

FLOOD RISK ASSESSMENT

relating to a

PROPOSED DETACHED THREE BEDROOM THREE STOREY REPLACEMENT DWELLING

at

**25 SANDY BEACH ESTATE
HAYLING ISLAND
HAMPSHIRE PO11 9RG**

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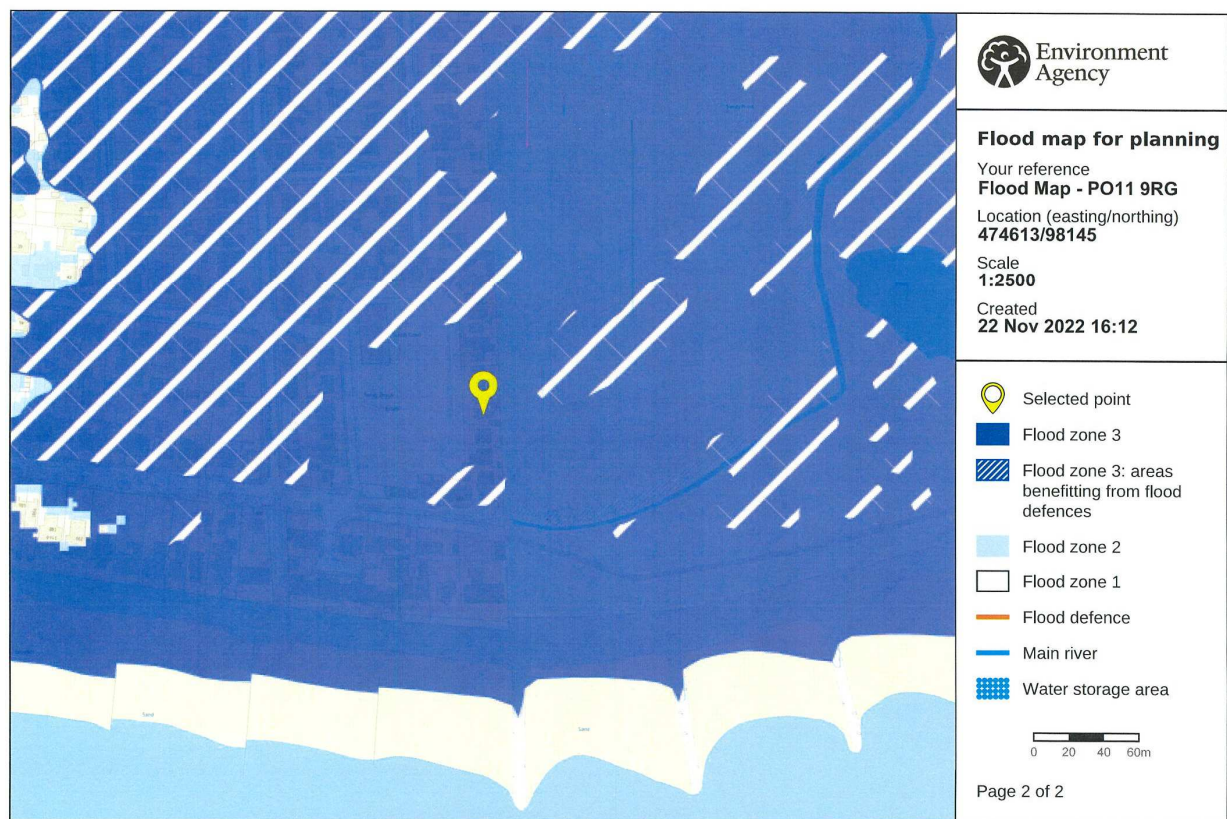
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1.0 Flood Risk Assessment

- 1.1 This Assessment is to accompany a full planning application with respect to a proposal to demolish the existing two storey detached two bedroom dwelling and to replace it with a three bedroom detached three storey replacement dwelling.
- 1.2 25 Sandy Beach Estate is located within Flood Zone 3 which is defined as having a 'high probability of flooding'. See definitions listed below.
- 1.2 The local planning authority have given pre-planning advice which includes the following statement with regard to a flood risk assessment relating to the redevelopment of this site:

'In this instance there would be a marginal increase in building footprint. However, I am of the opinion that the increase would not be so significant as to warrant a sequential test in this instance.'



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Figure 1 - Flood Map

FLOOD ZONE	DEFINITION
Zone 1 (Low Probability)	Land having a less than 1 in 1000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3.)
Zone 2 (Medium Probability)	Land having between a 1 in 100 and 1 in 1000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1000 annual probability of sea flooding (Land shown in light blue on the Flood Map.)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Flood Zone Definitions (applicable zone shown highlighted in yellow)

- 1.3 From reference to the above definitions, the site has a 1 in 200 (0.5%) chance of flooding from the sea per year with a 0.5% tide level of 3.4m AOD predicted to increase to 4.5m AOD by the year 2115 taking into account climate change and rising sea levels.
- 1.4 Recent improvements to Eastoke Point coastal defences have reduced this risk but a residual risk still remains from overtopping or a breach in defences.

2.0 Flood Mitigation & Resilience Measures

- 2.1 The replacement of the existing dwelling with a new build dwelling would provide significant opportunities to deal with flooding and incorporate resilience measures to limit damage and allow rapid drying out following a potential flood event.
- 2.2 The ground floor finished level in the new dwelling would be increased to 2.3m AOD compared to the existing floor level of 2.07m AOD. The new ground floor would therefore be 0.5m above the nominal external ground level of 1.80m AOD.

- 2.3 The following measures would be undertaken in the design and construction of the new building within the ground floor level:
- a) Solid concrete ground floor construction incorporating an effective damp proof membrane and a resilient non-absorbent PIR insulation layer sandwiched between the oversite slab and a cement & sand screed.
 - b) Concrete block cavity external walls with full fill non-absorbent PIR cavity insulation to the ground floor and solid block loadbearing and non-loadbearing internal partitions (rather than timber stud framing).
 - c) Cement based plaster finishes rather than plasterboard or gypsum plaster.
 - d) All electrical sockets, switches and other electrical equipment to be located at least 750mm above finished ground floor level and wired from above via the first floor voids.
 - e) All ground floor finishes to be selected from materials resistant to water damage.
 - f) New foul drainage system to be fitted with a non-return valve on the final connection to avoid risk of back-up.
 - g) New surface water system to drain to new cellular soakaway sized to cope with potential storm surges. Soakaway would be located minimum 5m from new building (linear soakaway adjacent to the road boundary would be proposed).
 - h) Removable flood boards & fixings to be fitted to ground floor external door openings to limit ingress of flood water during flooding.
 - i) The occupiers would formulate and adopt a Flood Plan to follow in the event of a flood warning and would sign up to the Environment Agency flood warning service.

3.0 Conclusions

- 3.1 The proposed replacement dwelling would have only a marginal increase in footprint and would not represent any significant increase in flood risk within the site and surrounding area.
- 3.2 The replacement dwelling would provide a higher ground floor level than the existing dwelling with much improved resilience to flood damage by appropriate construction to minimise internal damage and disruption and facilitate more rapid drying out should flooding occur.
- 3.3 The first floor would provide a safe haven above any possible rising flood levels within the life of the building in the event of any future catastrophic flooding.
- 3.4 The existing dwelling has little or no resilience to flooding, was not designed at a time when flooding was considered a risk and its replacement with a new building is considered the best and most appropriate option on this site.