



Flood Risk Assessment

101 FEENAN HIGHWAY, RM18 8EX

Executive Summary

This flood risk assessment has been prepared in accordance with the National Planning Policy Framework and associated Planning Practice Guidance. It has been produced in respect of a planning application for a new dwelling adjacent to no. 101 Feenan Highway, RM18 8EX and a rear extension to the existing dwelling at no. 101 Feenan Highway, RM18 8EX.

The site is located in the Eastern part of Tilbury and identified by the Environmental Agency as an area with a high probability of flooding that benefits from flood defences – Flood Zone 3.

This report demonstrates that the proposal is not at significant flood risk, subject to flood mitigation strategies being implemented.

The proposal is considered to be suitable within Flood Zone 3 subject to implementation of the sequential and exception test.

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Introduction

This flood risk assessment has been prepared in accordance with the National Planning Policy Framework and associated Planning Practice Guidance. It has been produced on behalf of the client in respect of a planning application for a single storey new dwelling adjacent to no. 101 Feenan Highway, RM18 8EX.

This assessment is intended to support a planning application and as such the level of detail is commensurate and subject to the nature of the proposal.

Site Name	101 Feenan Highway
Location	Tilbury
National Grid Reference	564583, 177205
Site Area (ha)	0.045
Development	Two storey new build house
Flood Zone Classification	Zone 3 tidal
NPPF Vulnerability	High probability of flooding
Environmental Agency Office	Ipswich
Lead Local Flood Authority	Thurrock Council
Local Planning Authority	Thurrock Council

Existing Site

101 Feenan Highway is a two-storey end terrace house built circa 1930's, constructed of traditional cavity masonry walls and pitched tiled roof. The proposal involves the construction of a similar sized house situated in the existing large side garden area.



Figure 1 - Aerial Photograph

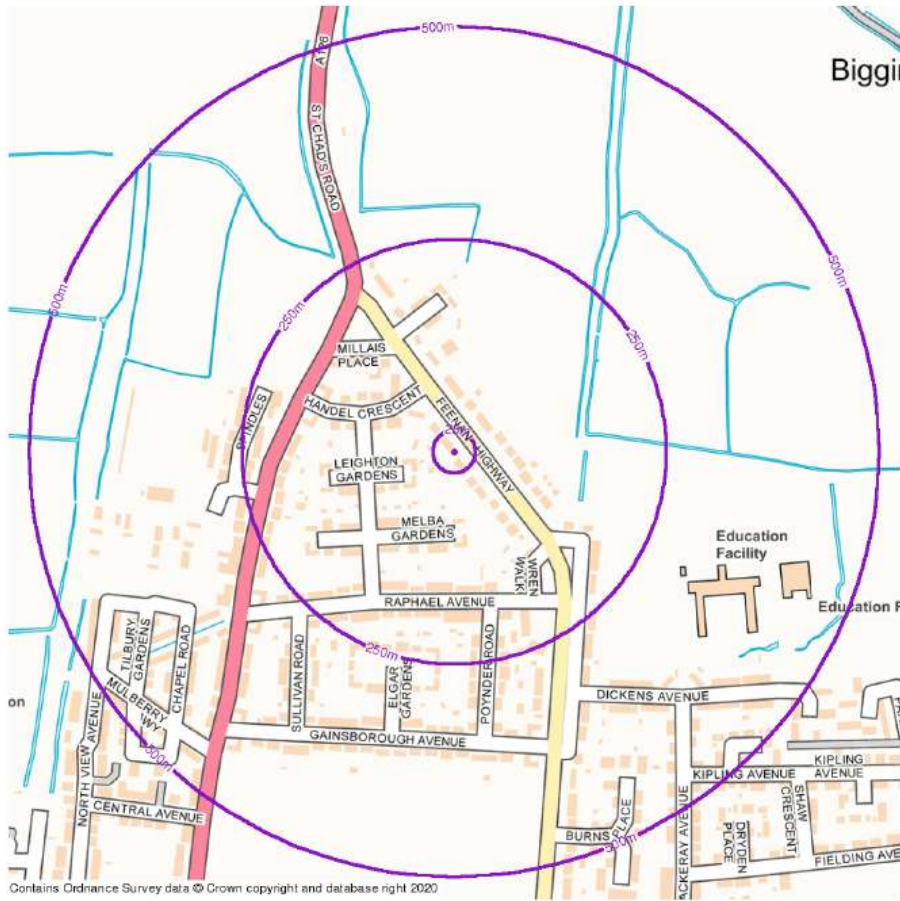


Figure 2 - Location Map

Proposed Development

The development proposals, are for the construction of a one-bedroom new dwelling over one storey. The proposal includes a rear extension to the existing dwelling at no. 101 Feenan Highway.

Flood Risk Planning Policy

The NPPF (National Planning Policy Framework, CLG, March 2012) sets out the Government’s national policies on aspects of land use planning in England with respect to flood risk. Planning Practice Guidance is also available at <https://www.gov.uk/government/collections/planning-practice-guidance>.

The Planning Practice Guidance sets out the flooding vulnerability of different land uses. It encourages development to be in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider area.

This Flood Risk Assessment is written in accordance with the NPPF and the Planning Practice Guidance.

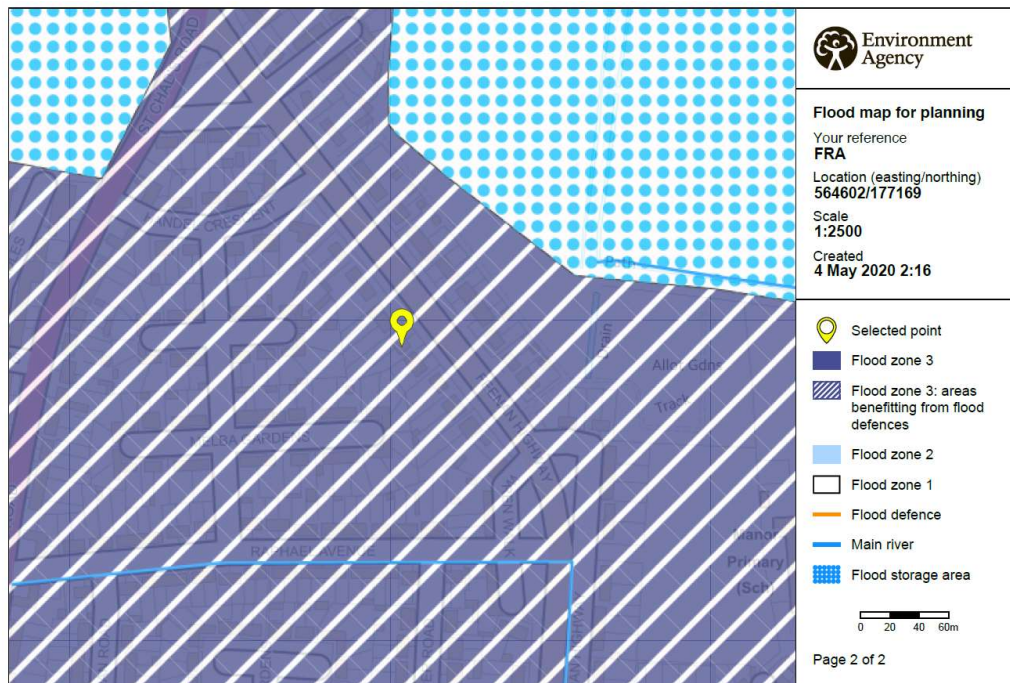
Flood Map for Planning

With reference to planning and development the Flood Map for Planning produced by the Environment Agency identifies Flood Zones in accordance with Table 1 of the Planning Practice Guidance.

Flood Zone 3a (High Probability) is defined as land having a 1 in 100 or greater annual probability of river flooding; or land having a 1 in 200 or greater annual probability of flooding from the sea. This is represented by “Flood Zone 3” on the Flood Map for Planning.

Flood Zone 3b (The Functional Floodplain) is defined as land where water must flow or be stored in times of flood.

The study site is shown to be located within Flood Zone 3: areas benefiting from flood defences as shown on Figure 3.



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Figure 3 – Environment Agency Flood Map for Planning

Potential Sources of Flood Risk

Flooding can occur from a variety of sources, or combination of sources, which may be natural or artificial. Table 1 distinguishes potential sources of flood risk to the site in its current condition, and the impacts which the development could have in the wider area, prior to mitigation.

Flood Source	Potential Risk				Description
	High	Medium	Low	None	
Fluvial		X			The site is located in Flood Zone 3.
Tidal	X				The site is below the 1 in 200-year tidal floodplain.
Canals				X	There are no canals within a 10-mile radius of the site.
Reservoirs		X			Tilbury Flood Storage is located within proximity of the site.
Pluvial		X			The site is located within proximity to a previous surface water flooding occurrence.
Sewers				X	There have been no records of sewer flooding within proximity of the site.
Groundwater				X	The site is outside a groundwater source protection zone.
Effect of Development on Wider Area		X			There will be impact on existing run-off rates as a result of the development.

Table 1 – Pre mitigation Sources of Flood Risk

Fluvial Flood Risk

The site lies within Flood Zone 3 and so considered at high risk of flooding. The Thames Estuary lies approximately 2km south of the site. The site is defended between 1:200-year and 1:1000-year flood levels respectively in the Thurrock Strategic Flood Risk Assessment. There is no risk of river flooding within 250m of the site.

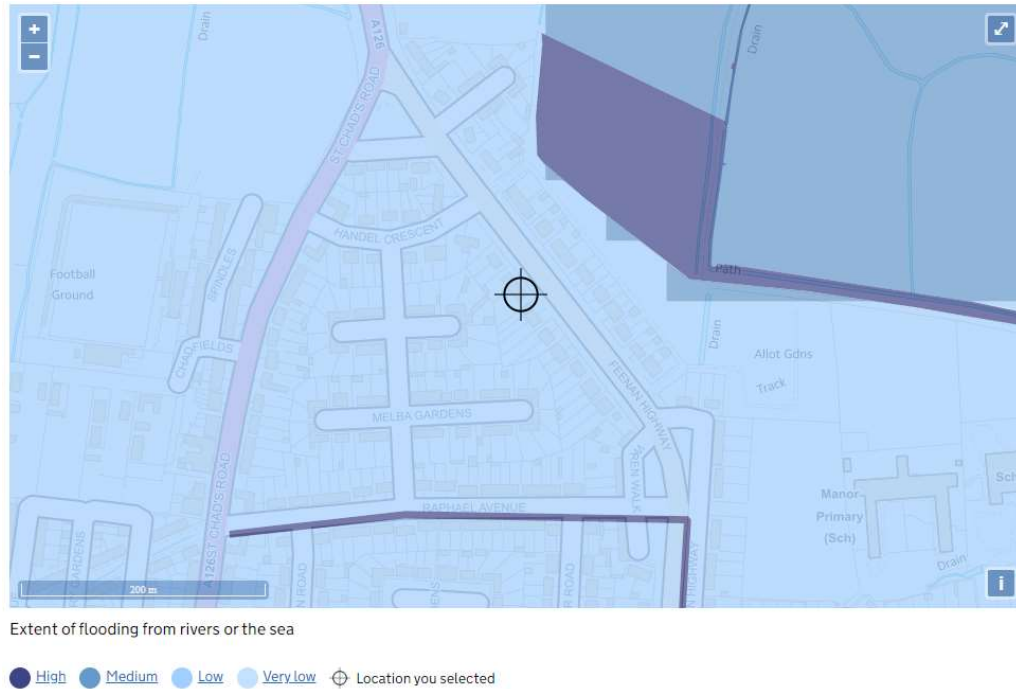


Figure 5 – Environment Agency Rivers and Sea Flood Map

Flood Risk from Canals

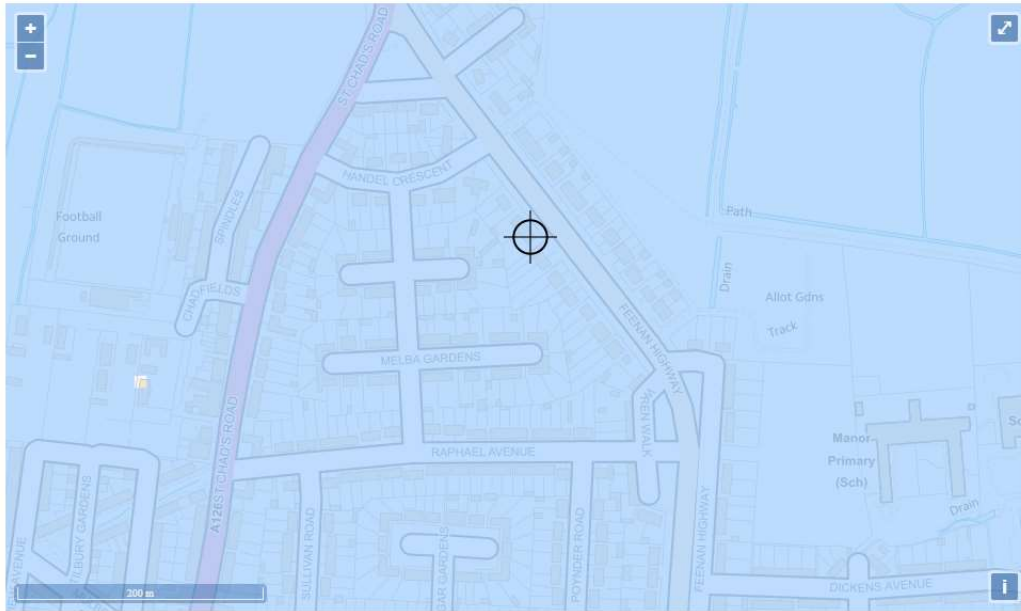
The Canal and River Trust maps indicate no canals within proximity of the site, therefore, flood risk from this source is considered to be none.

Groundwater Flood Risk

Online British Geological Survey geological mapping data indicates the site bedrock comprising of Seaford Chalk Formation. The site is outside a Groundwater Source Protection Zone as per Environment Agency Groundwater Vulnerability map.

Flood Risk from Reservoirs

The site is within proximity of the Tilbury Flood Storage. Flooding from reservoirs within the site is considered extremely unlikely by the Environment Agency.



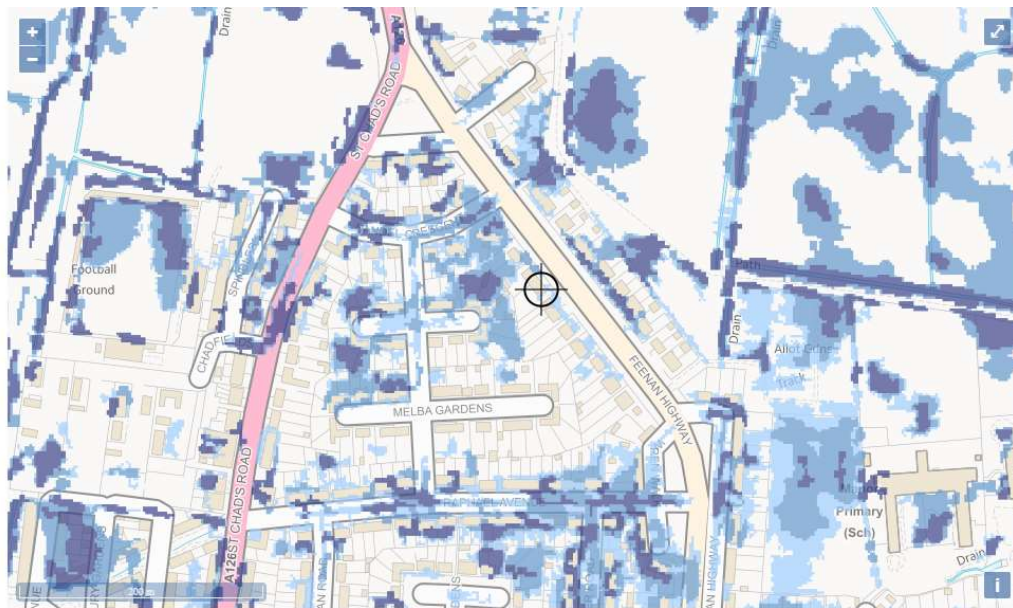
Extent of flooding from reservoirs

● Maximum extent of flooding ⊕ Location you selected

Figure 6 – Environment Agency Reservoirs Flood Map

Pluvial Flood Risk

The pluvial risk of flooding is considered to be Medium to High risk. Historical records indicate the site is within proximity to a previous surface water flooding occurrence.



Extent of flooding from surface water

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

Figure 7 – Environment Agency Surface Water Flood Map

Flood Risk from Sewers

There are no sewer related flooding events within proximity to the site, therefore, therefore, flood risk from this source is considered to be none.

Effect of Development of Wider Area

The site will become more vulnerable to flooding as a result of decrease of volume of impermeable surfacing and increase foul flows into the existing sewer network.

Flood Risk Mitigation

Floor levels within the development are to be set no lower than 300 millimetres above the external ground level.

Flood resistant design will be incorporated in cooperation with building control authority.

Safe access and egress can be sought to the north along St Chad's Road, A126, shown to be outside or at lower risk of flooding.

Safe escape incorporating flood warning and evacuation plan to be provided throughout lifetime of development.

Sustainable Urban Drainage Systems to be utilised within design of the development.

Conclusion

This flood risk assessment has been prepared in accordance with the National Planning Policy Framework and associated Planning Practice Guidance. It has been produced in respect of a planning application for a new dwelling adjacent to no. 101 Feenan Highway, RM18 8EX and a rear extension to the existing dwelling at no. 101 Feenan Highway, RM18 8EX.

In compliance with the requirements of National Planning Policy Framework, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk.