

Technical Note: Surface Water Flood Risk – Pond Cottage, Main Street, Peasmarsh, TN31 6YD



Author(s): Lewis Sternkopf BSc (Hons) MSc GradCIWEM

Project: 4019 - Pond Cottage, Main Street

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This document has not been prepared to accompany the submission of a planning application, in substitution for a detailed Flood Risk Assessment (FRA), but instead is focussed on providing the key information to the design team that will be required to be included within a detailed FRA and the scheme design. The findings from this report will assist in refining the design, to ensure that the development proposals will meet the flood risk requirements for planning, enabling a successful FRA to be prepared once the design is fixed.

Proposed Development

The proposed development is for the extension of the existing building to create a number of new residential units, with associated parking and landscaping on site.

Risk of Surface Water Flooding

Surface water, or overland flooding, typically occurs in natural valley bottoms as normally dry areas become covered in flowing water and in low spots where water may pond. This mechanism of flooding can occur almost anywhere but is likely to be of particular concern in any topographical low spot, or where the pathway for runoff is restricted by terrain or man-made obstructions.

Given the EA's 'Flood Risk from Surface Water' mapping shows that the site is located within an area considered to be at 'high' risk from surface water flooding, the mapping has been interrogated further to appraise the risk of flooding from surface water on site.

The design flood event for surface water flooding in this location is the 1 in 100 year event, including a 40% allowance for climate change. The EA's mapping does not include an allowance for climate change; however, it does include an event that typically exceeds the 1 in 100 year event, being the 1 in 1000 year event (Figure 1). This can be used as an estimate for the impact of climate change.

From Figure 1, it can be seen that the majority of the proposed extension building is located in an area that is at 'very low' risk from surface water flooding. There is, however, a small area to the northwest corner of the proposed building that is located within the extent of flooding during this event.

Notwithstanding this, by comparing the topographical survey to the extent of flooding shown by the EA mapping, it is estimated that the maximum predicted flood level on site is approximately 21.0m AODN. The finished floor level of the proposed building is 21.31m AODN and therefore elevated 0.31m above the design flood level during this event.

Taking the above into consideration, it is considered that the development is at low risk from surface water flooding. Furthermore, with the implementation of flood resilient construction techniques on site, this will increase the flood resilience on site and ensure the development is safe from surface water flooding for its lifetime.

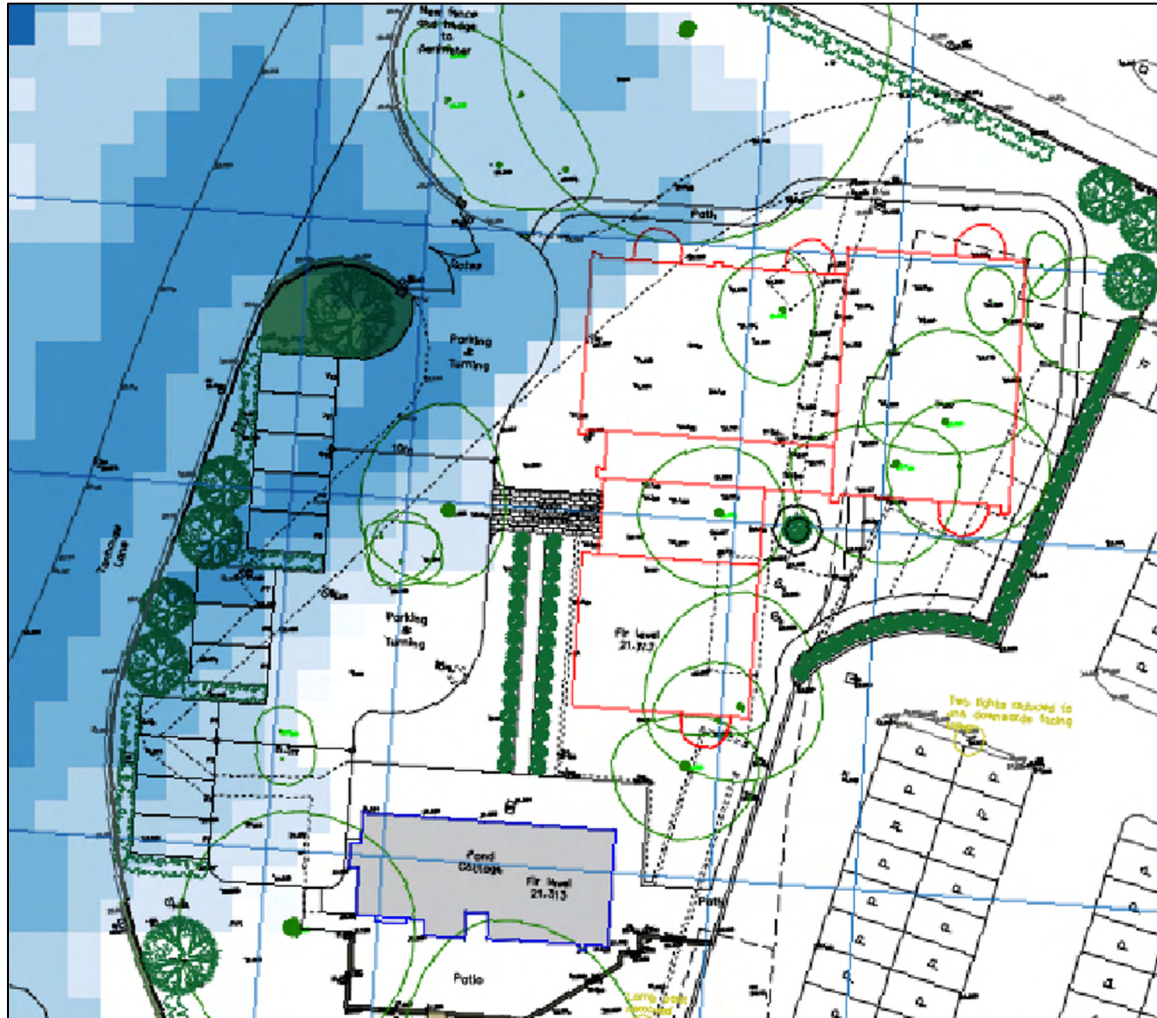


Figure 1 – Proposed site plan (with the proposed extension shown in red) overlain by the EA's surface water mapping, during a 1 in 1000-year flood event.