

FLOOD RISK ASSESSMENT



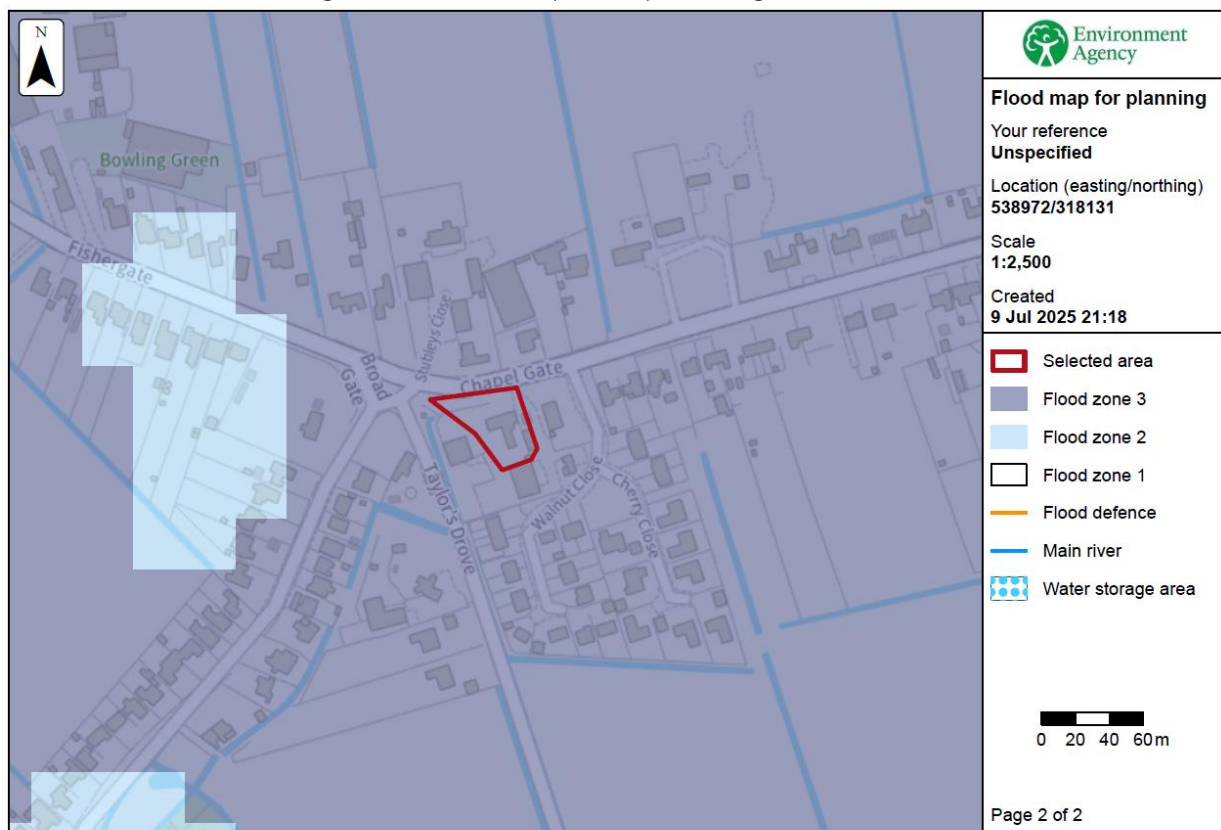
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Job No. 109
Client: Mr & Mrs Heanes
Date: July 2025
Location: Avalon, 149 Chapel Gate, Sutton St James, PE12 0EF

Reference/Description: Proposed single storey extension and alterations.

The Environment Agency mapping indicates the site is within Flood Zone 3. The extract below is from gov.uk flood maps for planning.



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The site is in Flood Zone 3. The site benefits from defences that provide protection during the 0.5% annual probability (1 in 200 chance each year) tidal event including an allowance for climate change.

The flood risk context.

The South Holland IDB district is safeguarded by the Wash tidal defences along the Lutton Marsh frontage, with embankments reaching a minimum height of +7.0m OD. Both sets of defences fall under the responsibility of the Environment Agency, which periodically reviews and updates a long-term maintenance strategy.

The local drainage network, managed by the South Holland IDB, is extensive. Watercourses drain the surrounding land toward the tidal River Nene. The IDB aims to maintain a general standard of flood protection for its district through the upkeep of pumping stations, associated structures, and channel systems, supported by a routine maintenance program. The current maintenance standards of both the South Holland IDB and the Environment Agency are commendably high.

The risk of flooding due to blockages in the South Holland IDB drainage system is low, given the IDB's effective maintenance standards. However, a failure of a sluice could elevate the risk in the catchment. Through its operational and maintenance activities, the Board strives to provide flood protection to agricultural lands and developed areas for events occurring once in 20 years and once in 100 years, respectively. The South Holland IDB main drains include a freeboard that lowers the risk during exceedance events by providing additional storage capacity.

The site benefits from flood defences, with embankments along the Wash and River Nene tidal defences offering protection against a 0.5% annual probability (1 in 200 chance each year) tidal event. Additionally, second-line defences and various informal banks reduce the flood risk further.

The probability of flooding from any Environment Agency system remains below 0.5% annually due to the robust existing flood defences. While climate change may gradually elevate the risk over time, the overall flood risk during the development's design life remains low. The SFRA assessment for a 1% fluvial 0.5% tidal event probability for either the present day or in 2115 indicates peak flood depths at the site of 0m, with an estimated depth of 0m based on Environment Agency LiDAR data.

Mitigation of flooding effect & conclusions.

The existing dwelling is constructed from low permeability materials, the proposed extension will continue this approach yet in a modern way with improved resilience.

The extension will not effect existing land levels across the remaining site area. The siting and nature of the proposal would not increase the potential for surface water to drain onto the highway nor give rise to detrimental surface water flooding elsewhere onto neighbouring properties.

As the existing dwelling is within an established settlement area it is recommended that the floor level of the proposed extension is equal to the existing dwelling. The proposal does not increase risk to life, nor increase the amount of ground floor sleeping accommodation.

Situated within an Internal Drainage Board catchment, the site benefits from maintained pumping stations and channel systems aimed at providing flood protection for agricultural land and developed areas, against events once in 20 years and once in 100 years, respectively.

Located in Flood Zone 3, the site benefits from protection by tidal defences on the Wash frontage and the River Nene during a 0.5% annual probability (1 in 200 chance each year) tidal event, factoring in climate change.

The site is not at risk during a breach of the tidal defences during the 0.1% annual probability (1 in 1000 chance each year) event in 2115.

If defences were breached, the proposal would not cause or heighten risk to health or life.