FLOOD RISK ASSESSMENT

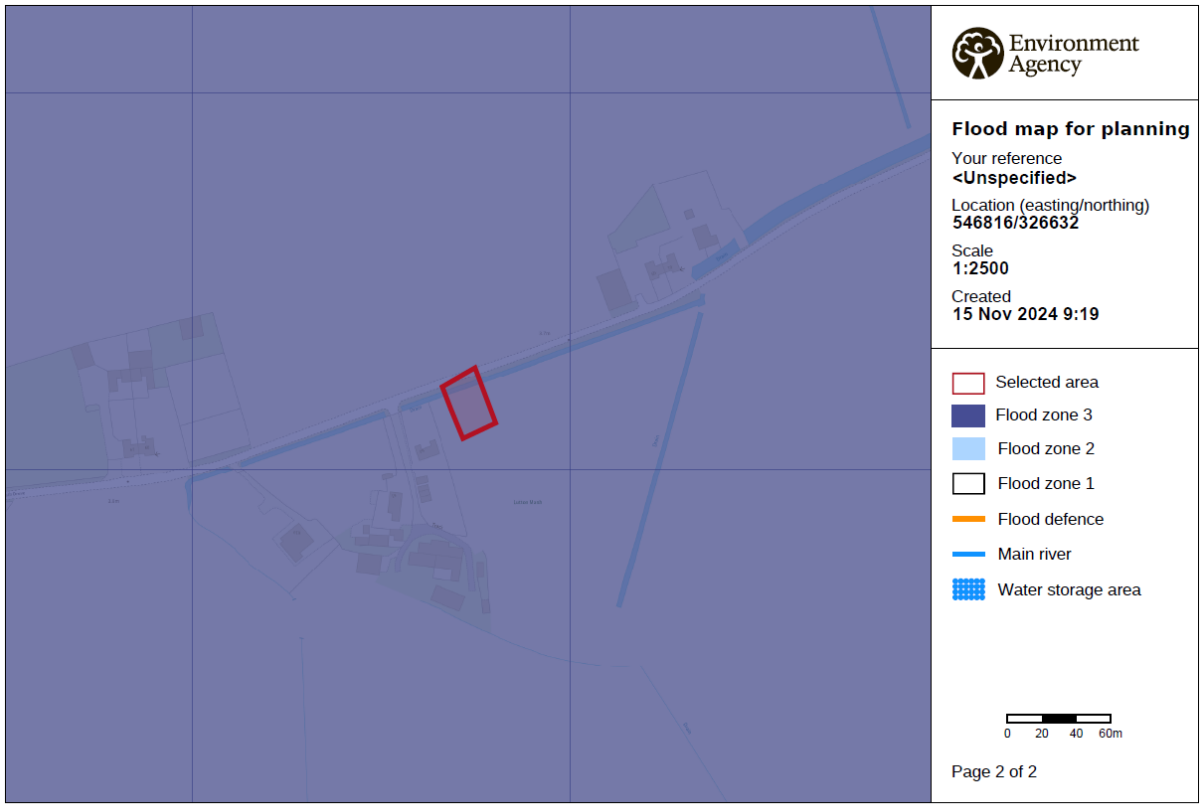
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Job No. 079a
Client: Laurence Burton/Henry Smith Charity
Date: November 2024
Location: Land Adjacent 60 South Drove,
Reference/Description: Proposed Field Access

This application seeks approval for a new field access. The extent of the proposal effects a very minimal surface area. This application is in connection to a separate planning application for the self-build conversion of adjacent barns. The applicant has purchased those barns from The Henry Smith Charity and part of the agreement is the formation of a field access at this location.

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 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. An IDB High Priority Watercourse is located 500m south of the site, which, along with the surrounding land, is part of the Lutton Leam catchment, draining eastward into the tidal River Nene at the Lutton Leam Tidal Sluice. 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 the Lutton Leam Tidal 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 likelihood of flooding from localised drainage systems for this development is low. However, the risk at the site could increase if the Lutton Leam Tidal Sluice fails. 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. Minimal changes in the impermeable area from the development suggest no significant increase in surface water flood risk elsewhere.

Conclusion

The proposal is a simple field access. The access will be formed in such a way that surface water will not drain onto the highway nor give rise to detrimental surface water flooding elsewhere.

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 enjoys protection from 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.

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