

FLOOD REPORT

22 BRENTBRIDGE, MANCHESTER, M14 6AS



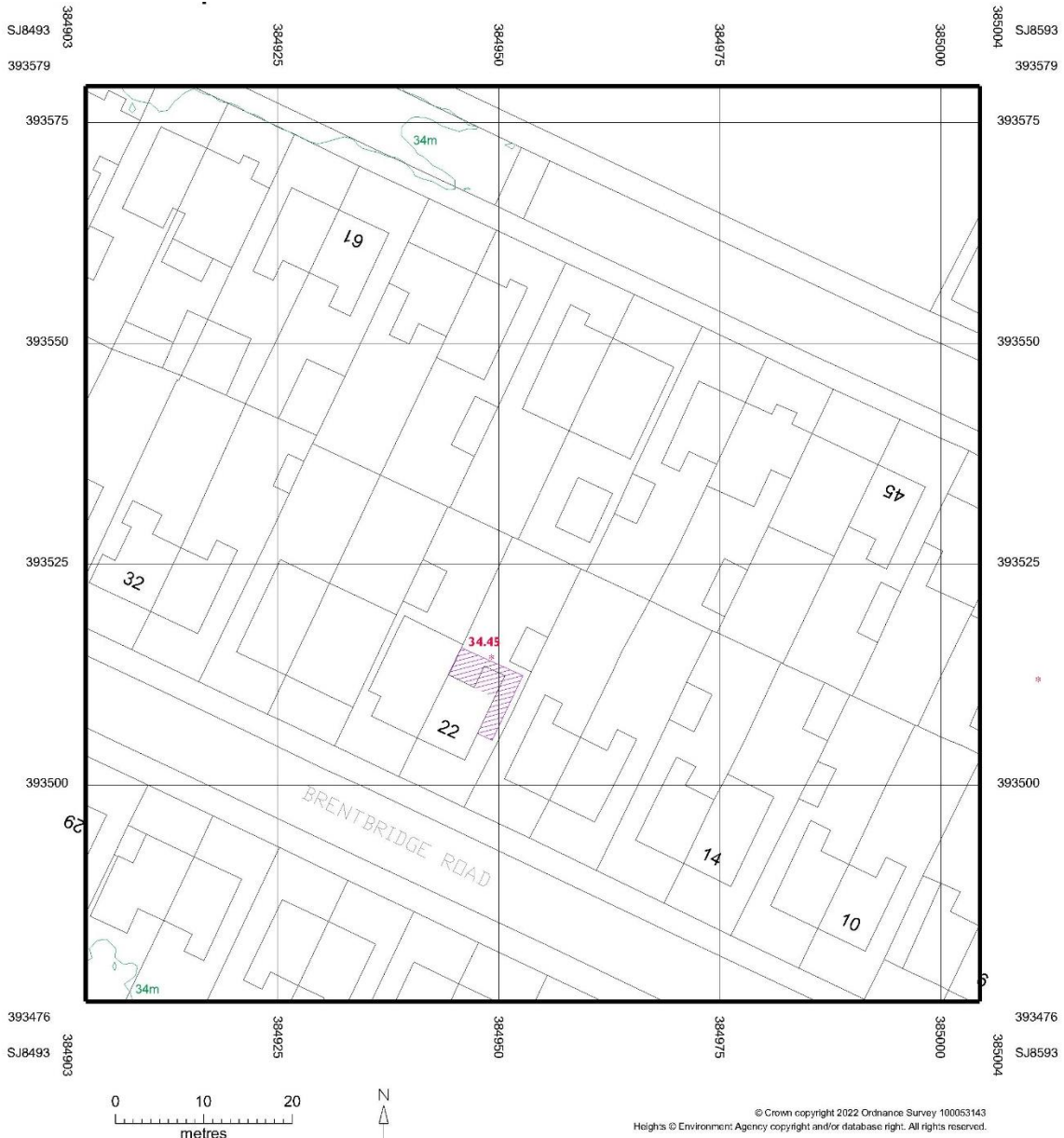
This report provides additional information in line with the Environment Agencies minor standing advice to accompany a planning application for an extension to 22 Brentbridge Road.



Images from Google Earth & Street

SITE INFORMATION

The Site is located in Fallowfield in Manchester in a residential area,
To the North of the site is Cringle Brook which runs via a culvert in the area closest to the property.



Grid reference: 384940E, 393511N for extension location for EA Flood Zone.

Grid Reference: 384940E, 393511N, as Reference for data given by EA.

The National Grid Reference for the site is 384940E, 393511N.

OS data and LIDAR topographical levels of the immediate area surrounding the site indicates that the landscape is relatively level between 34 and 35 m AOD. The general level to the area North of Brentbridge Road rises from 34 to 35m with the ground floor level at the location of the proposed extension being 34.45 m AOD.

This is based on OS elevation data obtained for the Site to a 1m resolution with a vertical accuracy of ± 150 mm.

FLOOD RISK ASSESSMENT

According to data provided by the Environment Agency (see following), the site and the area where the extension is proposed falls within Flood Zone 2 and is classified as being at medium probability of flooding.



Environment
Agency

Flood map for planning

Your reference
22 BR

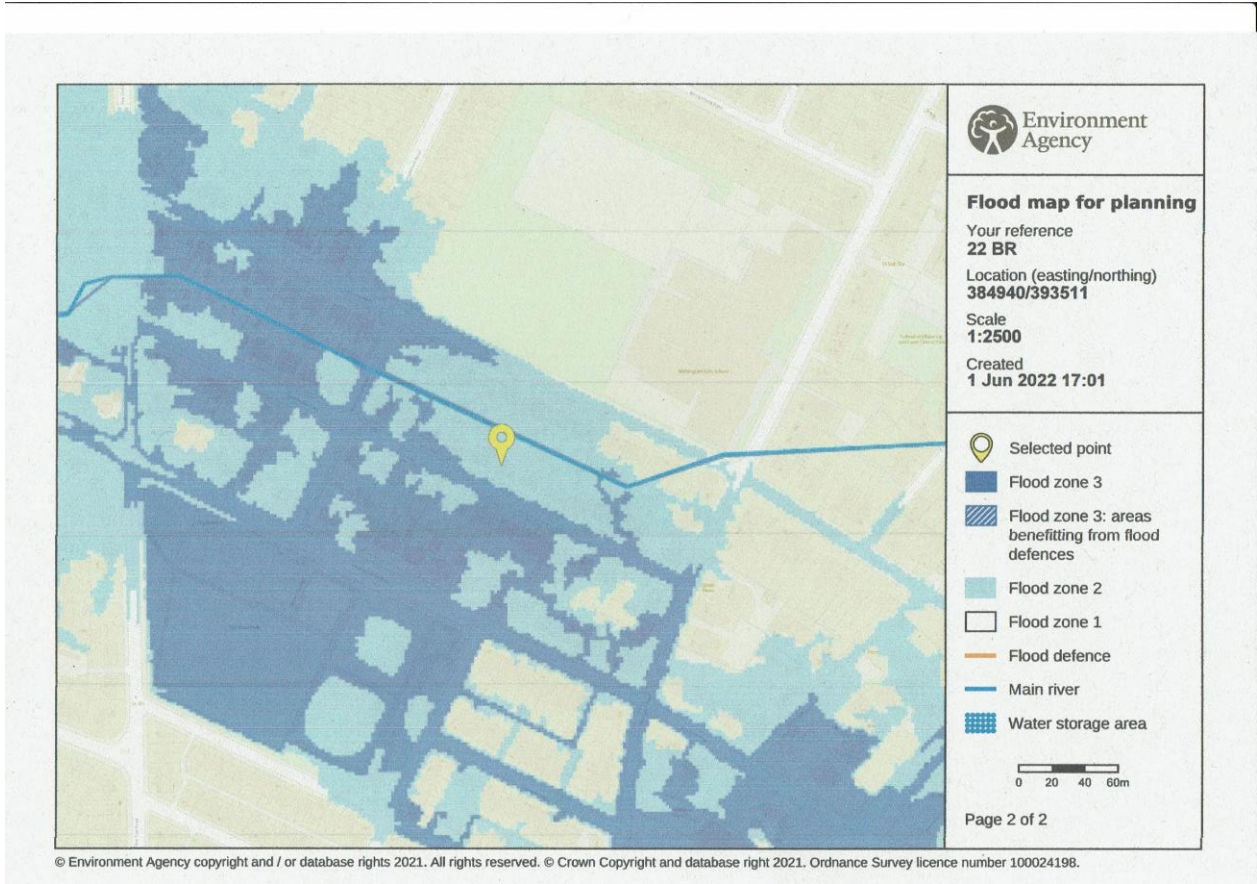
Location (easting/northing)
384940/393511

Created
1 Jun 2022 17:01

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)



PLANNING & ENVIRONMENT AGENCY ADVICE

Planning applications for developments in Flood zones 2 and 3 require a flood report. The EA Standing Advice guidance covers domestic extensions where the additional footprint created by the development does not exceed 250m². The proposed extension is considered to fit within the EA's standing advice for domestic extensions.

"Minor extensions standing advice:

you need to provide a plan showing the finished floor levels and the estimated flood levels. Make sure that floor levels are either no lower than existing floor levels or 300 millimetres (mm) above the estimated flood level. If your floor levels aren't going to be 300mm above existing flood levels, you need to check with your local planning authority if you also need to take flood resistance and resilience measures. State in your assessment all levels in relation to Ordnance Datum (the height above average sea level). You may be able to get this information from the Ordnance Survey. If not, you'll need to get a land survey carried out by a qualified surveyor. Your plans need to show how you've made efforts to ensure the development won't be flooded by surface water runoff, eg. by diverting surface water away from the property or by using flood gates."

The Environment Agency was contacted for the relevant information:

According to Environment Agency mapping, no historic flood events have been recorded at the Site (EA, 2022).

Modelled flood levels and flood extents for the site and Cringle Black Brook were requested from the EA as part of the Product 4 data request (see following).

Both defended and undefended modelled flood levels have been provided for the site, but using a precautionary approach the undefended levels will be used for this assessment as they are higher:

Extract from EA data showing Flood Levels for Site.

Map Reference	Model Node Reference	Data	Undefended				Defended			
			1 % AEP (1 in 100 year) + 30% Increase flow	1 % AEP (1 in 100 year) + 35% Increase flow	1 % AEP (1 in 100 year) + 70% Increase flow	0.1 % AEP (1 in 1000 year) + 50% Increase flow	1 % AEP (1 in 100 year) + 30% Increase flow	1 % AEP (1 in 100 year) + 35% Increase flow	1 % AEP (1 in 100 year) + 70% Increase flow	0.1 % AEP (1 in 1000 year) + 30% Increase flow
3	945253	Modelled Water Level (m aodN)	38.49	38.50	38.53	38.61	38.49	38.50	38.53	38.61
		Modelled Flow (cumecs)	4.44	4.44	4.44	4.49	4.44	4.44	4.44	4.49
5	945195	Modelled Water Level (m aodN)	39.37	39.38	39.39	39.46	39.37	39.38	39.39	39.46
		Modelled Flow (cumecs)	4.44	4.44	4.49	4.51	4.44	4.44	4.49	4.51
7	945208	Modelled Water Level (m aodN)	39.91	39.91	39.95	40.16	39.91	39.91	39.95	40.16
		Modelled Flow (cumecs)	6.42	6.52	7.25	9.24	6.42	6.52	7.25	9.24
11	2D measure	Modelled Water Level (m aodN)	34.06	34.06	34.13	34.27	34.05	34.07	34.12	34.28
12	2D measure	Modelled Water Level (m aodN)	34.13	34.13	34.17	34.32	34.12	34.13	34.17	34.33
13	2D measure	Modelled Water Level (m aodN)	34.70	34.71	34.71	34.79	34.69	34.69	34.71	34.79

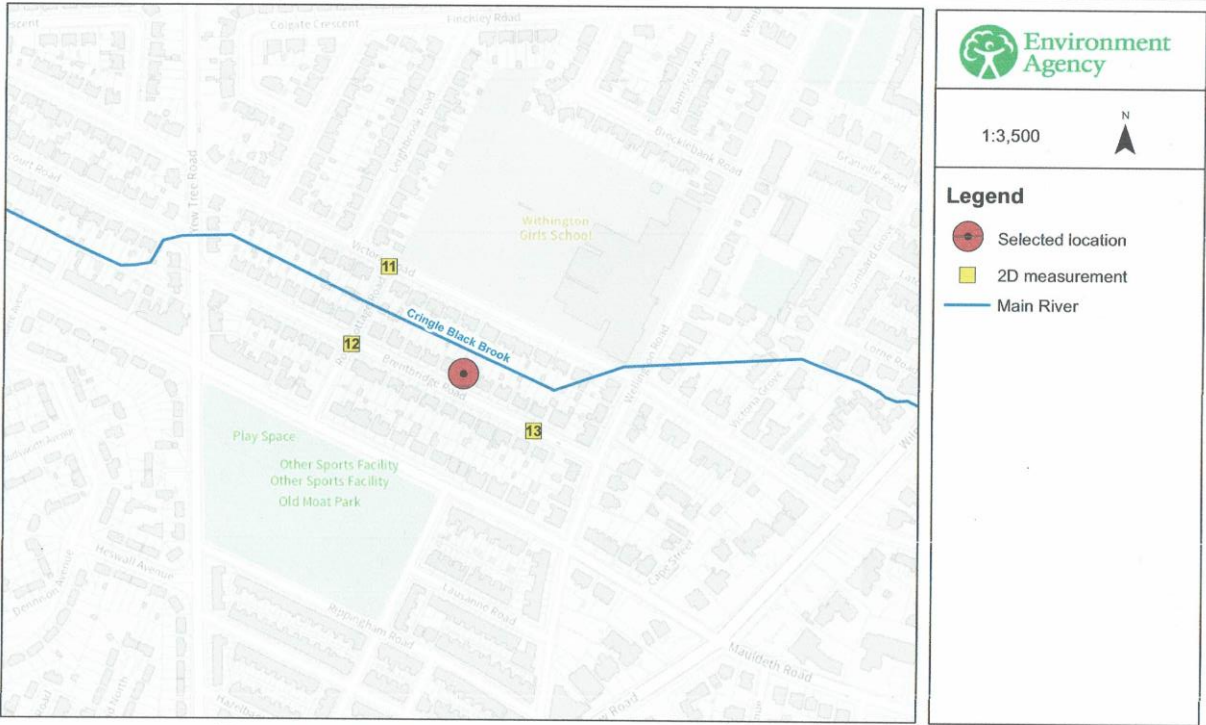
Defended :

- || I in 100 year + 30% Climate Change modelled flood level: 34.12 mAOD
- || I in 100 year + 35% Climate Change modelled flood level: 34.13 mAOD

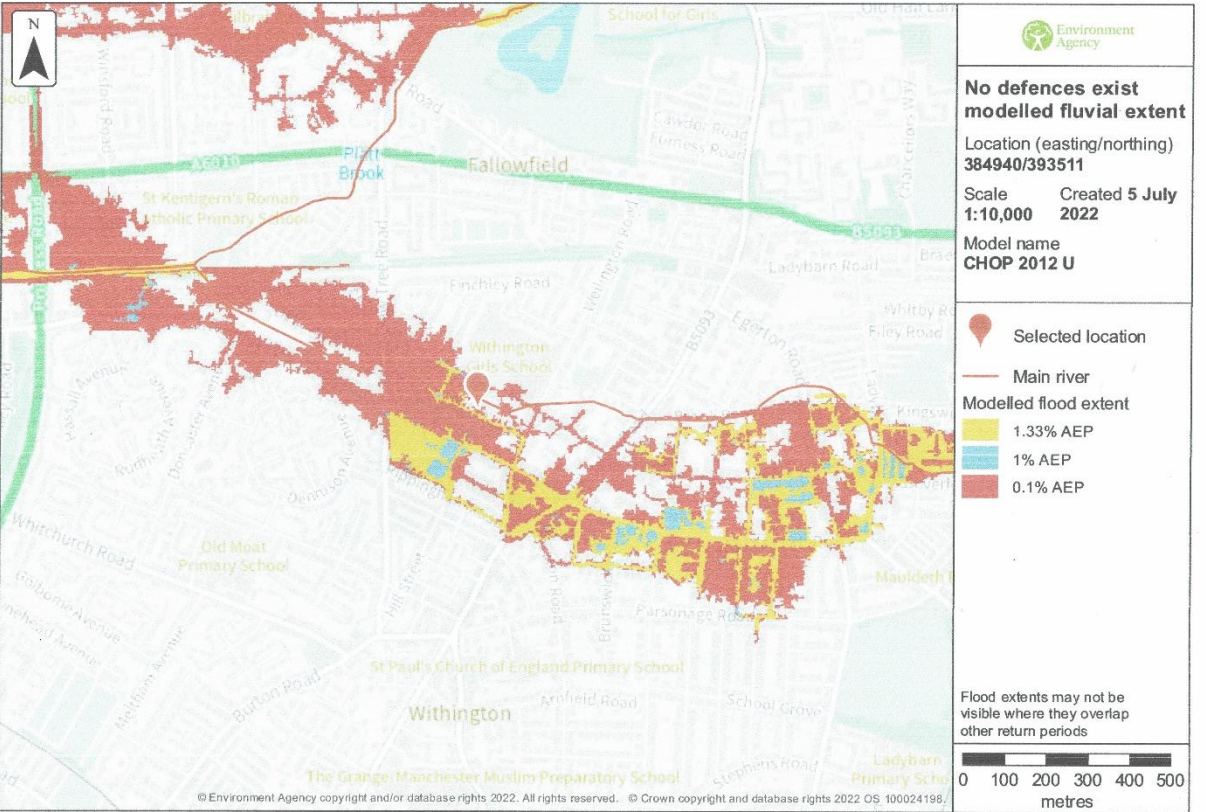
Undefended :

- || I in 100 year + 30% Climate Change modelled flood level: 34.13 mAOD
- || I in 100 year + 35% Climate Change modelled flood level: 34.13 mAOD

2D Model measurement map - Cringle Brook 2017



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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk



Map Reference	Model Node Reference	Data	Undertended				Defended			
			1% AEP (1 in 100 year) + 30% increase flow	1% AEP (1 in 100 year) + 35% increase flow	1% AEP (1 in 100 year) + 70% increase flow	0.1% AEP (1 in 100 year) + 30% increase flow	1% AEP (1 in 100 year) + 30% increase flow	1% AEP (1 in 100 year) + 35% increase flow	1% AEP (1 in 100 year) + 70% increase flow	0.1% AEP (1 in 100 year) + 30% increase flow
3	945253	Modelled Water Level (m aodN)	38.48	38.50	38.53	38.61	38.49	38.50	38.53	38.61
		Modelled Flow (cumecs)	4.44	4.44	4.44	4.49	4.44	4.44	4.44	4.49
5	945195	Modelled Water Level (m aodN)	39.37	39.38	39.39	39.46	39.37	39.38	39.39	39.46
		Modelled Flow (cumecs)	4.44	4.44	4.49	4.51	4.44	4.44	4.49	4.51
7	945208	Modelled Water Level (m aodN)	39.91	39.91	39.95	40.16	39.91	39.91	39.95	40.16
		Modelled Flow (cumecs)	6.42	6.52	7.26	9.24	6.42	6.52	7.26	9.24
11	2D measure	Modelled Water Level (m aodN)	34.06	34.08	34.13	34.27	34.05	34.07	34.12	34.28
12	2D measure	Modelled Water Level (m aodN)	34.13	34.13	34.17	34.32	34.12	34.13	34.17	34.33
13	2D measure	Modelled Water Level (m aodN)	34.70	34.71	34.71	34.79	34.69	34.69	34.71	34.79

Model data taken from Cingle Brook 2017

AEP - Annual Exceedence Probability

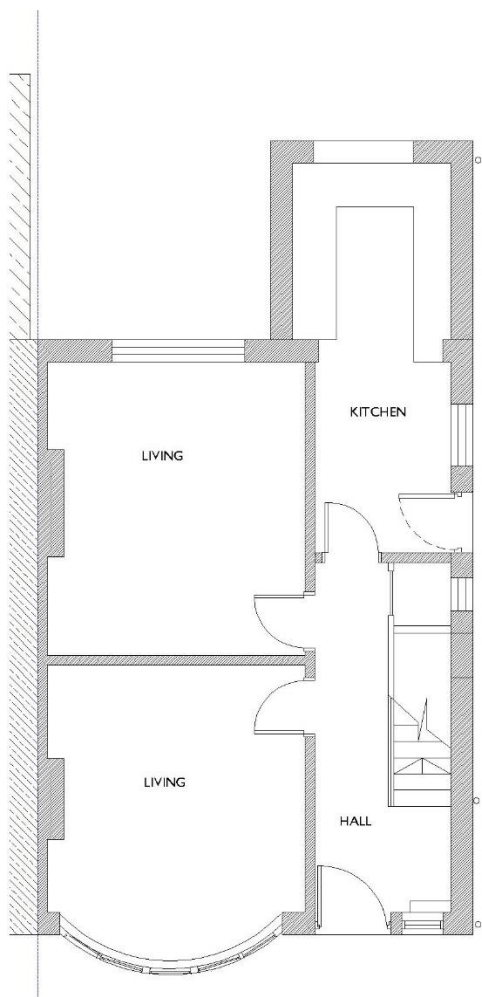
m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

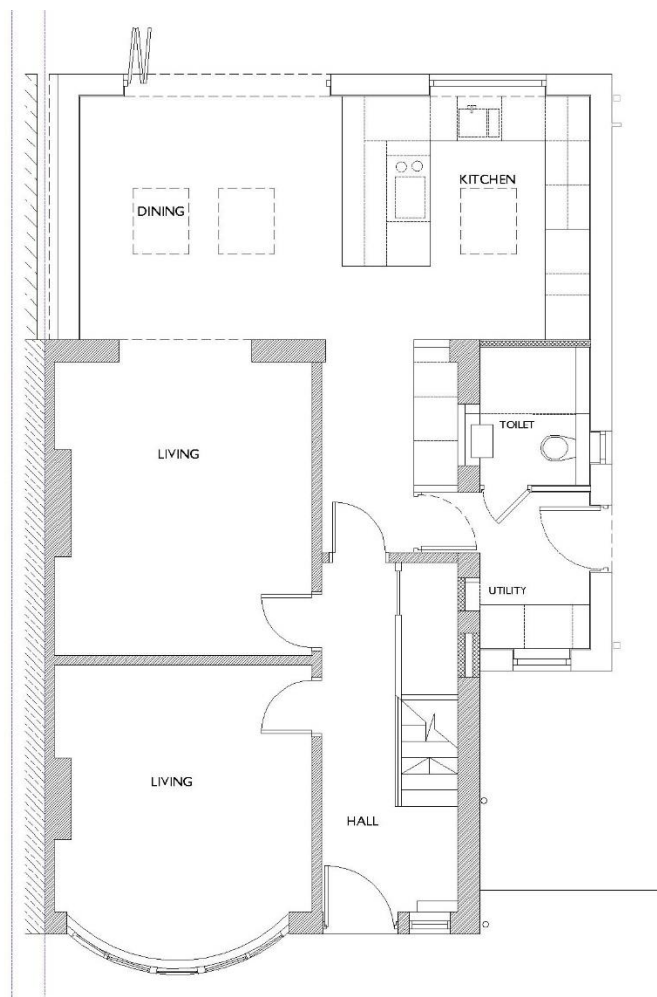
Notes:

*Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2050's (2070 - 2115). Please see <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

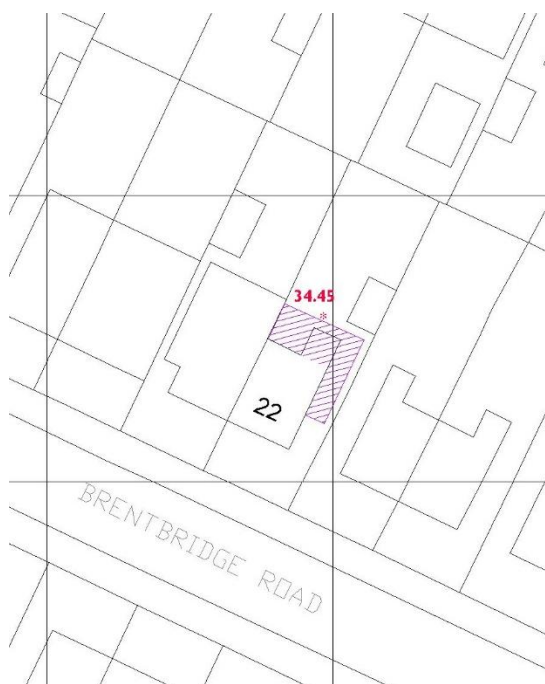
THE DEVELOPMENT



EXISTING



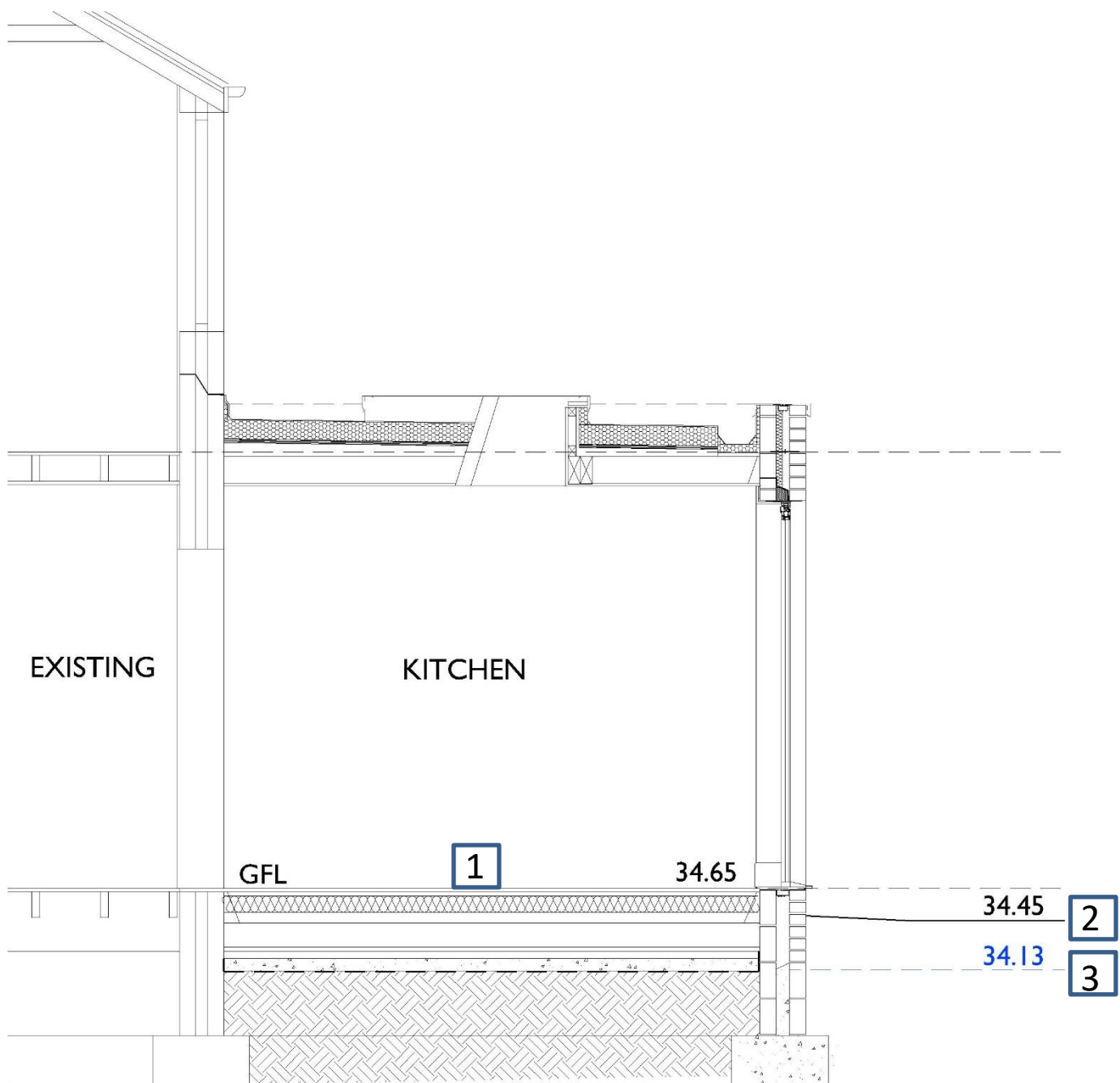
PROPOSED



The site is a two storey semi-detached residential property. The proposed development is for a single storey rear and side extension to provide additional accommodation. The area of the extension is less than 30m².

* Grid Reference: 384940E,
393511N, as
Reference for data given by EA.

THE DEVELOPMENT



1. The proposed floor level of the extension is to be set at same level as the existing kitchen floor. (and more than 300mm above estimated flood levels)
2. Existing external ground floor level
3. EA modelled level : *1 in 100 year + 35% Climate Change modelled flood level: 34.13 mAOD*

CONCLUSION

Floor levels within the proposed extension will be set no lower than the existing adjacent floor level.

(Note the floor level will also be greater than 300mm above estimated flood level. 34.13 mAOD: 1 in 100 year + 35% Climate Change modelled flood level.) (Proposed finish floor level above flood level – approx. 500 mm)

The risk of flooding from Surface Water Map is Negligible. Additionally, the risk of flooding posed to the site by groundwater, shows that the proposed extension sits in an area of moderate risk.

Flood proofing of the property will be incorporated as appropriate

The following flood proofing / resilience measures are recommended to be included:

- Solid concrete oversite slab with waterproof membrane
- Solid brick double skin walls with closed-cell internal insulation.
- External ground to be sloped away from edge of extension.
- Exterior ventilation outlets, utility points and air bricks fitted with removable waterproof covers
- New electrical circuitry and sockets raised
- Plumbing insulation of closed-cell design
- Non-return valves fitted to all drain and sewer outlets;
- Manhole covers secured
- Rainwater harvesting system i.e. water butt is advised to reduce the use of water and minimize current and future surface water flood risk.