

FLOOD RISK ASSESSMENT

BARN CONVERSION

**Paradise Nursery Barn
Lower Hartlip Road, Hartlip,
November 2022**

DESIGN PHILOSOPHY AND APPROACH:

Para. 164 of the National Planning Policy Framework states

Applications for some minor development and changes of use⁵¹ should not be subject to the sequential or exception tests but should still meet the requirements for site-specific flood risk assessments set out in footnote 50.

Footnote 50: A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3.

Footnote 51: This includes householder development, small non-residential extensions (with a footprint of less than 250m²) and changes of use; except for changes of use to a caravan, camping or chalet site, or to a mobile home or park home site, where the sequential and exception tests should be applied as appropriate.

A site-specific flood risk assessment is required to consider the risk of flooding to the proposed development at the site and consider what measures may be required to manage the risk. The risk of flooding to others and potential impacts of climate change must also be considered.

The flood risk assessment needs to be appropriate to the scale, nature and location of the development.

The information provided in the flood risk assessment needs to be credible and fit for purpose. Site-specific flood risk assessments need to be proportionate to the anticipated degree of flood risk and make optimum use of information already available, including information in a Strategic Flood Risk Assessment for the area, and the Environment Agency's Flood Map and surface water flood risk information on Check the long-term flood risk for an area in England.

FLOOD RISK SUMMARY

Surface water

Flood risk

Extent of flooding

Location

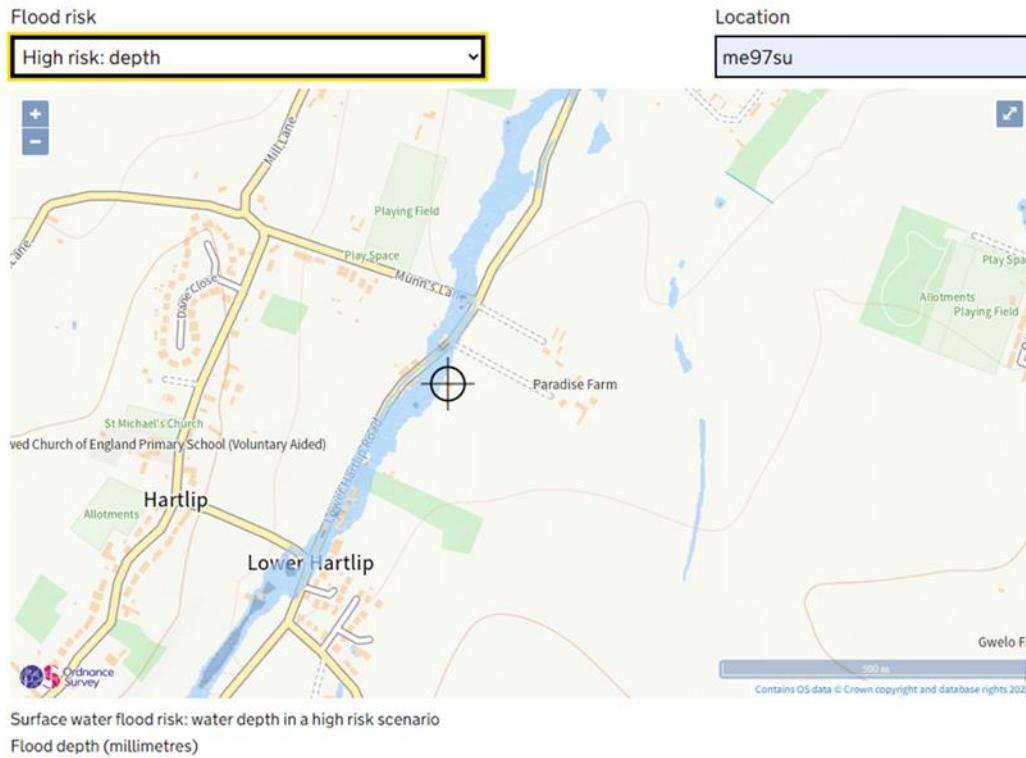
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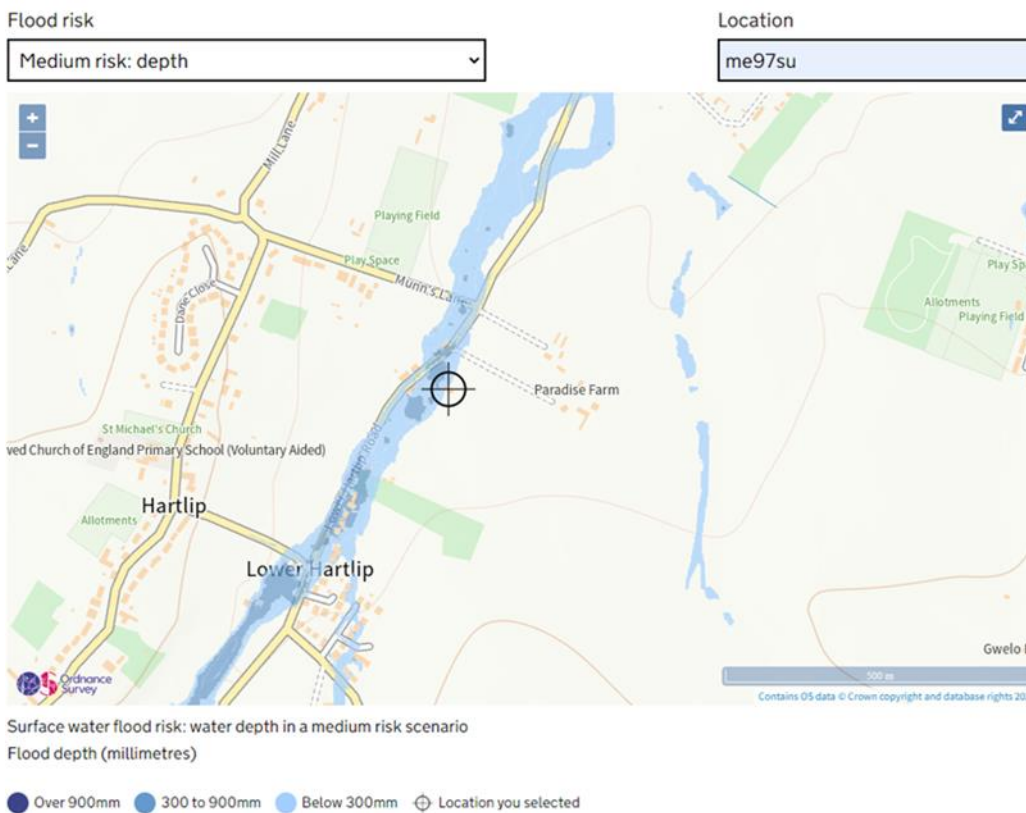
High risk-

Surface water flooding, sometimes known as flash flooding:

- happens when heavy rain cannot drain away is difficult to predict as it depends on rainfall volume and location
- can happen up hills and away from rivers and other bodies of water
- is more widespread in areas with harder surfaces like concrete

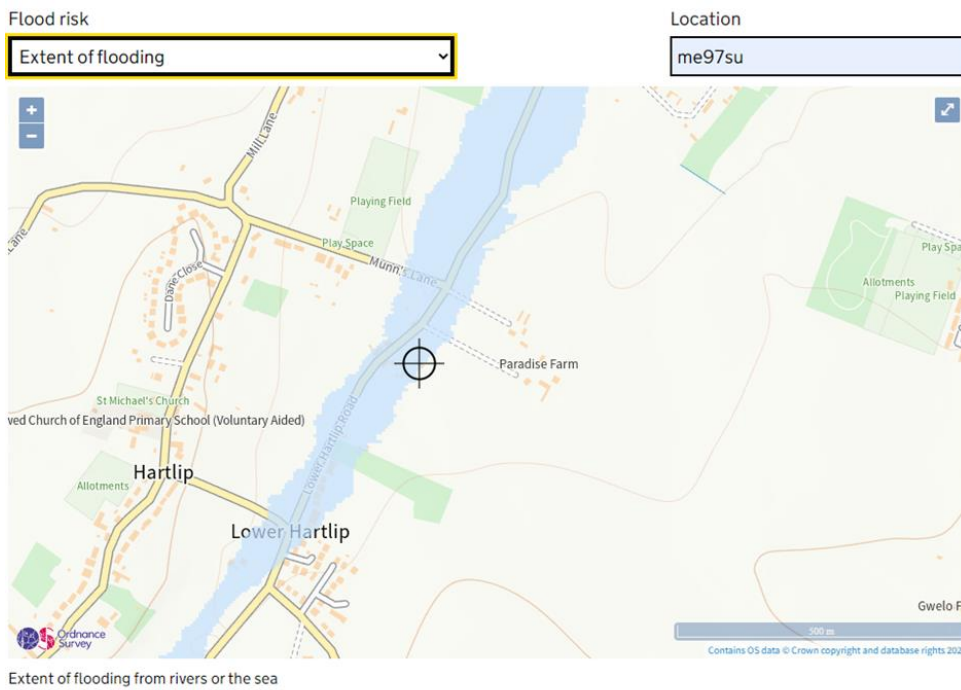


Site has no appreciable water depth in a high-risk scenario.



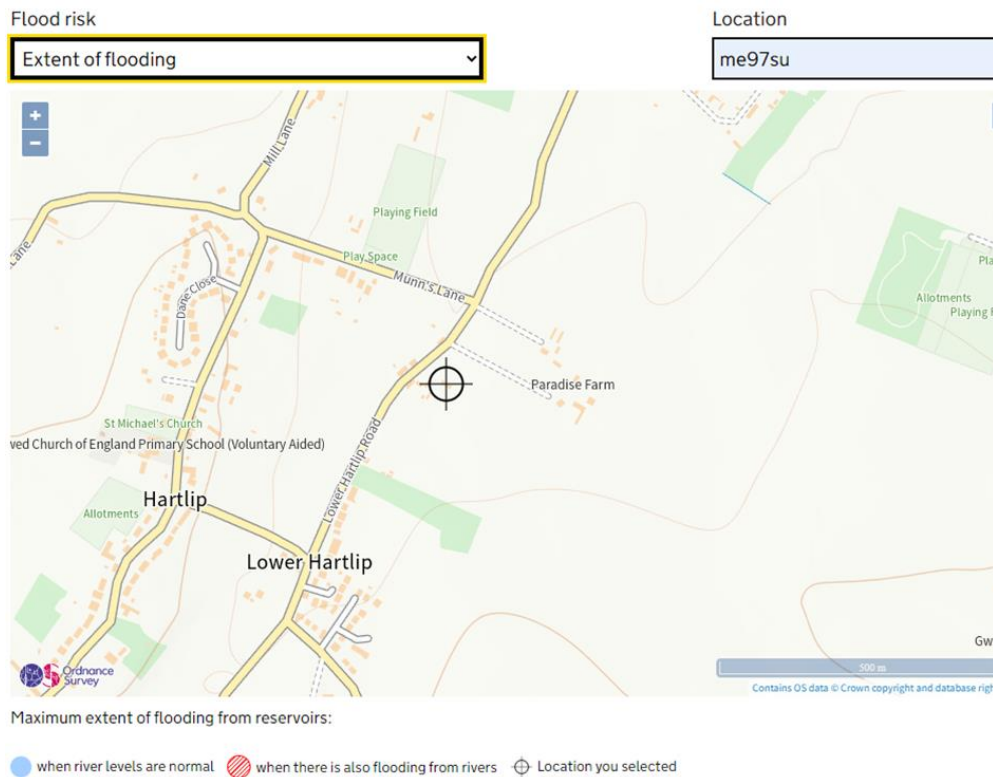
Site has no appreciable water depth in a medium-risk scenario.

Rivers and the sea



The site has a very low risk of flooding from rivers or the sea.

Reservoirs



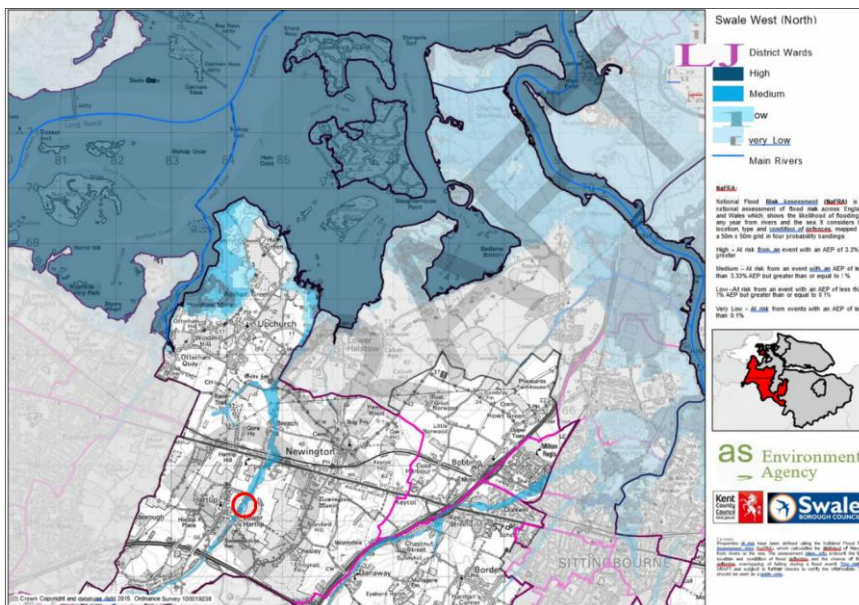
The site has no risk of flooding from reservoirs.

The Swale West area has the smallest proportion of coastline that would be susceptible to tidal flooding in the district. The northernmost tip around the Upchurch and Otterham Quay area is shown to be partially vulnerable to flooding during an extreme event, but much of this area is low-lying and uninhabited.

Throughout the rest of the area there are numerous narrow bands of flood risk associated with topographical low-points at the base of valleys. Whilst these areas are ordinarily dry and free from flow, there is a small risk of flooding during periods of particularly prolonged or intense rainfall (when the valley sides become saturated, or when intense rainfall results in sheet runoff). These ordinarily dry valleys are only depicted because of the potential for ponding or flow in the most extreme circumstances.

Much of the southern area is located over chalk, with the coastal areas being largely underlain by more impermeable clays and silts. Inappropriately drained impermeable development over the areas underlain by the permeable chalk could significantly increase flood risk from surface runoff if suitable Sustainable Drainage provisions are not provided. Whilst these systems are usually effective in chalk areas, it should be checked that the groundwater table is sufficiently far below the surface to allow room for infiltration, and also that the area is not near enough to a Source Protection Zone to cause pollution. The area underlain by the impermeable London Clay and silts are likely to be poorly draining, and potentially susceptible to surface water ponding during periods of prolonged or intense rainfall.

The NaFRA mapping for Swale East (which shows the areas at risk from flooding with the defences in place) is shown in Appendix 10.



Lead local flood authorities (LLFA) are responsible for managing the flood risk from surface water and provided the following information

KSL ENQUIRIES – ENVIRONMENT AGENCY

RE: KSL 283246 AC - Paradise Farm Barn, Lower Hartlip Road, Hartlip, ME9 7SU

Thank you for your enquiry which was received on 5 October 2022.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

This site is located in an area of Flood Zone 3 where we do not have modelled flood levels.

This area is covered by national generalised modelling, which is only suitable for Flood Zone extent visualisation, not levels or depths data.

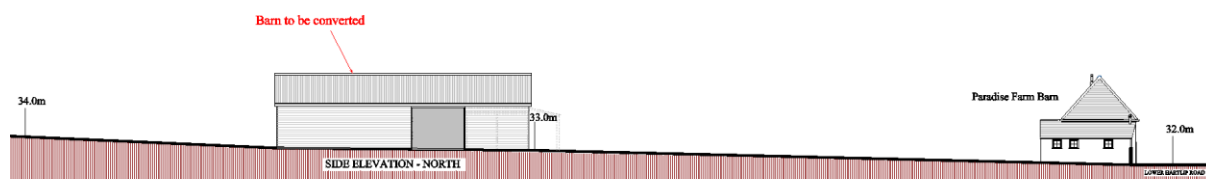
In 2004 we completed national generalised modelling to produce catchment scale Flood Zones (using JFLOW modelling techniques), the calculation process produced water depths as a by-product. Since the modelling methods used were developed, tested and reviewed to produce Flood Zone extents only, we currently have no information on the accuracy of the depth data. Please note some areas of flood zone 2 which are not modelled are derived from historic flood event maps.

The property is in flood zone 3, The chance of flooding in any one year is greater than or equal to 1% (i.e. a 100 to 1 chance) for river flooding and greater or equal to 0.5% (i.e. a 200 to 1 chance) for coastal and tidal flooding.

We can confirm that we have no record of flooding from rivers and/or sea for this location.

The applicants and neighbours (one who has lived in this area for over 70 years) cannot recall ever being flooded.

Site Levels



SECTION THROUGH SITE EAST-WEST

There is a gradual slope within the site down towards the Lower Hartlip Road. The barn is 1m higher than the road level of 32.0m.

FLOOD RISK ASSESSMENT

The proposed barn conversion is required to satisfy 2 conditions.

1. The building is to be made safe from flooding for its lifetime.
2. The development is to be designed so it will not increase flood risk elsewhere.

Condition 1.

The existing floor level is one meter above the finished floor level of Paradise Farm Barn dwelling which has no history of flooding.

The proposed conversion will necessitate a 200mm increase in height to the floor level to allow for insulation. (With appropriate damp proofing measures to meet building regulations).

This will take the floor level 1.2m above that of the Paradise Farm Barn dwelling.

The Environment Agency state that the PLP (property level protection) measures can be the most effective in mitigating both the ingress of water to a property and help to minimise damage should water get in.

Protection measure to include;

- 1 Manual door barriers are to be fitted to the external doors to provide a watertight seal.
- 2 All door and window frames and openings for cables etc. to be sealed with a silicone gel to prevent entry of water at these points.
- 3 No electrical sockets or switches to be lower than 800mm to comply with the EA recommendations thus reducing the risk of electrical failure.
- 4 Property owner to sign up to the EA's flood line to receive information and flood warnings by email and text.

With all the above information taken into account and proposed protection measures put in place it is considered that the building will be safe from flooding for its lifetime.

Condition 2.

To ensure flood risks to other sites are not increased, the runoff from the site will be dealt with using SUDS methods. The aim is to ensure that any volumes and peak flow rates are no greater than the rates prior to the proposal.

The rainwater from the roof is to be discharged to a suitable soakaway following percolation tests for the soil. (It should be noted that the building currently has no guttering.)

It is considered that the proposed SUDS methods, in accordance with building regulations, will ensure that there will not be an increase in flooding.

