitate rapid drying out of the building in the event of a flood.

A few of the measures that will assist in these aims are detailed below.

- The floor level within the proposed development will be set no lower than existing levels, 600mm above existing ground level.
- Rebuilt external wall will be constructed out of engineering bricks which are rated as 'good' for water penetration, drying ability and retention of pre flood dimensions in table 6.2 of guidance.
- 'Hyload' Damp Proof Membranes (d.p.m.) will be included to minimise the passage of water through ground floors. 'Hyload' product is greater than 1200 gauge to minimise ripping.
- Under floor services using ferrous materials will not be used.
- The site has a gradient from the front of the property to the back, encouraging gravity drainage away from the property.
- Where possible, all services entries will be sealed.
- Rear doors will be 600mm above the level of the ground in the garden (as is existing).
- Floor insulation will be Celotex XR4000 110mm – a closed cell type insulation as recommended in the guidance.
- Foundation ground beams will be reinforced concrete and will be impermeable to water.
- Robust design with all new electrical socket outlets set 450mm above finished floor level.

Conclusion

The site is within an area susceptible to surface water flooding. However, as the proposed works would not reduce the level of any of the floor and will benefit from the additional flood proofing and resilience measures detailed, this is not considered to have an adverse impact on flood risk. The proposal is therefore in accordance with Policy LP21 of the Local Plan.

Appendix 1 – Environment Agency Flood Map for Planning

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
29 Hartington	**516758/174020**	**1 Jul 2024 14:15**

Your selected location is in flood zone 1, an area with a low probability of flooding.

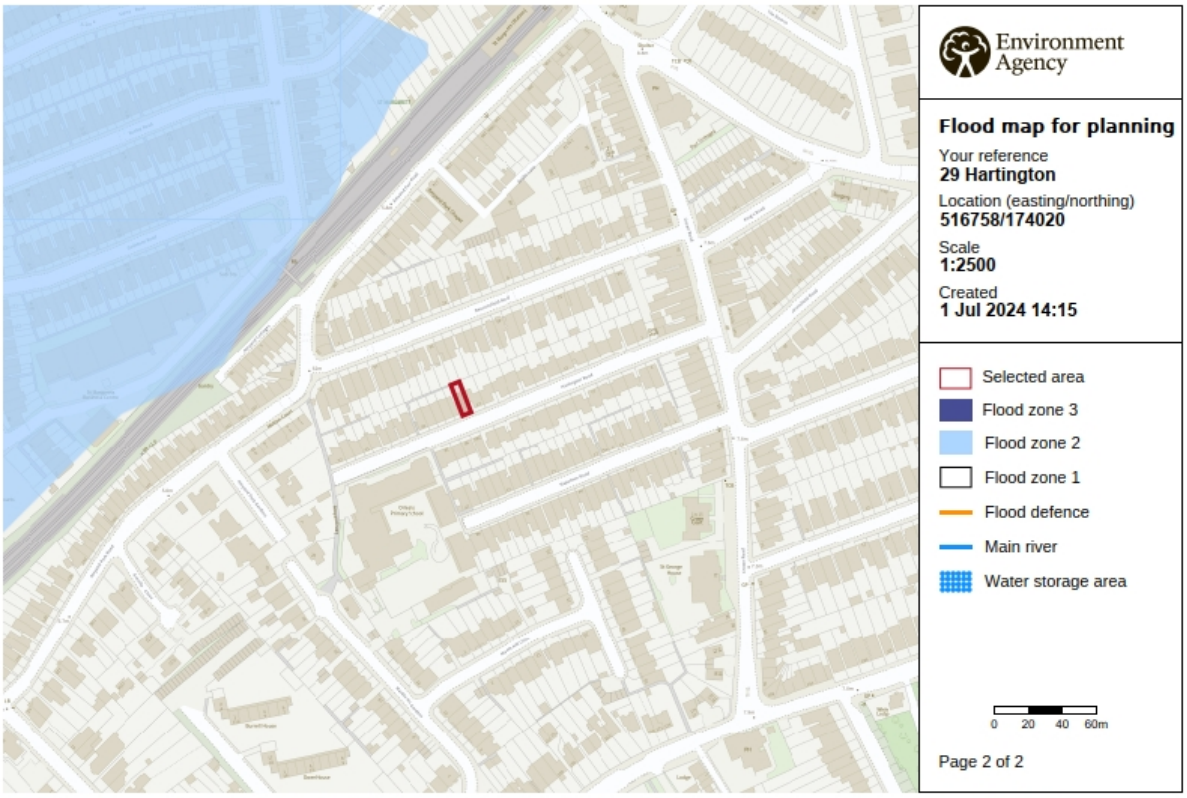
You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- **In an area with critical drainage problems as notified by the Environment Agency**
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.



Appendix 2 - EA - Householder and other minor extensions in Flood Zones 2 and 3

FRSA England (national) version 3.1
Advice issued: April 2012

Environment Agency

Route to this page -->Step by Step-->non-res < 250m2-->No culvert/20m-->Flood Zone 2

Restart Print Form

Householder and other minor extensions in Flood Zones 2 and 3

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. In this instance consult the Environment Agency.

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
Or; 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 flood level is the extent of the Flood Zones	This must be demonstrated by a plan that shows finished floor levels relative to the known or modelled flood level. All levels should be stated in relation to Ordnance Datum[1]	No

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 opposed to these developments.

Continued...

[1] 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..

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

There is potential for 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).

One 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 http://www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens

The Environment Agency supports the GDPO amendment 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.

End of comment