

ML PLANNING CONSULTANCY LTD

FLOOD RISK ASSESSMENT

Proposal: formation of earth banked slurry lagoon

Location Lower house Farm, Lewth Lane, Inskip PR4
OTE

Date: 17 / 03 /2022

Author: L Godden

Introduction

The National Planning Policy Framework (NPPF) sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk. Support in the Planning Practice Guidance is also available.

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

The NPPF also states that alternative sources of flooding, other than fluvial (river flooding), should also be considered when preparing a Flood Risk Assessment.

As set out in the NPPF, local planning authorities should only consider development in flood risk areas appropriate where informed by a site-specific Flood Risk Assessment. This document will identify and assess the risk associated with all forms of flooding to and from the development. Where necessary it will demonstrate how these flood risks will be managed so that the development remains safe throughout its lifetime, taking climate change into account.

In investigating the flood risk relating to the site, the Environment Agency flood mapping has been reviewed and has confirmed that the site lies within Flood Zone 3. Flood Zone 3 is identified as land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. The flood zones categorisation refers to the probability of river and sea flooding, ignoring the presence of defences.

STRATEGIC FLOOD RISK ASSESSMENT

The Strategic Flood Risk Assessment for Wyre Borough Council is dated April 2007 and was produced by Wyre Borough Council.

The SFRA states this area is very low lying and flat with the majority of the area in Flood Zone 3. The area is predominately agricultural in nature with sporadic larger villages.

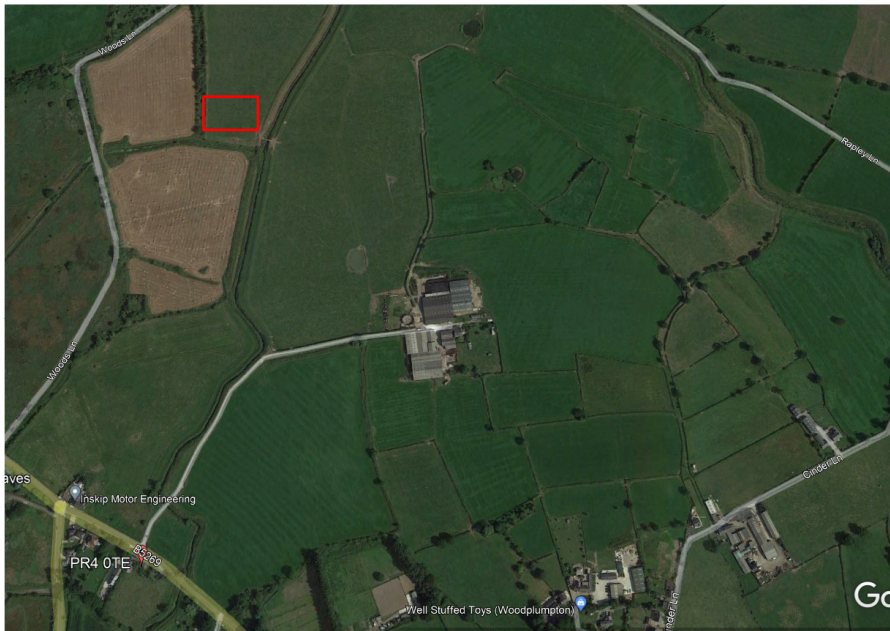
The main risk of flooding within the area is from tidal sources, in a breach of the coastal or estuary defences scenario. This would lead to significant areas being flooded. The area is also susceptible to flooding from fluvial sources due to the low gradients and difficulty in discharging into Morecambe Bay. This is compounded by rising beach levels at the discharge points. Similarly, sewer flooding, groundwater and highway drainage systems can result in flooding problems as they are interconnected to the watercourses and suffer from poor hydraulics and overcapacity in the urban area.

However, this proposal site is not at risk of tidal flooding, but from an overflow of the River Wyre.

CONSULTATION & GUIDANCE

The site is identified on the Environment Agency's flood mapping as lying within Flood Zone 2/3 defended, and so it is at a high risk of flooding. The main risk of flooding is tidal.

Site Location



The site is located a 600 hundred metres EAST of Lewth Lane

Image of the site. Development area marked with red edge. Site Datum for the site 11 mAOD. The topography site is generally flat with elevated land to the east, marking a transition from Flood Zone 2, to Flood Zone 3 within the vicinity of the development.

Existing Ground Levels and Finished Floor Levels

There is an established OS datum point adjacent to the site which shows the existing ground level of 11 mAOD.

Proposal

The proposal is engineering work to form an earth banked slurry lagoon This would see a 1.5m high earth bund around the perimeter of the lagoon

This development will require minimal land level changes, other than the formation of the bund and an established site datum of 11 mAOD will form the external ground level of the site.

Wyre Council Strategic Flood Risk Assessment

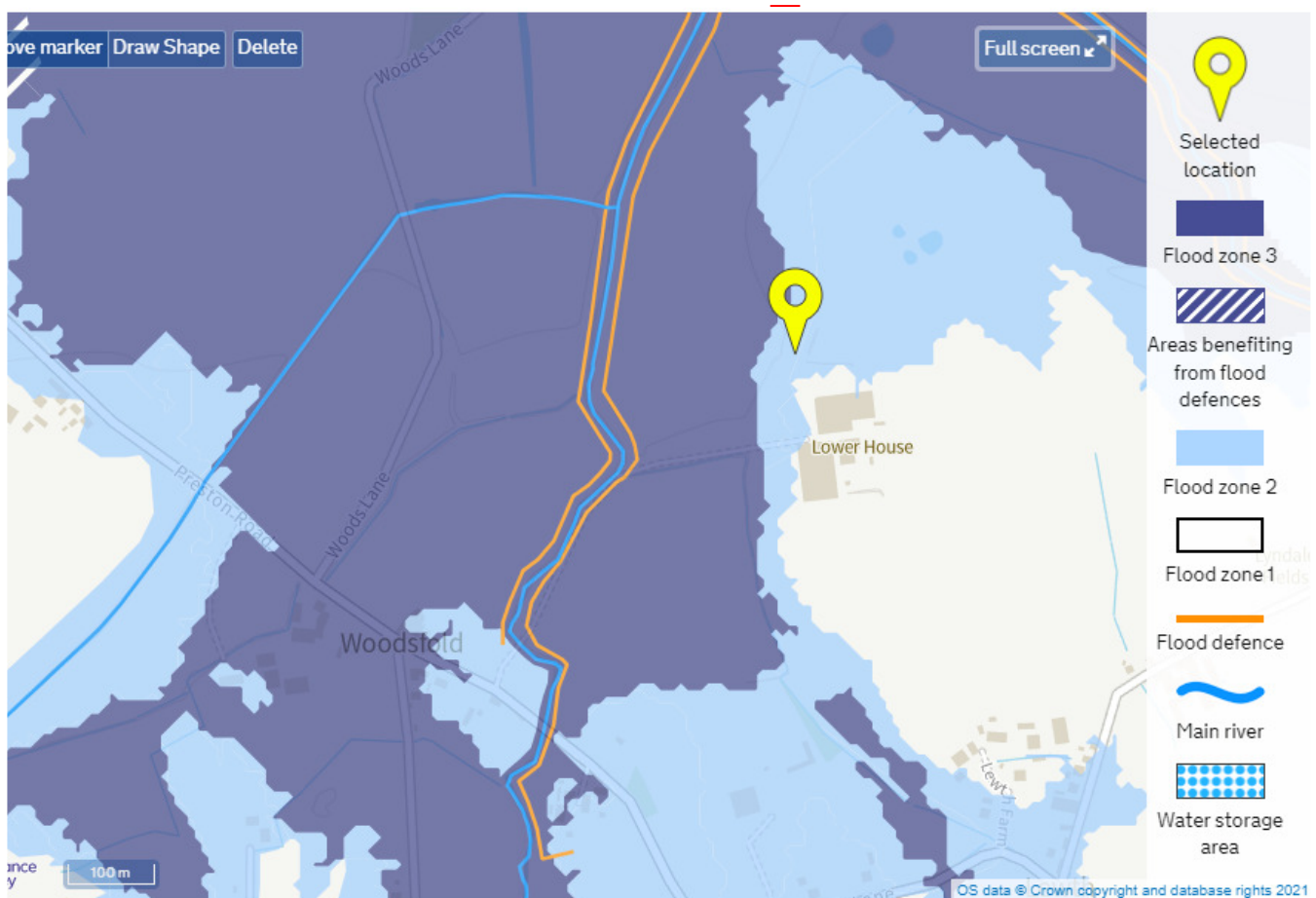
The application site falls under the jurisdiction of Wyre Council LPA

Fluvial Flood Defences

The site is identified on the Environment Agency's flood mapping as lying within Flood Zone 2, the topography site is generally elevated above its surroundings

[draw a shape](#)

Download printable map (PDF)



Assessment

The flood map zone shows that the site is Flood Zone 2 and the source of flood risk is fluvial due to proximity to the river Woodplumpton Brook to the east.

Fluvial Sources of Flood Risk – Defended

Detailed modelling for the site show that the site is unaffected by tidal sources of flood risk.

Fluvial defended 1% annual probability of flooding.

This site is affected in this scenario which has a 1 in 100 year annual probability. The scenario is from a fluvial source without any additional allowances factored into the modelling. This results in flood waters on site at 11.16mAOD, between 0mm > 300mm exceeding site levels of 11 mAOD by 160 mm.

Safe access and egress

The site is in an area benefitting from the Environment Agency's flood warning service and the business operators are to be registered to receive free flood warnings when flooding is expected to enable the evacuation of people for a range of flooding events up to and including the extreme event.

CONCLUSIONS & RECOMMENDATIONS

The site lies within Flood Zone 2, the source of flood risk in the area is fluvial, there are flood defences along the river Woodplumpton Brook near to the site.

The risk of fluvial flooding arises from the main channels identified on the flood map for planning and flood defence map. Fluvial levels are given in 9 scenarios, in five of these scenarios flood waters range between 160mm and 300mm above existing and proposed ground levels.

Tidal flood risk sources to do not affect the site directly.

The risk of flooding from canals, reservoirs and other sources is low.

The flood risk from surface-water is low.

The risk from sewer flooding and pluvial runoff is low.

Development drainage will not change the flood risk up stream or downstream of this location and as the impact of surface water flow from the site will be mitigated with minimal effect to the surrounding area, the risk of flooding from the development drainage is low.

To protect the development the following mitigation measures are to be implemented:

- The owners are to be registered to receive free flood warnings when flooding is expected to enable the evacuation of people for a range of flooding events up to and including the extreme event.