

SUPERSEDED

FLOOD RISK ASSESSMENT

(Feb 2013)

Demolition of existing bungalow and replacement with new
28 The Kench
(off Ferry Road)
Hayling Island
PO11 ODF

ref: SU 68938, 00005
50.795516N, -1.0232279W

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1.0 Introduction

This FRA has been prepared in support of an application for a replacement dwelling at 28 The Kench, Hayling Island.

The existing boat house has become past its design life and becoming increasingly inefficient in terms of energy and thermal insulation. It is no longer feasible to spend money on maintenance and improvement and a replacement dwelling is now proposed.

Many of the boat houses / holiday homes on the development of The Kench is becoming ready for its dwellings to be replaced and number 28 is following on from a number of other dwellings which have already been replaced.

The national grid location of the site is approximately centred at SU 68938, 00005
Or 50.795516 N, -1.0232279 W

2.0 Flood risk assessment

In order to construct the following report the following have been consulted in order to assess flood risk:

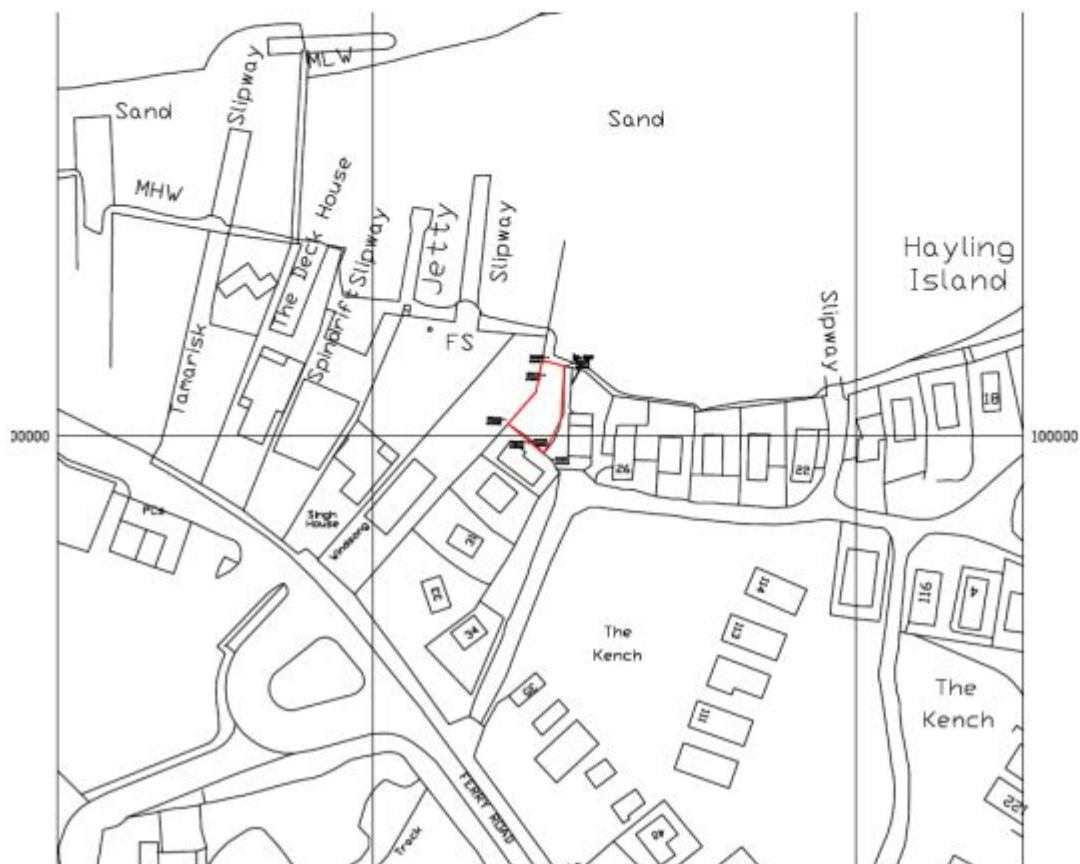
Havant borough council Planning dept
Environment Agency

3.0 location



The site is roughly rectangular in plan with the southern part been 1.2m approximately

higher at the southern end. The northern part of the site backs onto the sheltered bay of the kench with a sea wall marking its northern boundary. The site occupies a footprint of approx 150m².



Although this project is a replacement of existing under planning term PPS25 states that a flood risk should still be considered as part of the planning application.



4.0 Assessment of risk

In order to construct the following report the following have been consulted in order to assess flood risk:

Havant Borough Council Planning dept Environment Agency

In terms of the local Havant Borough Council District Plan the development site falls within a coastal zone and should therefore comply with policy C3 which sets out a need for use of best design practices within these areas.

The Environment Agency flood risk map shows that the majority of the site is in flood zone 2 with flood zone 3 indicated as encroaching into the lower parts of the site. After speaking to the Environment agency officers they have confirmed that their latest modelling for the site predicts a 1:200 year worst case scenario of 4.3m AOD

Following a topographical survey of the site, the boundary wall on the site has been measured to top out at 2.56m AOD with remaining parts of the site up to a level of around 3.6m AOD. As part of the design process the environment agency have said that a floor level at 4.3m would be preferable however they understand that it isn't always possible to create a building that would be significantly higher than the neighbours.

Various modelling and scheme options for the site have been looked at and a Finished floor level of 4.0m AOD is possible without been too significantly overbearing on

neighbours.

The environment agency have acknowledged that this is a like for like replacement dwelling and an increase from the existing 3.560m AOD floor level up to 4.0m AOD would be acceptable in this situation. They also mentioned the use of flood resilient construction which will be looked at shortly

In summary Environment agency have suggested the following be considered for the site:

- Safe emergency egress
- Floor level be raised as much as possible as far as is reasonably practicable.
- Flood resilient measures be used throughout the design.
- Sign up for the Environment Agencies FLOOD WARNING service

Although the technical details of flood resilient construction will be assessed as part of the building regulations application is worth noting as part of the risk assessment that various details with Government publication "improving flood performance of new building. Flood resistant construction" are recommended and deemed as satisfactory in the proposed situation.

6.3.1 *Water exclusion strategy*

A general principle for flood resilient design where predicted flood water depths are relatively small (no greater than 0.3m above floor level) is to minimise the entry of water through permeable elements of the foundation. Any concrete blocks placed below ground-bearing concrete floor slabs provide a potential path for water to ingress into wall cavities, as these blocks are considerably more permeable than concrete slabs. Figures 6.2 and 6.3, illustrating a ground bearing slab and a concrete suspended floor slab, show a potential flow path from the

6.3.2 *Water entry strategy*

General advice for resilient design

A general principle for flood resilient design where predicted flood water depths are high is to provide durable materials that will not be affected by water and use construction methods and materials that promote easy draining and drying.

Standard methods and good quality building materials will generally comply with these requirements but good workmanship is essential.

(EXTRACT FROM IMPROVING FLOOD PERFORMANCE OF NEW BUILDING. FLOOD RESISTANT CONSTRUCTION)

5.0 Emergency access / egress

Access to the site is via ferry road, this is a main road that leads back from the Kench and marina area at the end of the peninsular, back to the inner parts of Hayling and connecting A roads.

Ferry Road is there for the road proposed to be used as a means of emergency egress. As part of this assessment we have identified that a small part of this road, approx 200m away also lies within flood zone 2. The development does however lie in a designated flood warning area, the flood zone risk is also tidal so the probability of flooding can be predicted for years in advance. As the area is not, like other area in a food zone which is created by a river busting its banks where its not always possible to predict early. The Kench benefits from been able to be alerted well in advance and give future occupiers time to make safe egress.