

Flood Risk Assessment

Works to Sea Defences

Field south of Driftway House
Langstone
Havant

October 2024

Introduction

A Flood Risk Assessment is required to accompany a planning application to carry out works to upgrade the resilience of the existing flood defences.

This is no residential element to the works.

The Site

The site is within a small field south of Mill Lane, Langstone.

From a topographical survey,

The ground levels in the field vary from approx. 3.50m OD at the north end to approx 2.40m OD at the southern end.

The Proposed Development

The proposed works involve the construction of an earth bank as a new sea defence.

This will be a more robust structure than the existing bank at the western edge of the field.

It will have considerably more resilience and a longer service life.

The new bank will be seeded to blend into the existing landscape.

The height varies from 0.40m at the north to approx. 1.50m at the southern end of the field.

Flood Risk Mapping

The Environment Agency flood mapping has been consulted and the plans are included at the end of this assessment.

The risk in this location is from tidal flooding, such as might occur with an adverse combination of spring tides and meteorological conditions.

The field is within Flood Zone 3.

The EA mapping appears to make no allowance for the existing sea defences.

This project will play a part in the upgrading of the defences.

(It is hoped that the residents of Mill Lane and Harbourside will work together to produce a comprehensive upgrade to the defences, achieving a standard similar to the scheme recently developed by Coastal Partners called Frontage 1B.

This one section of that frontage.)

The current 1 in 200 year flood level is predicted at 3.20m OD.

And the 2115 flood level, on the same basis, is 4.30m OD.

Risk Assessment

Considering the theoretical 2115 design tidal level of 4.30m OD, without any defences, the adjacent grassland would flood to a depths of 0.8 at the northern end to almost 2.0 at the south.

The proposed bank has a crest level of 3.85m OD, so would be overtopped by the projected 2115 1 in 200 tide.

However, it would be feasible to raise the bank in the future to provide extended protection.

The proposed development site, an open field, does not include any residential development on-site.

The proposal will reduce the flood risk for nearby homeowners.

Existing Drainage, Foul and Storm systems

There is no change to loading of the foul sewers.

There is no change to run-off to storm sewers.

Flood water displacement, surface water

The works will reduce the risk of flooding through a failure of the sea defences in this section being upgraded.

The changes will have no effect on flooding arriving from elsewhere, for instance via a breach elsewhere in the defences outside this property.

Surface water run-off will be affected in that the new embankment will cut off the existing drainage ditch running across the south of the field.

Surface water to the east of the new bank will be picked up by a French drain along the eastern edge of the bank.

This French drain will discharge into the existing ditch and outfall to Langstone Harbour at the south of the site.

This is a continuation and improvement of the existing arrangement and can be expected to reduce waterlogging in the adjacent garden.

Surface water to the west of the new bank will need to be provided with a new route to drain to Langstone Harbour.

Presently, the surface water in the field runs southwards to the lower levels at the end of the field.

Two options have been identified

1. A new small outfall is formed through the existing sea defence bank at the southwest of the field to discharge westwards into Langstone Harbour. This would take the form of a small diameter pipe, 100 or 150mm diameter, with flap valve, laid through the existing bank. This solution can be delivered subject to permissions, as we have landowner consent.
2. Maintaining the integrity of the new floodbank, a pipe is run through the new bank, following the line of the existing drainage ditch to a new manhole constructed on the inland side of the existing outfall, adjacent to the sea defence in this location. A new manhole in this position would form a manifold providing separate non-return flap valve protected discharges to the various sources of surface water which this outfall currently serves. This is subject to discussion with adjacent landowners.

Sequential Test

By its nature, a flood defence in a particular location, this is not a development or type of construction which could be steered towards another lower risk site.

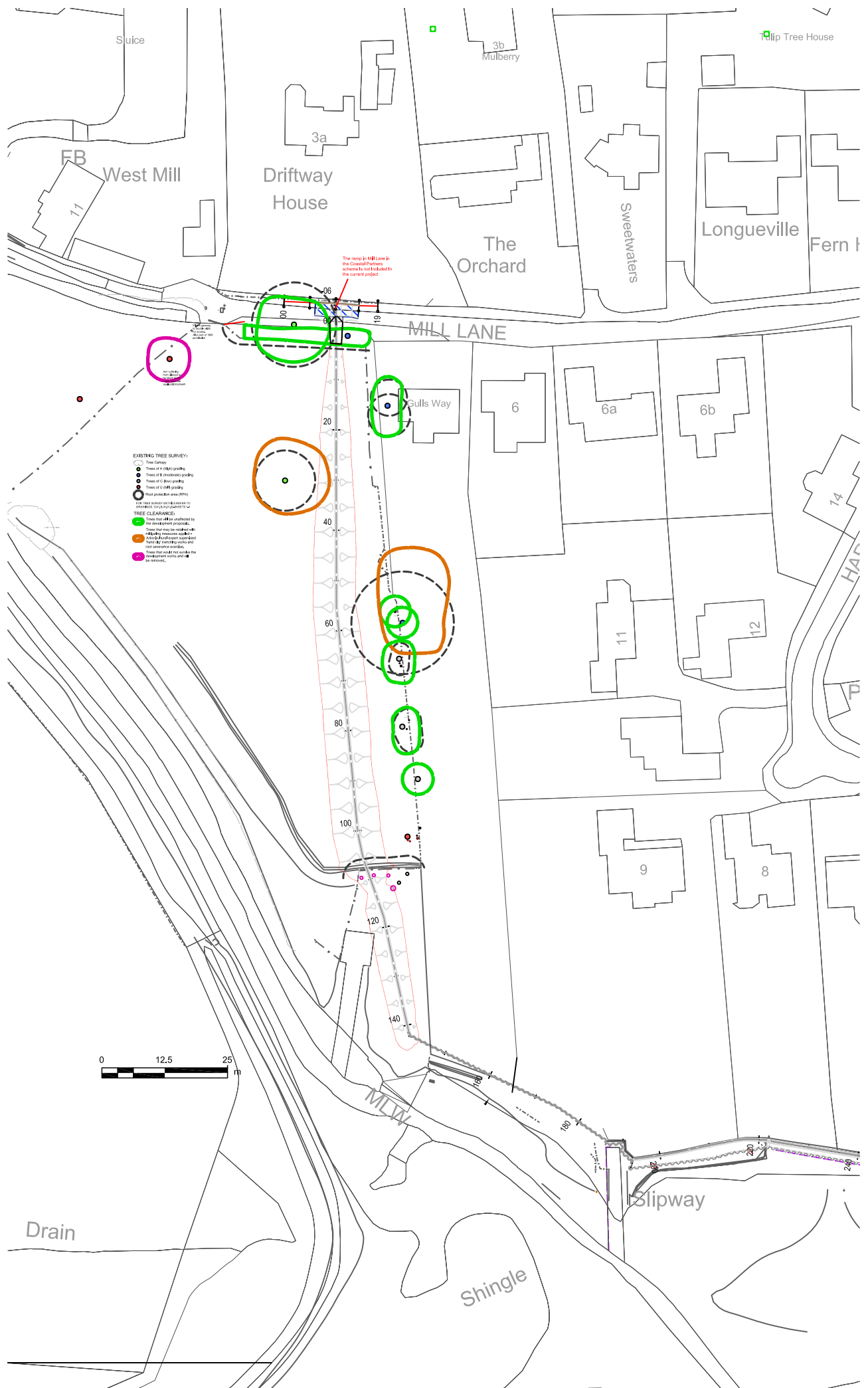
Conclusion

This proposal will improve the flood risk to adjacent properties.

RG Carrell BSc ACGI
28 October 2020

Attached -

Site and location plan
Flood zone mapping
Surface water mapping
Topo survey plan



Flood map for planning

Your reference
<Unspecified>

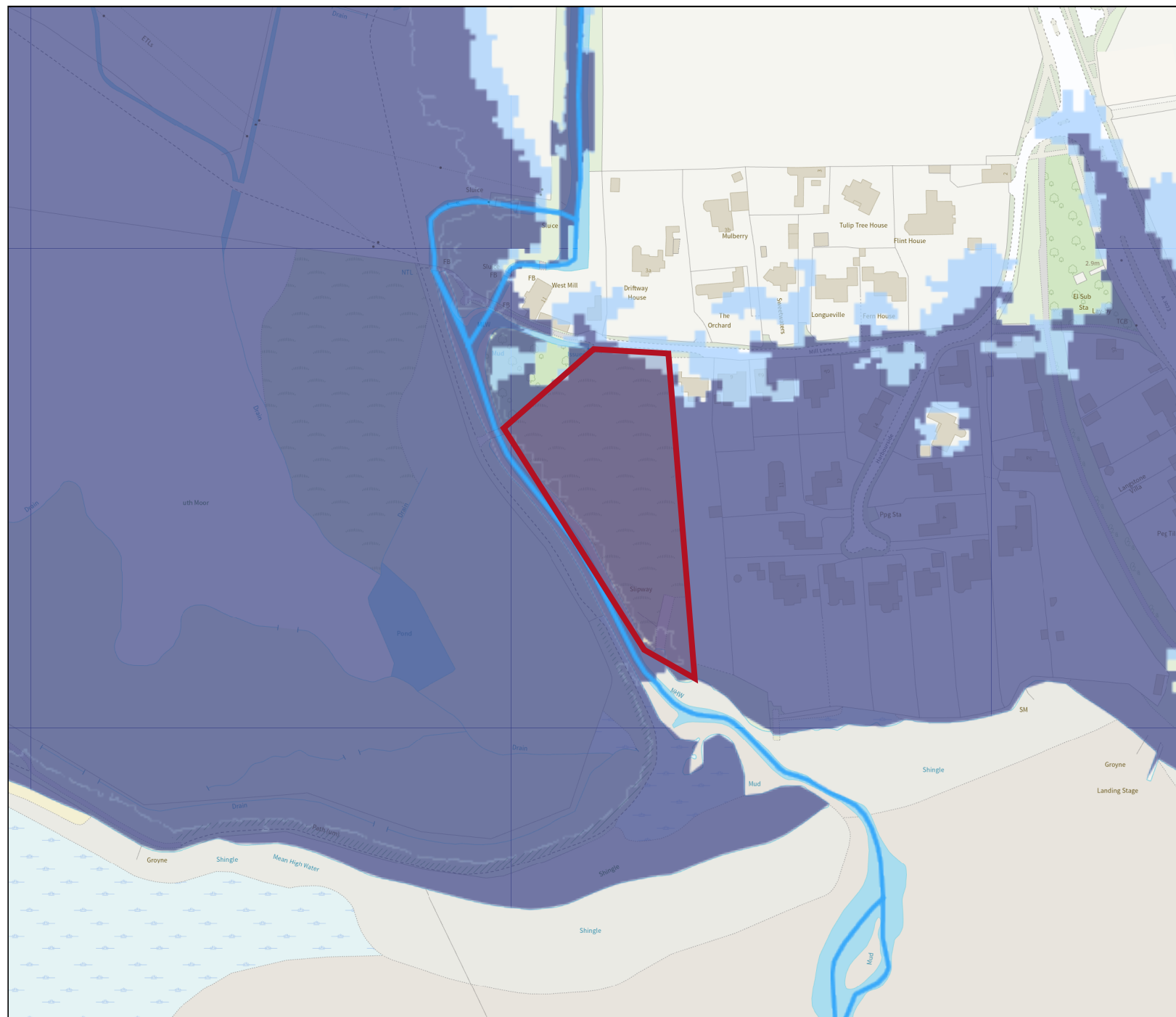
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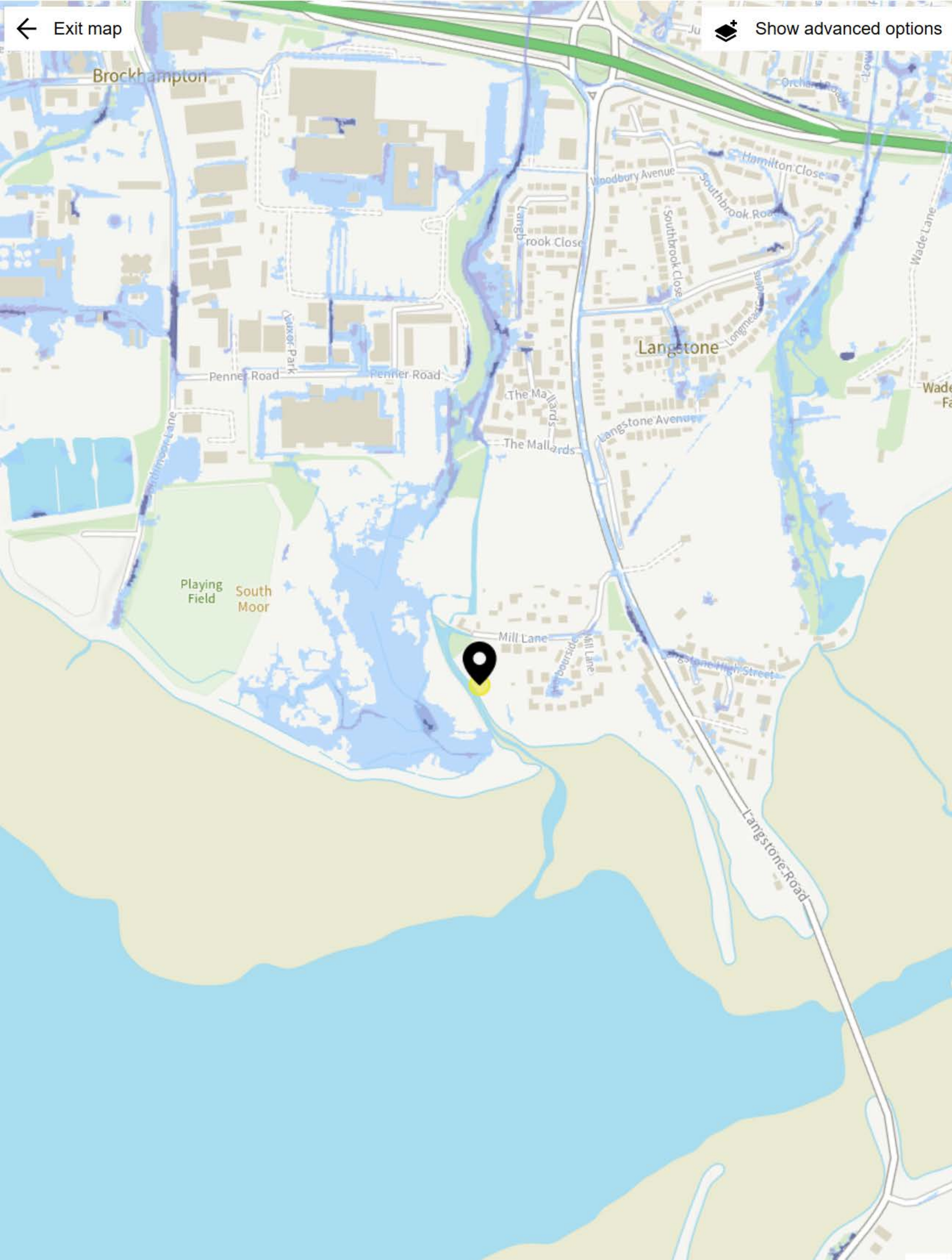
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-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

0 20 40 60m





Key

Surface water

 Extent

 High

More than 3.3% chance each year

 Medium

Between 1% and 3.3% chance each year

 Low

Between 0.1% and 1% chance each year

 Depth

Map details

☒ Show flooding

☒  Selected address

 15m boundary

Pause to updates of flood risk data

We have [paused updates to information about flood risk](#) from rivers and the sea and surface water while we get ready for new data.

