

FLOOD RISK ASSESSMENT

(Feb 2013)

Revision A May 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.

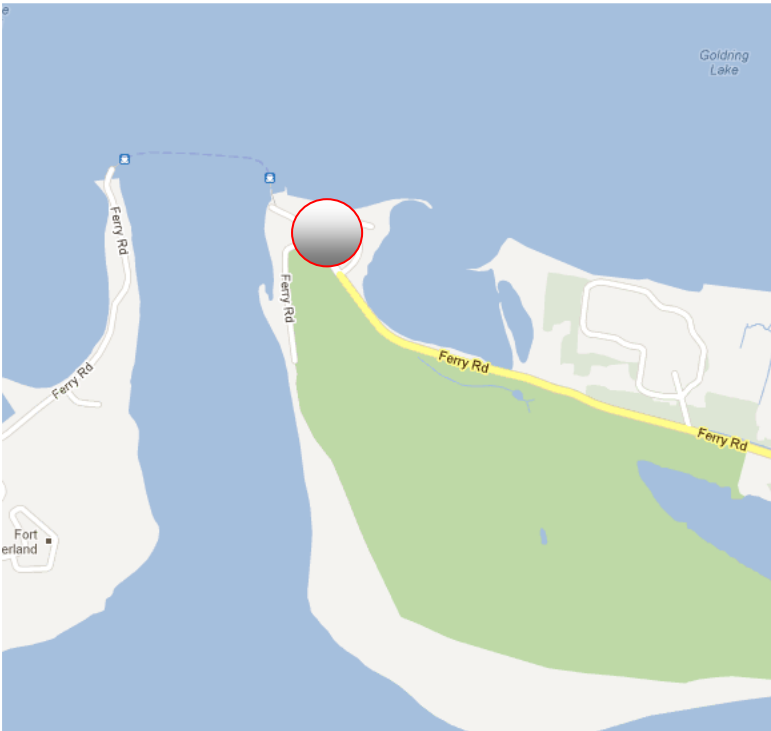
The national grid location of the site is approximately centred at SU 68938, 00005
Or 50.795516 N, -1.0232279 W

2.0 Flood risk assessment

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

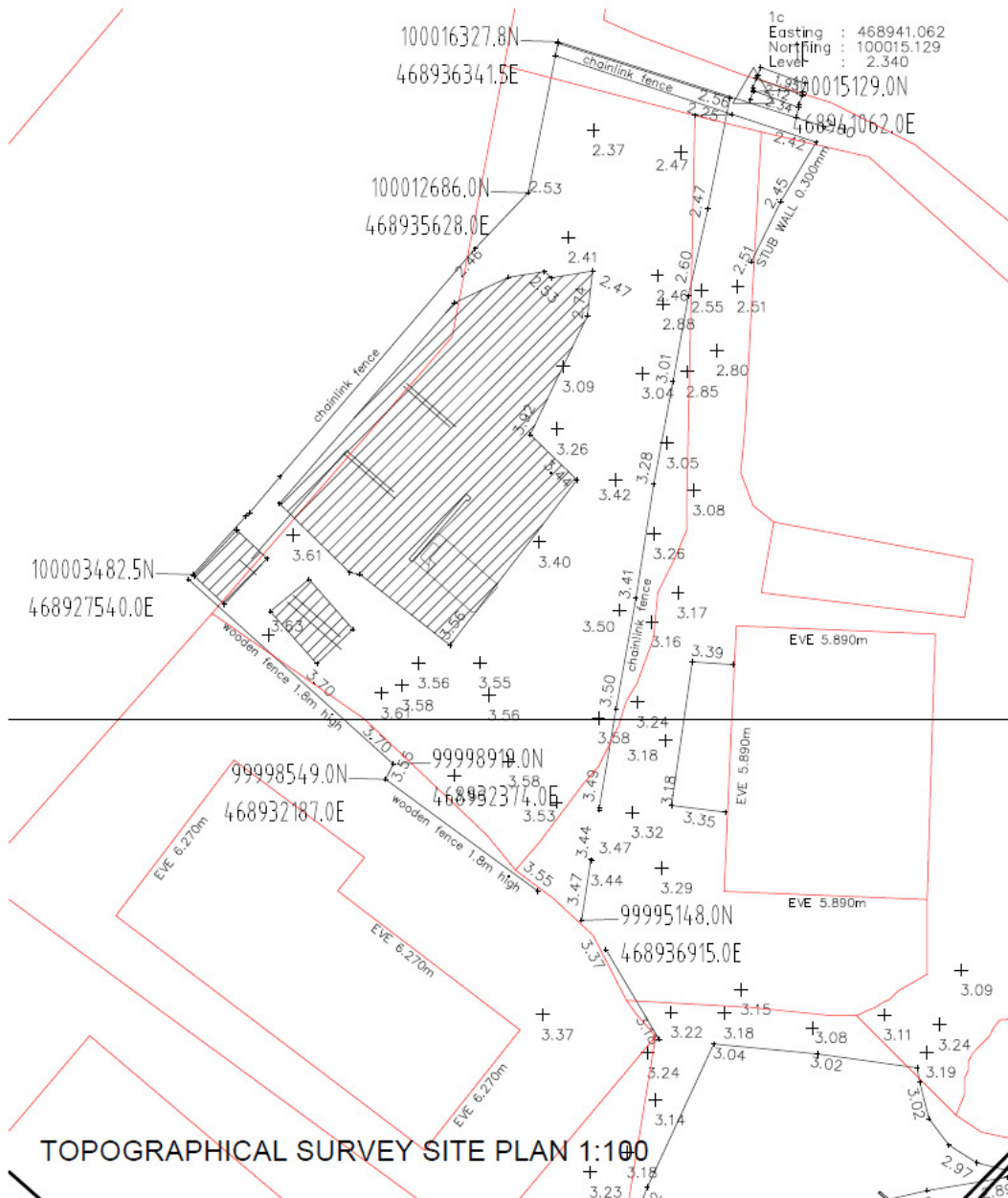
Havant borough council Planning dept
Environment Agency

3.0 location



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

The map shows a coastal area with several buildings and landmarks. A red line is drawn on the map, indicating a specific path or boundary. The map includes labels for 'Sand', 'MHW', 'Slipway', 'The Deck House', 'Jetty', 'FS', 'Singh House', 'Vedding', 'The Kench', 'Hayling Island', and 'TERRY ROAD'. The map is oriented with North at the top.



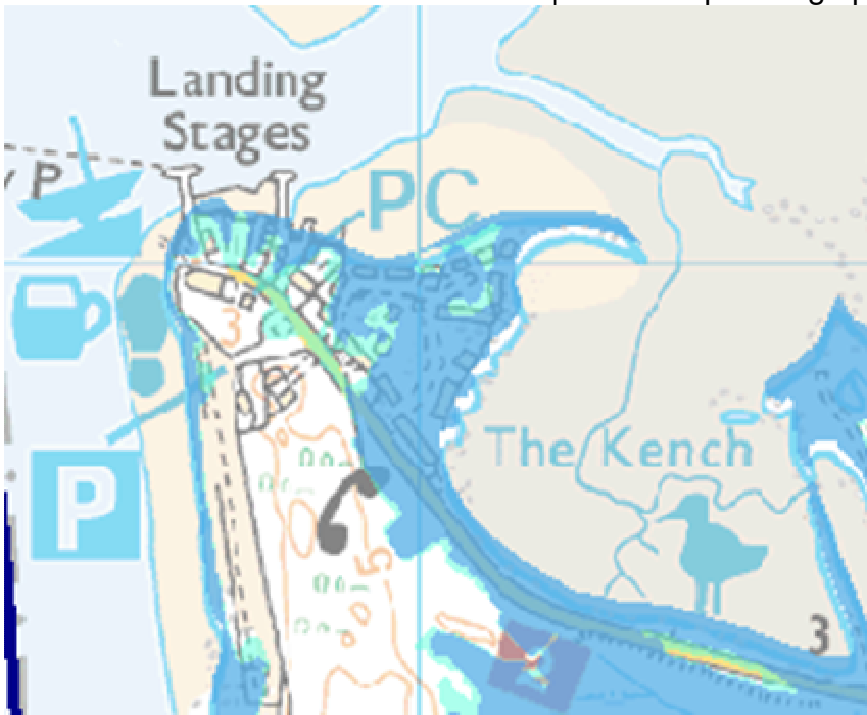
We commissioned a highly accurate topographical survey of the site for accuracy of levels as well as to check boundary coordinates. (see extract above)

The site is currently laid out with a single dwelling on the higher southern part of the site. The current finished floor level of this is 3.560m AOD

Government Planning and Policy Statement 25 (PPS 25) states flood risk assessments are required for planning applications for the following:

- Development proposals of one hectare or greater in Flood Zone 1, and,
- All proposals for new developments located in Flood Zones 2 and 3.

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
Urban South Hampshire Strategic flood risk assessment

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 3.3m 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 high as feasible floor level 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 3.6m AOD is possible without been to 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 3.6m 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.

6.0 Conclusion

Following the initial application and review by the councils consultant costal engineers this flood risk assessment has now been re submitted on revision A.

Consultation and further review of the South Hayling Strategic Flood Risk Assessment has identified the site 1:200 at the precise location is 3.3m AOD

The dwelling currently standing on the site has a FFL of 3.56m AOD which is some 260mm above the predicted worse case 1:200 year level. The new proposed dwelling is designed to sit slightly higher with a 0.3m clearance above the 1:200 level at 3.6m AOD.

This is a solution that has allowed the floor level to be revised from 4.3m initially which was particularly high and becoming a planning issued to a more suitable level which is still 300mm above the 1:200 level.

As mentioned earlier in this report the consultant engineer has recommended a number of flood resilient construction measures and products could be incorporated into the design in line with government policy.

We are due to consider these at a detailed construction design and tender stage and would recommend that details of these measures are conditioned into a planning approval.

We also fully accept the recommendation notifying Natural England and the Langstone Harbour Board of proposed construction timings in relation to local environmentally designated areas.

