

FLOOD RISK ASSESSMENT



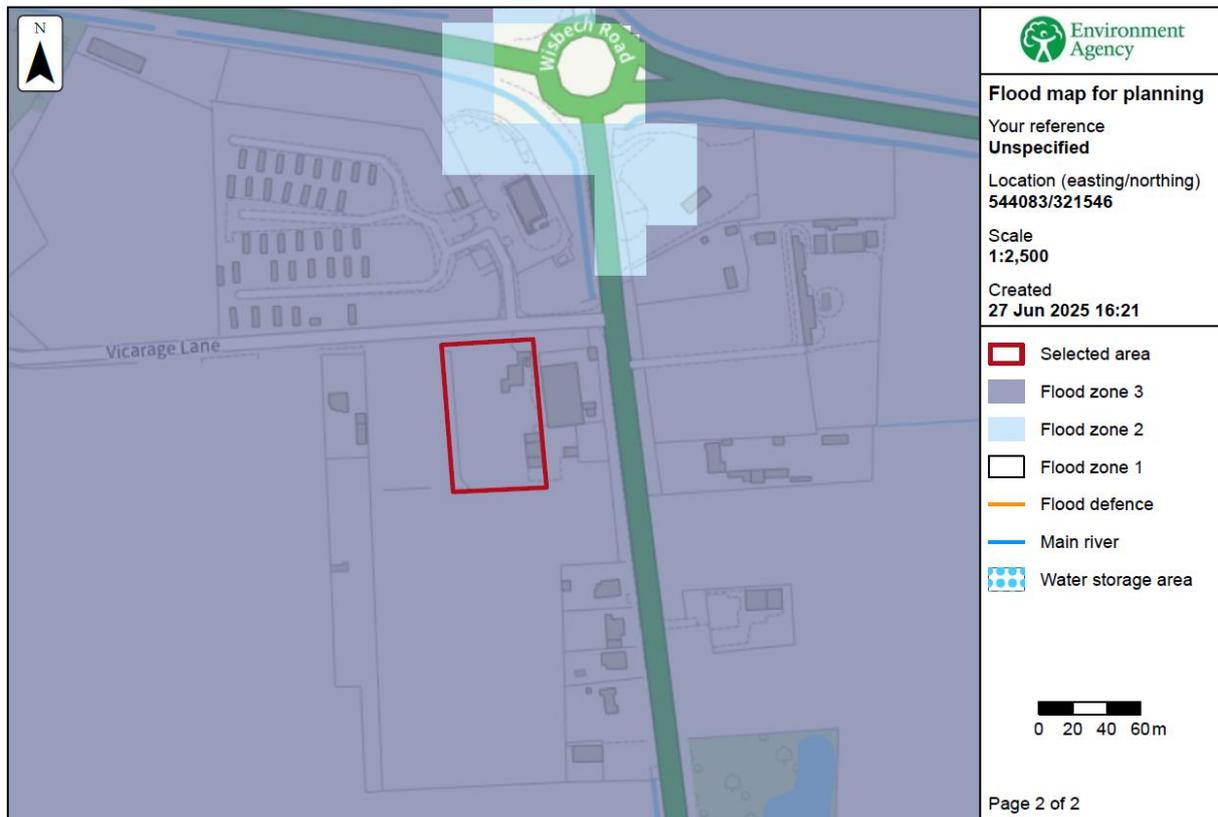
22 Shore View
Hampton Hargate
Peterborough
PE78FS

T 07799 585277
E. info@seven22.co.uk
W. www.seven22.co.uk

Job No. 111a
Client: Mr F White
Date: Dec 2025
Location: 59 Vicarage Lane, Long Sutton, PE12 9AF

Reference/Description: Proposed single storey extensions 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 on the tidal River Nene 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. These defences are approximately 2.1km from the site, while the River Nene tidal defences lie about 2.4km to the east. 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 defence breach in 2116 indicates peak flood depths at the site between 1.0m and 2.0m, with an estimated depth of 1.4m 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 large 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 as the applicant already occupies the dwelling.

The use of non-return valves in new foul sewers will be recommended to the applicant.

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.