

Flood Risk Assessment (FRA)

Replacement House and Annex

7 Wheatlands Avenue and Land at Hayling Island, PO11 9SG

V1. October 2021

V2. February 2022

V3. February 2023

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Appendices:

A. EA Defence Map

1.0 Generally

- 1.1 This Flood Risk Assessment (FRA) forms part of a Full Planning Application to Havant Borough Council for a replacement house and annexe at 7 Wheatlands Avenue, Hayling Island, PO11 9SG.
- 1.2 This FRA is being undertaken in line with the Technical Guidance to the National Planning Policy Framework. The subject site is within Flood Zone 2, and the proposed use class is 'More Vulnerable'. A full Exception Test should not therefore be required.
- 1.3 No other purpose is anticipated or accepted. Copyright of this report remains with Critchley Architecture And Design Ltd.
- 1.4 Reference should be made to the planning submission drawings for details of the proposals, re:

21010 -	111	Location and Block Plan
	102A	Existing Site Plan
	114	Proposed Site Plan
	301	Existing House Elevations
	302	Existing Annexe Elevations
	403B	Proposed House Plans
	412A	Proposed Annexe
	501C	Proposed House Elevations

2.0 Development

- 2.1 The proposals are for a replacement chalet bungalow style house with a replacement annexe in the rear garden.
- 2.2 The existing bungalow and annexe are set on stilts with a finished floor level 300mm above ground level.
- 2.2 The subject site ranges from approximately 3.44m AOD to at least 3.59m AOD. Datum points are identified on drawings 21010-102A and 21010-104. Please see the Environment Agency's table below.

Water Depths & Levels for Wheatlands Avenue, P011 9SG

Point	Water Surface Level (mAOD*)		Ground Level	Water Depth (metres)	
	0.5% Annual Probability/1 in 200 Year Present Day (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year Present Day (Flood Zone 2)		0.5% Annual Probability/1 in 200 Year Present Day (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year Present Day (Flood Zone 2)
1	No Data	3.84	3.44	No Data	0.20
2	No Data	3.84	3.44	No Data	0.20
3	No Data	3.84	3.45	No Data	0.19
4	No Data	3.84	3.52	No Data	0.12
5	No Data	3.88	3.59	No Data	0.07

* Levels in metres above Ordnance Datum Newlyn

3.0 Assessment of Flood Risk

- 3.1 This FRA is being undertaken for a minor development with a '*more vulnerable*' use within Flood Zone 2.
- 3.2 The majority of the subject site is within Flood Zone 1 and the site in general benefits from flood defences along the nearby coast, see Appendix A.
- 3.3 The site is considered to be at low or very low risk of flooding from rivers or seas. Very low risk areas have a less than 0.1% chance of annual flooding. Low risk areas have an annual chance of flooding of between 0.1% and 1%.
- 3.4 The site is considered to be at high risk of flooding from surface water. This information is not property specific, and further data obtained from the Environment Agency indicates that only the front and rear boundaries of the site fall within land that is at risk of flooding.
- 3.5 Surface water flooding, or flash flooding, occurs when runoff from roofs and other hard surfaces is unable to drain away, usually due to heavy rainfall exceeding the capacity of local drainage systems.
- 3.6 This area of Hayling Island sits on the Bracklesham Group and Barton Group and is considered to be a moderately productive aquifer. An aquifer is a body of permeable rock which can contain or transmit groundwater.
- 3.7 Evacuation during a flood event is a potential issue in Wheatlands Avenue, since this entire area of Hayling Island can only be accessed via a single road (Southwood Road).

4.0 Future Protection

- 4.1 The proposals seek to replace existing buildings. As the existing buildings are on stilts, it would be logical to also build the proposals on open stilts to minimise new hardstanding and allow any flood water to drain freely.
- 4.2 Existing concrete hardstanding will be removed as part of the proposals. All new hardstanding to the amenity areas is to be porous.
- 4.3 An area of planting is to be retained along the front boundary to aid in reducing rate of run off.
- 4.4 The proposed finished floor levels are set at a minimum of 450mm above ground level. As water depths are estimated to reach no more than 0.2m, this should be an ample allowance.
- 4.5 The existing house contains bedrooms at ground floor level. As part of the proposals, all new sleeping accommodation is set at first floor to minimise the risk to future occupants.
- 4.6 The above measures ensure that any future occupants would remain safe in the event of inundation until either the water dissipates or evacuation can be made.

5.0 Mitigation Measures

- 5.1 Take low level protection measures as follows:
 - Seal service entry connections.
 - All service outlets within the building to be a minimum of 450mm above floor level.
 - Entrance door to be flood resistant.
 - Run separate electrical circuits for upper and lower floors.
 - Boiler to be wall-mounted.
 - Insulation to be closed cell.
 - External doors to have slotted jamb provisions for flood boards. Flood boards to be stored in an easily accessible location.
 - All drain and service access covers at ground level to have locking covers and frames.
 - Sewer pipes to have non-return valves.

- Sign up to relevant flood warnings (Environment Agency, Floodline etc).
- Complete the 'Personal Flood Plan' as issued by the Environment Agency for in house management in case of inundation.
- Install remote location outdoor water and flood alarm to allow occupants for warning of flood depths on Wheatlands Avenue.

5.2 Further resilience measures relating to internal finishes will be recommended to, but are at the discretion of, the applicants.

Defence map Centred on Wheatlands Avenue, PO11 9SG - Created 6 October 2021



Legend

ASSET_ID

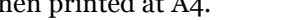
 470251

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*when printed at A4.



0 150 300

Metres

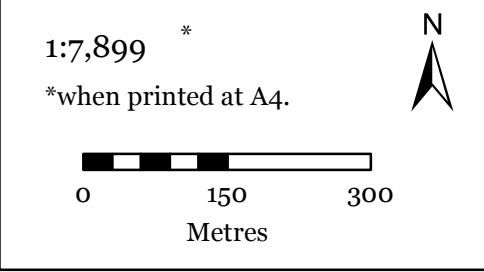
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*when printed at A4.



0 150 300

Metres



Asset Id	Asset Sub-type	Length (m)	Asset Maintainer	Actual Condition	Design SoP	Last Inspection Date
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