

Appendix 7 – Flood Risk Management Plan

Land adjacent to 132 Havant Road, Hayling Island
Flood Risk Assessment

Mr R Ruffell

**Land Adjacent to 132
Havant Road, Hayling
Island**

Flood Risk Management Plan

Project Ref: 27859/002

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Land Adjacent to 132 Havant Road, Hayling Island
Flood Risk Management Plan

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Project Name: Land Adjacent to 132 Havant Road, Hayling Island

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Revision	Date	Description	Prepared	Reviewed	Approved

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Contents

1	Introduction, Scope & Objective	1
2	Document Control & Review	3
3	Flood Risk	5
4	Flood Warnings Direct (FDW)	6
5	Safe Refuge	7
6	Response Actions/ Considerations	8
7	The Role of Other Bodies	11
8	Contact Details	13

Figures

Figure 1: Site Location	1
Figure 2: EA Flood Zone Map	5
Figure 3: EA Flood Warning Map	6

Appendices

- Appendix 1 – Environment Agency Flood Risk Information
Appendix 2 – Useful Sources of Information

1 Introduction, Scope & Objective

Peter Brett Associates LLP (PBA) has prepared this Flood Risk Management Plan (FRMP) for the new residential development at **Land Adjacent to 132 Havant Road, Hayling Island.**

The objective of this plan is to raise awareness of the risk of flooding in the location specified below, to detail the Flood Warnings and estimated lead time available, and to detail how the Plan is triggered by who and when, and what actions are required by those people in the area. The Plan also describes the evacuation procedure and need for safe refuge.

The location of the site covered by this Plan is shown in Figure 1 below:

Figure 1: Site Location



The site is within an area at risk of tidal flooding from Langstone Harbour and also from a ditch to the north which is designated as Main River and understood to be called Pound Croft. The risk of flooding may increase due to potential sea level rise; The Technical Guidance to the National Planning Policy Framework (NPPF) indicates a possible increase in peak sea levels of approximately 1 metre over the next 100 years.

This Plan is to ensure that the occupants of the residential development are safe through adequate flood warnings being available and that they will act on them. Depending on the severity of the flooding, actions required of residents and those who are in the buildings may include:

- Monitoring flood warnings and remaining within the dwellings (all of which provide a safe refuge as they are located above the flood level);
- If it is considered necessary, leaving the development by the appropriate safe access route before they are potentially cut off at peak of the flood event

This FRMP will become a 'live' document as the development is completed and occupied, to provide advice and guidance to users in the event of an extreme flood.

Land Adjacent to 132 Havant Road, Hayling Island

Flood Risk Management Plan

This FRMP aims to supplement any wider scale plans for the area and does not supersede any advice given by Havant Borough Council or the Environment Agency (EA). The advice of the emergency services should be followed at all times and on the ground decisions will supersede plans within the report.

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2 Document Control & Review

The plan will be reviewed and updated at least every three years, as a result of lessons identified after an activation event or exercise, following major changes of personnel or policy, or following any change to the flood risk or warning process that is used by the Environment Agency.

The initial FRMP will be included within the Home Buyers Pack.

Residents should undertake the following:

- **Reading the plan and updating the contacts list;**
- **Contact the Environment Agency Floodline Service** on 0845 988 1188 to check that the flood risk to the development has not changed, for example flood defences may be built in the future. specific information for the tidal areas of West Hayling including Langstone Harbour can be found by entering the quick-dial number **0122145**;
- **Contact Havant Borough Council (Emergency Planning Dept)** to check that their evacuation procedures have not changed;
- **Contact the Environment Agency Flood Warning Service** on 0845 988 1188 to register to receive flood alerts direct to your phone. This information is also on the EA website and is currently available at the following address (this is a free service which provides vital information in the event of a flood).

<http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx?type=Warnings&term=All>.

- **Prepare and maintain a flood kit** to contain items which are essential for evacuation. The flood kit will also be useful for general emergency situations. This should be stored where you can easily get to it, and should include:
 - a torch;
 - a first-aid kit;
 - a list of useful telephone numbers;
 - emergency contact details
 - a supply of bottled water;
 - a portable radio and supply of batteries.

Residents should review this plan to keep all contact numbers up to date, with their own changes detailed below.

Land Adjacent to 132 Havant Road, Hayling Island
Flood Risk Management Plan

Date of Review	Changes to Plan	Issued to

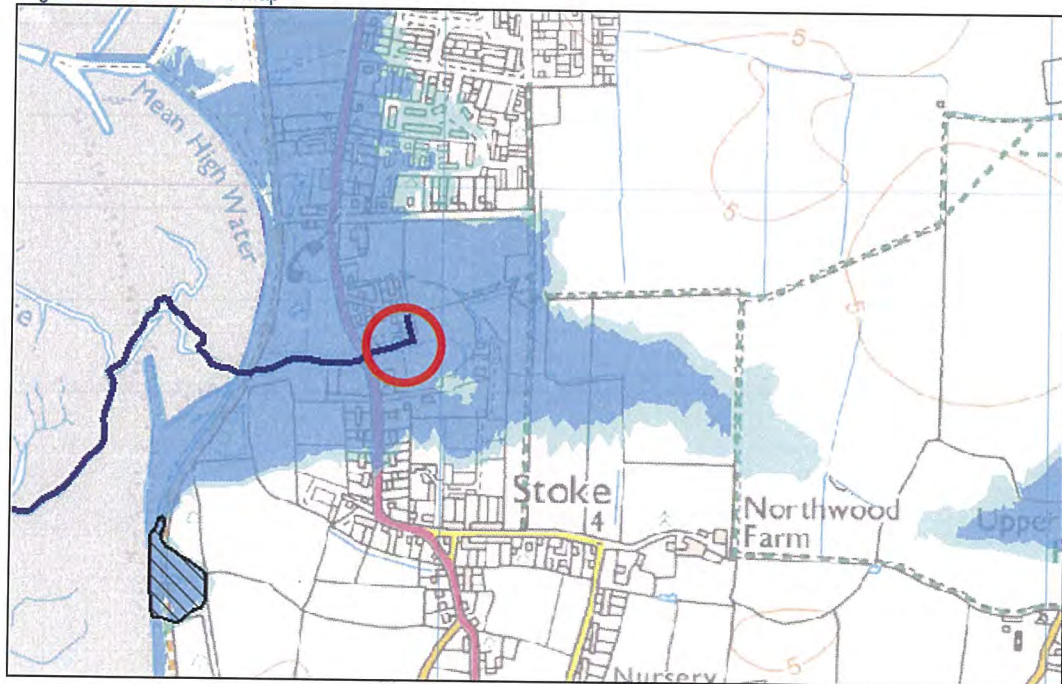
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3 Flood Risk

The location covered by this Plan is at risk from flooding from the Langstone Harbour and also from a ditch to the north which is designated as Main River and understood to be called Pound Croft. The ditch is thought to suffer from periodic flooding due to flows backing up during high tides, and is covered by the EA Flood Warning System. The frequency, duration and probability of flooding at this location is discussed below.

The **Langstone Harbour** is the dominant flood risk to the area. The EA Flood Zone map provided in Figure 2 indicates that the site is currently in Flood Zone 3 'high probability', where the annual probability of tidal flooding via the Langstone Harbour is greater than 1 in 200 (>0.5%).

Figure 2: EA Flood Zone Map



Analysis undertaken by Royal Haskoning on behalf of the Environment Agency confirms that the site remains unaffected by the 1 in 200 annual probability tidal flood 'design event' even allowing for sea level rise to the year 2048. It is only beyond the year 2048 when the site falls into the area affected by the design flood event. The modelling confirms that the site and surrounding area is impacted to a peak tide level of 4.5m AOD.

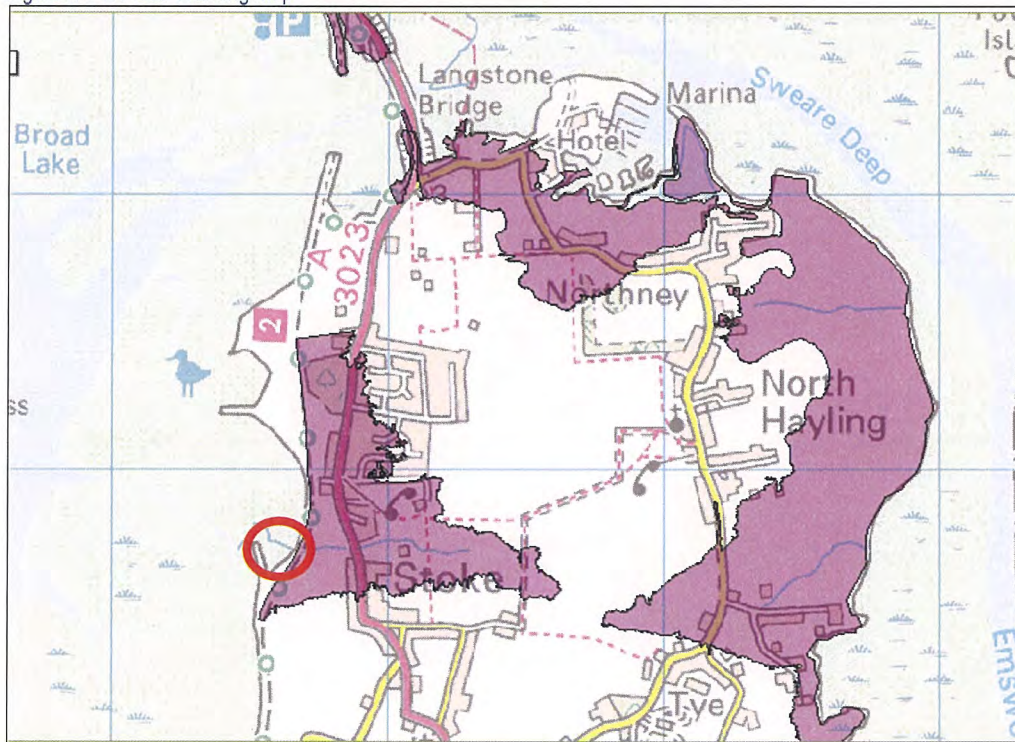
As the area is at risk from tidal sources, any flood is therefore likely to be of a limited duration dependant on the period when the high tide is above the level of the surrounding tidal defences. However, there are likely to be a series of high tides when flooding could occur as well as areas of standing water, possibly to a significant depth, in the intermittent periods of low tide. As noted previously, the site is currently outside the area at risk of flooding in an extreme 1 in 200 annual probability flood. However, the area may become at risk due to the projected increases in sea level.

4 Flood Warnings Direct (FDW)

In the event of a serious flood event the competent warning authority is the EA. The EA operates a flood warning service in all areas at risk of flooding; this is available on their website (www.environment-agency.gov.uk).

When a flood is expected, Havant Borough Council and the local emergency services will be responsible for public care and safety. The area is shown as being within a 'Flood Warning Area' on the EA's website (reproduced on Figure 3 below).

Figure 3: EA Flood Warning Map



Flood warnings are broadcast on TV and radio weather and travel bulletins and, in designated flood warning areas, direct to the local community by siren, loudhailer or flood wardens, and in high risk areas by phone or fax.

The flood warning information on the EA website is updated every 15 minutes. All warnings are also available through the EA's 24 hour Floodline service 0845 988 1188 (specific information for the tidal areas of West Hayling, including Langstone Harbour be found by entering the quick-dial number 0122145). Furthermore, people may sign up to **Flood Warnings Direct (FWD)** to receive a pre-recorded flood warning message sent to their home, work or mobile phone number.

Floodline Warnings Direct is a free service operated by the EA that provides flood warnings direct to you by telephone, mobile, email, SMS text message and fax. Sign up for Floodline Warnings Direct by calling Floodline on 0845 988 1188 or online by following the link included in Appendix 3.

The EA's flood warning service, where available, aims to minimize the risk to life and property from flooding from rivers and the sea. However, it would not claim in any way to eliminate the risk. If flooding is forecast, warnings are issued using a set of four easily recognisable codes. A description of the codes is provided in Section 6, together with the recommended actions in each case.

5 Safe Refuge

In the event of a breach or overtopping of the tidal flood defences, the depth of waters is predicted to reach approximately 2.4m at the location of the proposed building. However, the ground floor is devoted to garaging and less vulnerable uses such as utility rooms, storage, swimming pool and personal gym which will be resilient to flooding. The first floor will contain the habitable rooms and the minimum floor level would be 4.7m AODN, and therefore safe refuge is provided to all residents.

As the site is only impacted by tidal flooding if the flood defences are overtopped or breached during a 1 in 200 (0.5%) annual probability plus climate change flood event, the initial advice is that all users and occupiers take safe refuge on the first floor.

The initial advice is for residents to monitor flood warnings and remaining within the first floor of the dwellings (which provide a safe refuge as located above the flood level).

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6 Response Actions/ Considerations

In the event of a serious flood event the competent warning authority is the EA. When a flood is expected, Havant Borough Council and local emergency services will be responsible for public care and safety.

Any advice given by competent, authorised staff on the ground will over-ride this plan.

This Section sets out 5 action levels and the actions/considerations associated with each phase of the flood risk as:

- **Annual Review**
- **Flood Alert**
- **Flood Warning**
- **Severe Flood Warning**
- **(Warning no longer in force)**

All contacts required within this Section will be listed in the contacts in Section 6.1.

- The advice for residents is to remain within their dwellings, which provide a **safe refuge** safely above the flood event;

The main risk of flooding is from tidal sources via the Langstone Harbour. As such, there would be significant advance warning and the duration of flooding should be limited.

6.1 Flood Alert

Environment Agency “Flood Alert” Status Issued

Flood Watch means – ‘***Flooding is possible - be prepared!***’

The EA will issue a Flood Alert status when flooding is possible. This will be issued by the EA through their website¹ and Floodline Warning Direct based upon weather and river conditions. The Flood Alert is issued between 2 hours to 2 days in advance of flooding, dependant on the form and characteristics of the flood risk.



When a Flood Alert is issued residents should:

- Be prepared to act on your Site Flood Plan.
- Prepare a flood kit of essentials.
- Monitor local water levels and flood forecast on the EA website and local media.

Contact Floodline on 0848 988 11 88, key 1 and enter quick-dial code **0122145** (tidal areas of the West Hayling including Langstone Harbour) and listen to EA advice.

¹ Available at <http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx?type=Warnings&term=All> where specific information can be found by entering the house postcode or address.

Check that a flood kit has been prepared.

6.2 Flood Warning

Environment Agency “Flood Warning” Status Issued

Flood Warning means – ***‘Flooding expected – Immediate action is required!’***

The Flood Warning alert will be issued when water levels are rising and further rain is expected, between 30 minutes to 1 day in advance of flooding.

It is possible that the Flood Warning alert would be triggered by the EA, although this depends on a number of factors rather than simply the water level and may not accurately reflect the risk to individual properties.



At this stage residents should:

- Contact Havant Borough Council to find out whether evacuation is considered necessary and where they are providing for evacuees.
- Consider moving any vehicles parked at ground level to higher levels or higher ground away from the site (the areas at ground level may be at risk of flooding).
- Locate keys for locking windows and tools for switching off gas and electricity supplies. It will be necessary to switch off utilities and secure unoccupied properties if authorities advise evacuation.
- Residents must locate water, electricity and gas supplies and switch off before evacuating. If residents are unsure of how to do this they must contact the supplier.
- Residents should call the EA Floodline on 0845 988 11 88 periodically and listen to and watch for weather and flood warnings on local radio and television stations.

If water levels begin to fall without reaching the site, residents should continue to monitor the situation. Residents should stay alert until the EA issues the “All Clear” status.

6.3 Severe Flood Warning

Environment Agency “Severe Flood Warning” Status Issued – Evacuate if appropriate

Severe Flood Warning means – ***‘Flooding poses a significant danger to life!’***

The EA aim to provide at least 2 hours warning between the Flood Warning alert being issued and the commencement of flooding.

If levels continue to rise, residents are advised to remain within their dwellings unless advised by authorities to do otherwise.

Residents should monitor the flood progression and evacuate, preferably by vehicle as soon as possible if advised by the authorities to do so. Note that there is a risk this may occur before the EA issues their Severe Flood Warning status.



Before evacuating, residents must check that all windows are securely closed and locked; this will provide protection against thefts. On leaving the property residents must also check that doors, including internal doors, are securely closed and locked. Call 999 if you are in immediate danger.

At this stage Havant Borough Council, the emergency services and the EA should be managing the situation, with widespread flooding potentially over a large area, and will endeavour to provide advice on an evacuation route, shelter and assistance to evacuees.

The Local Authority has a legal obligation to provide assistance to evacuees under the Homelessness Act 2002. Any evacuation operation is likely to be initially be conducted by the Police Service going door-to-door in the high risk areas and, where needed, escorting people to a rendezvous point.

However, residents must be aware that at times of widespread flooding; local services may have difficulty providing for a large number of evacuees. If no other advice is available from the relevant authorities, you are advised to stay within your property, with is located safely above the flood level.

6.4 Warning no longer in force

No further flooding is expected in the area

Residents should contact Havant Borough Council to check that it is safe to return to properties, if an evacuation has occurred.

7 The Role of Other Bodies

The response to a major flood event will involve a number of organisations working together at a local level, including the emergency services, the local authority, utilities companies and the EA. The **East Hampshire District Council and Havant Borough Council Emergency Response Plan** has been produced to provide relevant information and outline the response arrangements in place for a co-ordinated multi agency response to a major incidents including flooding

The general roles of the main bodies in relation to a major flood event on Havant are summarised below. It should be noted that this is a general list and specific duties may vary between different bodies:

7.1 The Police

- Coordination of the emergency services at a major flood event, as well as helping to save lives and protect property.
- Establish cordons where practicable to facilitate the work of the other emergency services in saving lives, protecting the public and caring for the public.

7.2 The Fire Service

- Saving life and rescuing trapped persons.
- Provide monitoring procedures in respect of health and safety of those persons operating within an established cordon.
- Carry out essential damage control measures, including pumping out flood water and salvage work.
- Assist other relevant agencies, particularly the local authority, to minimise the effects of major flooding on the community.

7.3 Havant Borough Council as the Local Authority

- Emergency care, if necessary, including feeding, accommodation and welfare for those who have been evacuated from the flooded area.
- Emergency transport for people, equipment and material such as sandbags, and if necessary evacuation.
- Information services for liaison with the media on the local authority response and for information to the public and to relatives of evacuees.
- Flood alleviation – for flood prevention, such as the placement of demountable flood barriers, clearing blocked culverts, for dealing with flooded roads and diversions and for other assistance to the public such as drying-out facilities.
- Emergency environmental health advice for action relating to environmental problems caused by flooding.
- Coordination of the voluntary response.

7.4 The Environment Agency

- Issue flood warnings.

- Responsibility for maintenance and operation of EA owned flood defences. Checking defences and undertakes essential repairs and maintenance on EA owned flood defences and advise other owners as their maintenance responsibilities.
- Monitor water levels and flows, assessing the risk, clearing obstructions from known pinch points and advising the emergency services and local authority.
- Once its own systems and flood defences are secure support the police and local authority by providing materials, equipment and manpower as far as resources and other duties permit.

7.5 Utilities Companies

- In the event of a flood, will secure their services and equipment to ensure continuity of supply.
- Repair services disrupted by flood.
- Provide alternative means of supply during service disruption if life and health risks are identified.

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8 Contact Details

This information is to be completed and periodically reviewed.

General Contact list

Contact	Company name	Telephone
Floodline	EA Floodline	08459 88 11 88 (Quick-dial – 0122145)
Electricity provider		
Gas provider		
Water company		
Telephone provider		
Local Authority	Havant Borough Council (emergency out of hours number)	07770 477533
	Havant Borough Council (main switchboard)	023 9244 6019 Mon to Fri 9am – 5:30pm
Fire (non emergency)	Hampshire Fire & Rescue Service	023 8064 4000
Ambulance (non emergency)	South Central Ambulance Service NHS Trust	01962 898 000 (non-emergency) Mon to Fri 9am - 5pm
Police	Hampshire Constabulary	0845 0454545 Call on 101 for non-emergencies only. In an emergency always dial 999)
Local Public Transport		
Local Radio	The EA website indicates that flood warnings will be disseminated through the following local radio stations: Spirit 96.6FM, The Breeze 107, Wave 105 FM	
Insurance company		

Key locations

Locations of cut-off points for services that may require attention during a flood event.

Service cut-off	Description
Electricity	
Gas	
Water	

Equipment and Materials

Note equipment and materials required, e.g. Torch

Item	Used for	Items to protect / where to use	Storage Location	Done
Torch	Light			
Batteries	Torch			
First aid kit	Non-serious injuries	Do not use to treat serious injuries unless qualified.		

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