

Flood Risk Assessment for 20 Sandy Beach Estate

Introduction

Havant Borough Council granted planning consent in October 2013 to extend & alter the property at 20 Sandy Beach Estate under application APP/13/00534. The property has occupied this site since the late 1930s which falls within a designated Flood Zone 3. Given its position and risk to flooding the owner wishes to knock down and rebuild the dwelling incorporating flood resilient measures.

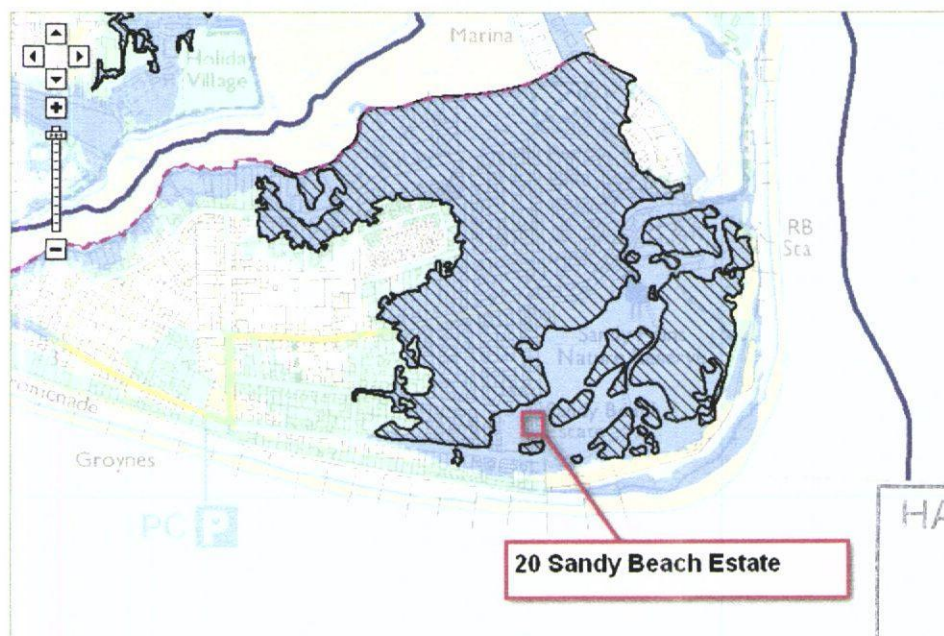
With respect to the Sequential Test governing new build Applications it should be noted this Application is for the regeneration of the existing building to make it materially more resilient to potential flood events than can practically be achieved by modifications to the former structure. Additionally for the purpose of regeneration of the building in situ there are no other practical sites for this building.

Location

20 Sandy Beach Estate is located within an area shown as tidal flood zone 3 and has a 0.5% (1 in 200) chance of flooding from the sea in any year. The current 0.5% tide level is given as 3.4mAOD, and this rises to 4.5mAOD by the year 2115 when predicted climate change and sea level increases are factored in. Recent improvements to the Eastoke Point coastal defences have reduced the risk of flooding however a residual risk remains from overtopping or a breach.

X: 474,498;Y: 98,360 at scale 1:10,000

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Flood Mitigation Measures

The following measures are being incorporated into the design of the building to mitigate potential flood damage.

Considerations	Flood Proofing Measures
Floor Levels	Floor levels will be set no lower than the existing floor levels in the present building.
Solid Ground Floor	The new building will benefit from a concrete slab that will provide a waterproof foundation for the entire ground floor. The slab will be designed to provide run off into sump areas providing an exit for any flood water ingress into the building.
Electrical Circuits	All electrical sockets and switch points for the ground floor will run downwards from the ground floor ceiling to be located at least 750mm above floor level.
Non Return Valves	A single non return valve will be located at the head of the primary sewage pipe presented to the road.
Draining / Sump point	Primary and secondary six inch pipes will direct any ingress of flood water into the sumps away from the built up area to the back boundary of the property.
Water Extraction	The primary and secondary drain pipes are fed by immersion pumps located in each sump. These mains powered pumps can be diverted to run via a small portable generator.
Building Construction	The building will be constructed using Durisol blocks which is a Permanent Formwork System or the original ICF (Insulated Concrete Formwork) made from recycled timber which has been treated so that it doesn't rot or burn. The system will be used below and above ground onto which a waterproof render will be applied externally. With no cavity, and no capillary action intrinsic to the material, the walls form a watertight flood defence. REF www.durisol.net/the-product/
Flood Boards	Rails to support flood boards will be included at front and back doorways.

Safe Refuge

The design of the building includes balconies at first and second levels which provide safe refuge in the event of catastrophic flooding. The property and owners are registered for flood alerts with the environmental agency floodline service.

Summary

This Flood Risk Assessment demonstrates, through the use of innovative building materials and by putting flood risk considerations at the centre of the design, flood risk to the new property is no greater and actually reduced when compared to the existing building. Given the limitations of the existing building to incorporate modern materials and systems that will help mitigate potential flood damage, regeneration represents the most effective option for the owner.

References

<http://www.environment-agency.gov.uk>

<http://www.environment-agency.gov.uk/homeandleisure/floods/>

<http://www.planningportal.gov.uk/uploads/odpm/4000000009282.pdf>

<http://www.communities.gov.uk/publications/planningandbuilding/improvingflood>

<http://www.durisol.net/>