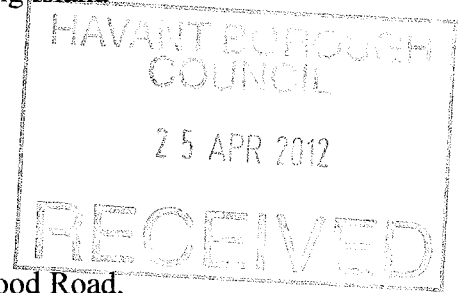


Planning Application for ~~San Lounge, Balcony Extension~~  
to 148a Southwood Road, Sandy Point, Hayling Island  
Hampshire, For Mr G Cavalaier,  
Flood Risk Assessment.



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**Introduction.**

The Proposed development site is Located at 148a Southwood Road, Sandy Point, Hayling Island, Hampshire. And lies within the Environment Agency's 1 in 200 year flood outline as in Appendix 1.

This Stage 1 report has been prepared by Architectural Planning Design Consultancy to identify the basic flooding constraints and to identify the requirements of the Environment Agency for a full flood risk assessment in accordance with Appendix F of PPS25.

In preparation of this stage 1 report we have consulted the Environment Agency office in Winchester and Havant Borough Councils web sites for guidance and flood maps and recommendations. Flood maps are contained in appendix A to this document.

**Sources of Flood Risk.**

The main sources of flood risk are from tidal flooding. There may be some localised issues of groundwater or surface water flooding but these are likely to be secondary.

**Tidal Flooding.**

In our proposal we estimated a 1 in 200 year flood level of 3.6m AOD. During our consultations we located an earlier flood risk assessment for Havant Borough Council. This has used 3.6m AOD as a 200 year water level. The Environment Agency flood plans indicate the tidal flood risk levels for this area and we would use these values for the final flood risk assessment.

The Environment Agency would wish to see development above the 200 year flood level extended to the year 2060. This would give a design flood level of 3.9m AOD.

Tidal flooding appears to be the less dominant influence on the extreme level and the full flood risk assessment would need to consider floor levels, escape routes and building design set at a level above 3.9m AOD.

The existing manhole benchmark, located in Southwood Road gives a bench mark Datum set at 3.38 AOD (Southern Water Record map dated 11.07.2001 enclosed refers ) and ground floor levels to this property are currently set at 4.1mtrs AOD, this level is set at the entrance doorway / porch, this property has been designed with an internal step with the Ground floor being set 0.2mtrs

Planning Application for Sun Lounge,  
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above this entrance level, the proposed extension being a loft conversion will not be effected by the predicted flood risk.

**Requirements of Flood Risk Assessment.**

The guidance for flood risk assessments is contained in Appendix 2. For this site the greatest risk is likely to be the 1 in 200 year 2060 tide level of 3.9m AOD. Access to the development, is via an existing adopted Road set at current levels, ranging between 3.92 to 4.16mtrs AOD therefore above the mean average for any predicted tidal surge.

In order to comply with the Agency's requirements for land drainage consent any crossing structure would need to be designed to pass the 1 in 100 year flow without becoming surcharged. In addition a freeboard of between 300mm and 600mm is usually required.

Floor levels are existing and as such set above the design flood level and a minimum freeboard of 300mm has been provided within the existing dwelling the proposed extension therefore will not be effected by the proposed predicted flood risk.

**Guidance.**

The proposed extension forms a master bedroom, mirroring the existing levels, which provides a floor level set 600mm above any predicted 1 - 200 tidal surge. The Environment Agency Flood line wards occupants of dwellings at risk, to make plans to evacuate or protect their dwellings using flood boards. When compiling this assessment we have also consulted Defra's guidance on "Improving the flood performance of new buildings - Flood resilient construction" Chapter 5 & 6 Avoidance and resistance design options. With the majority of living accommodation set above the recommended flood plans. As such this development will not put any additional burden upon the emergency services, then what is already perceived.

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## Appendix 1.

Southern Water Records.



of pipes shown on this plan are believed to be correct, but Southern Water Services  
responsibility in the event of inaccuracy. The actual positions should be determined

# SEWER RECORD

| Node  | Cover | Invert | Size | Material | Shape |
|-------|-------|--------|------|----------|-------|
| 0101X | 3.48  | 1.85   | 200  | VC       | CIRC  |
| 0150X | 3.68  | 2.5    | 375  | CP       | CIRC  |
| 0201X | 3.3   | -0.25  | 225  | CI       | CIRC  |
| 0250X | 3.27  | 2.67   | 225  | CP       | CIRC  |
| 0251X | 3.45  | 2.44   | 225  | CP       | CIRC  |
| 0253X | 3.45  | 2.74   | 225  | CP       | CIRC  |
| 0254X | 3.19  | 1.59   | 975  | CP       | CIRC  |
| 1101X | 3.38  | 1.47   | 200  | VC       | CIRC  |
| 1150X | 3.55  | 2.05   | 450  | CP       | CIRC  |
| 1201X | 3.5   | -0.54  | 225  | CI       | CIRC  |
| 1250X | 3.61  | 2.22   | 225  | CP       | CIRC  |
| 2101Y | 3.61  | 1.86   | 150  | VC       | CIRC  |
| 2101X | 3.61  | 1.22   | 200  | VC       | CIRC  |
| 2150X | 3.72  | 1.71   | 525  | CP       | CIRC  |
| 2201X | 3.54  | -0.61  | 225  | CI       | CIRC  |
| 2202X | 3.47  | -0.8   | 300  | CI       | CIRC  |
| 2250X | 3.41  | 1.93   | 300  | CP       | CIRC  |
| 2251X | 3.47  | 2.22   | 225  | VC       | CIRC  |
| 8201X | 4.5   | 2.2    | 225  | VC       | CIRC  |
| 8250X | 4.32  | 3.74   | 150  | VC       | CIRC  |
| 9101X | 3.92  | 2.47   | 225  | VC       | CIRC  |
| 9101Y | 3.92  | 2.3    | 200  | VC       | CIRC  |
| 9150X | 4.08  | 3.3    | 300  | CP       | CIRC  |
| 9151X | 4.16  | 3.09   | 300  | CP       | CIRC  |
| 9250X |       |        | 225  | VC       | CIRC  |
| 9251X | 3.6   | 1.73   | 975  | CP       | CIRC  |

[illegible]

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## Appendix 2.

Environment Agency Flood  
Map for Southwood Road

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## Maps

### Maps

[How to use the flood map](#)

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[Flood risk and home insurance](#)

[Your questions answered](#)

### Information summary

You searched for PO11 9RT.

This is the information for your location :

### Flood maps

What areas are most likely to be affected by flooding when waters rise?

Click [View map](#) link to find out what your risk is.

[View map of these results](#)

### See also...

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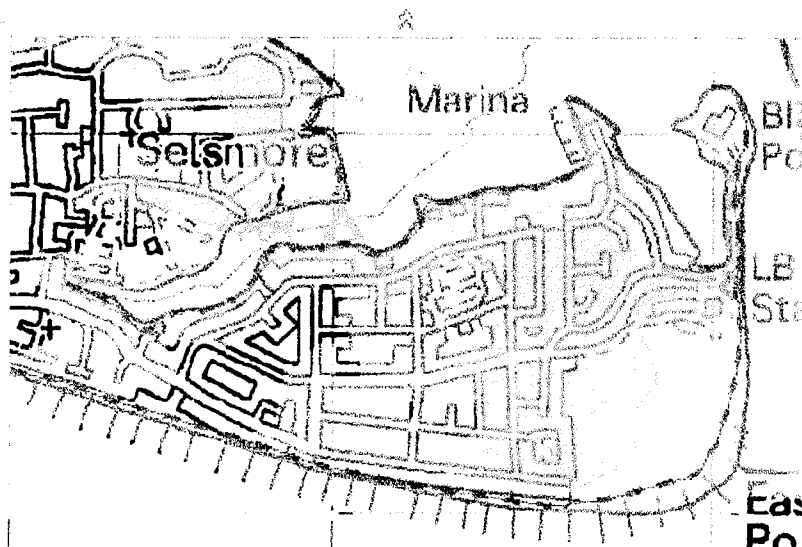
### Map of PO11 9RT :

Click on [Learn more](#), then click the symbol or area on the map to see more information.

Click on the map to ...

Current map scale: 1:20,000



### What's on the map?

1. Tick the boxes.
2. Click the name next to the box to find out more.

[Flood maps](#) [more](#)☒ [Flood maps](#) [more](#)  
Click [Learn more](#) to see details.☐ Flooding from rivers or sea without defences☐ Extent of extreme flood☐ Flood defences☒ Areas benefiting from flood defences[Click here to find out what else is in your backyard.](#)

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26 June 2007

You are in: > Current Flooding Situation

## Current Flooding Situation

National Summary for England and Wales  
Page last updated: 18:30 on 26-Jun-07

Follow the links below for information regarding flood warnings currently in force in your region.

|           |           |
|-----------|-----------|
| Anglian   | Southern  |
| Midlands  | Southwest |
| Northeast | Thames    |
| Northwest | Wales     |

Note that areas are only shown where warnings are in force. Flood Watch alerts may be issued outside Flood Warning Areas. All watches and warnings are available on Floodline 24 hours a day on 0845 988 1188.

Press the Control key and 'Refresh' on your browser when viewing warnings, to ensure that you see the most recent version of each page.

Flood warning statuses have the following meanings:

|                             |                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------|
| <b>Flood Watch</b>          | Flooding possible. Be aware! Be prepared! Watch out!                               |
| <b>Flood Warning</b>        | Flooding expected affecting homes, businesses and main roads. Act now!             |
| <b>Severe Flood Warning</b> | Severe flooding expected. Imminent danger to life and property. Act now!           |
| <b>All Clear</b>            | An all clear will be issued when flood watches or warnings are no longer in force. |

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You are in: Maps &gt; Tell me more &gt; Flood maps

I'm looking for...

## Flooding

[Tell me more](#)[Bathing waters](#)[Environment  
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areas](#)[Groundwater  
source protection](#)[Hi-flows \(high  
flood levels\)](#)[Landfill sites](#)[Pollution Inventory](#)[Pollution hazards  
\(EP OPRA\)](#)[Pollution hazards  
\(IPC OPRA\)](#)[Pollution hazards -  
waste](#)[River quality](#)[Urban waste water  
treatment](#)[Water resources  
\(CAMS\)](#)[See also...](#)This page has the  
following theme:

### Flood maps

#### Understanding the Flood Map

The map and associated information is intended for guidance, and cannot provide details for individual properties.

To find out how to be prepared for all types of flooding go to our Floodline pages or call Floodline on tel: 0845 988 1188.

#### Key

##### 1. Floodplain

A floodplain is the area that would naturally be affected by flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas.

There are two different kinds of area shown on the Flood Map. They can be described as follows:-

- Dark blue ☐ shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:
  - from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year
  - or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.
- Light blue ☐ shows the additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1% (1 in 1000) chance of occurring each year.

#### Flood Map

Are you at risk of  
flooding? Enter your  
postcode or town to find  
out now...

GO

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## Flood risk

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements.

For a fuller explanation of flood likelihood, follow the link at the bottom of the page.

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web sites.

## 2. Flood Defences

The purple line  shows all flood defences built in the last five years to protect against river floods with a 1% (1 in 100) chance of happening each year, or floods from the sea with a 0.5% (1 in 200) chance of happening each year, together with some, but not all, older defences and defences which protect against smaller floods. Flood defences that are not yet shown, and the areas that benefit from them, will be gradually added.

Hatched areas  benefit from the flood defences shown, in the event of a river flood with a 1% (1 in 100) chance of happening each year, or a flood from the sea with a 0.5% (1 in 200) chance of happening each year. If the defences were not there, these areas would be flooded.

Flood defences do not completely remove the chance of flooding, however, and can be overtopped or fail in extreme weather conditions.

For information on flood defences which are not yet shown on the map, contact your local Environment Agency office.

## 3. Significant, Moderate or Low Likelihood of Flooding

Our assessment of the likelihood of flooding from rivers and the sea at any location is based on the presence and effect of all flood defences, predicted flood levels, and ground levels. By clicking within either of the blue areas of floodplain, you can see which of three further categories of likelihood of flooding (significant, moderate, or low) apply there.

For a fuller explanation of flood likelihood, follow the link at the bottom of the page.

## 4. Flood Warning

### Flood Warning Areas

Flood warning schemes have been set up for a number of areas that are considered to be at particular risk from flooding. These areas are called Flood Warning Areas. Within these areas, we can warn residents in advance when flooding may be likely and how severe the flooding could be.

For advice about flood warning please click here. We also publish a number of flood

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warnings that are in force on this site. Follow the link below to view them.

**Frequently Asked Questions about the flood maps**

**Frequently Asked Questions about the flood maps**

**Flood likelihood explained**

**What does my chance of flooding actually mean?**

**Flood warnings in force**

**Flood warning information for your area updated every 15 minutes.**



**Anglian | Midlands | North East | North West | South West | Southern | Thames | Wales**

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**Havant**  
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## Flood Protection for your Property

If you live near the coast, there is always a possibility that a combination of high weather will threaten your property with flooding, even though engineers will do as much as possible to reduce the risk of this happening.

At Langstone, for example, flooding has been recognised as an unavoidable fact as houses were built hundreds of years ago and the older cottages nearest the sea have adapted doors so that their owners can prevent water flowing into the house when the Street is flooded.

However, even if you live inland you need to remember that storms can cause flooding anywhere, because the drainage system might be overwhelmed by the amount of rain expected to carry. In addition, when the ground is saturated even small extra rainfall will have difficulty draining away from gardens and enclosed spaces.

**The Borough Council has a very small number of staff to deploy at times and will concentrate on protecting the public at large. We will not be able to provide details of individual homeowners who may find their properties threatened. The details of who is responsible for what is contained in our Flood Plan.**

This page describes some actions that property owners can take to protect their property. The preparation could save a great deal of trouble and distress.

### 1. Assess the Threat

This is the first task. Check whether your property is in a Flood Zone (use the search on the Environment Agency's Flood Map page). The threat of flooding is greater if you live nearer to the storm beaches of Hayling Island, but if you live further inland that is near the edge of the harbours you need to find out what is the ground level of your house in relation to Ordnance Datum. If the floor level of your house is higher than 3.73m on Hayling, 3.83m at Langstone, or 4.03m at Emsworth, the threat of flooding is reduced (although flood waters could still result in the property being flooded). If the floor level of your house is below this level, it would be wise to consider preventing water entering the house and make arrangements well in advance. This is also increased the closer you are to a river, stream, ditch or other water body.

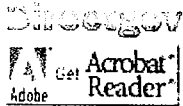
### 2. Obtain Flood Boards

If you think there is some risk to your property it is probably best to obtain flood boards. These do not need to be elaborate - a piece of 18 mm marine ply across the door jambs can be temporarily nailed in place if required. Seal with plasticine, rubber, carpet or underlay, or wadded with wet newspaper, if necessary. You will of course need to check that the pointing on the lower part of the door is sound and if there are any air bricks below possible flood level these should be temporarily plugged up as well.

### 3. Sandbags and other Flood Protection Products

The council does not have a duty to provide sandbags and if you are concerned about flooding you should make your own arrangements as quickly as possible.

There is nothing special about sandbags. They are cheaper than pillows.



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cushion covers but are simply bags that hold sand or soil so that a low wall can be built up to dam the flow of water. If your house is under threat and you have no time to improvise. It is very unlikely that the council or anyone else will provide sandbags quickly enough in a real emergency. Bin liners or plastic sheeting filled with soil dug from your garden will serve. Soil wrapped up in a bat (roll) across the bottom of a door will help. Grow bags are the right size and are easy enough to be carried around easily.

There are now a number of approved systems which manufacturers have developed to alleviate the effects of flooding. These systems have been approved by the British Standards Institution (BSI) and are kitemarked to show their status in a way that has involved the Environment Agency and HR Wallingford, the country's leading research facility.

Flood protection products such as these, alone will not make a home flood proof impossible. However their use may slow the flow of flood water into a property giving residents more time to move themselves and their belongings to safety. The Environment Agency has a booklet - *Using Flood Protection Products, a Guide for Homeowners* - which gives practical advice on making your home more flood resistant. You can phone for a copy on the Floodline number, **0845 988 1188**, or visit our website online (along with other useful information).

#### 4. Pressure Seal

Mariners have a trick that may serve. They sealed leaks in boats by roping over the hole and letting water pressure seal it. The modern equivalent is to staple a sheet of heavy duty polythene over the doorway on the **outside** using drawing pins or tacks to the jambs and door sill. You will need to keep it taut to take the weight of water but it will help seal the gaps under and around the door.

Our Engineering staff are able to advise the approximate levels of specific properties and individual problems and give advice on measures to reduce the effects of flooding on your property, and they may be contacted via Customer Services by email to [customer.services@havant.gov.uk](mailto:customer.services@havant.gov.uk) on **023 9244 6013**.

Havant Borough Council, Civic Centre Road, Havant, Hampshire PO9 2AX

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Service email: [customer.services@havant.gov.uk](mailto:customer.services@havant.gov.uk)

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### Appendix 3.

Guidance on the requirements for  
Undertaking a Flood Risk Assessment

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development.

8. A cross-section of the site showing finished floor levels or road levels, or other relevant levels relative to the source of flooding, and to anticipated water levels and associated probabilities.
9. An assessment of the likely rate or speed with which flooding might occur, the order in which various parts of the location or site might flood, the likely duration of flood events and the economic, social and environmental consequences/impacts of flooding.
10. An assessment of the hydraulics of any drains or sewers, existing or proposed, on the site during flood events. The methodology for assessment must be clearly stated.
11. An estimate of the volume of water which would be displaced from the site for various flood levels following development of the site and of the run-off likely to be generated from the development proposed.
12. An assessment of the likely impact of any displaced water on neighbouring or other locations which might be affected subsequent to development. This should address the potential for change of the flooding regime both upstream and downstream of the site due to ground raising or flood embankments.
13. An assessment of the potential impact of any development on fluvial or coastal morphology and the likely longer-term stability and sustainability.
14. Because of the uncertainties in flood estimation and expected climate change impacts, hydrological analysis of flood flows and definition of defence standards should include the allowances for increased flows and sea-level rise in MAFFs project appraisal guidance for flood defence cited in Appendix A.
15. An assessment of the residual risks after the construction of any necessary defences. Where new or modified flood defence arrangements are provided, consideration should always be given to their behaviour in extreme events greater than those for which they are designed and information should be provided on the consideration given to minimising risks to life in such circumstances.

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## 4 Summary and Flood Zone

The site lies within Zone 3b of PPG 25 Table 1 below.

**Table 1: Planning response to sequential characterisation of flood risk**

| Flood Zone<br>(see Note a)                                                                                                                                         | Appropriate Planning Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Little or no risk</b><br>Annual probability of flooding:<br>River, tidal & coastal <0.1%                                                                     | No constraints due to river, tidal or coastal flooding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>2. Low to medium risk</b><br>Annual probability of flooding:<br>River 0.1-1.0%<br>Tidal & coastal 0.1-0.5%                                                      | <p><b>Suitable for most development.</b></p> <p>For this and higher-risk zones, flood risk assessment appropriate to the scale and nature of the development and the risk should be provided with applications or at time of local plan allocation. Flood-resistant construction and suitable warning/evacuation procedures may be required depending on the flood risk assessment.</p> <p>Subject to operational requirements in terms of response times, these and the higher-risk zones below are generally not suitable for essential civil infrastructure, such as hospitals, fire stations, emergency depots etc. Where such infrastructure has to be, or is already, located in these areas, access must be guaranteed and they must be capable of remaining operational in times of emergency due to extreme flooding.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>3. High risk</b><br>(see note b)<br>Annual probability of flooding, with defences where they exist:<br>River 1.0% or greater<br>Tidal & coastal 0.5% or greater | <p><b>a. Developed areas</b><br/> These areas may be suitable for residential, commercial and industrial development provided the appropriate minimum standard of flood defence (including suitable warning and evacuation procedures) can be maintained for the lifetime of the development (see paragraph 31 below), with preference being given to those areas already defended to that standard. In allocating or permitting sites for development, authorities should seek to avoid areas that will be needed, or have significant potential, for coastal managed realignment or washland creation as part of the overall flood defence strategy for coastal cells and river catchments.</p> <p><b>b. Undeveloped &amp; sparsely developed areas</b><br/> These areas are generally not suitable for residential, commercial and industrial development unless a particular location is essential, eg for navigation and water-based recreation uses, agriculture and essential transport and utilities infrastructure, and an alternative lower-risk location is not available. General-purpose housing or other development comprising residential or institutional accommodation should not normally be permitted. Residential uses should be limited to job-related accommodation (eg caretakers and operational staff). Caravan and camping sites should generally not be located in these areas. Where, exceptionally, development is permitted, it should be provided with the appropriate minimum standard of flood defence and should not impede flood flows or result in a net loss of flood-plain storage.</p> <p><b>c. Functional flood plains</b><br/> These areas may be suitable for some recreation, sport, amenity and conservation uses (provided adequate warning and evacuation procedures are in place). Built development should be wholly exceptional and limited to essential transport and utilities infrastructure that has to be there. Such infrastructure should be designed and constructed so as to remain operational even at times of flood, to result in no net loss of flood-plain storage, not to impede water flows and not to increase flood risk elsewhere. There should be a presumption against the provision of camping and caravan sites.</p> |

Notes:

*(a) All risks relate to the time at which a land allocation decision is made or an application submitted. The Environment Agency will publish maps of these flood zones. Flood zones should be identified from Agency flood data ignoring the presence of flood defences. Local planning authorities should, with the Agency, identify those areas currently protected by defences and the standard of protection provided by those defences.*

*(b) Development should not be permitted where existing sea or river defences, properly maintained, would not provide an acceptable standard of safety over the lifetime of the development, as such land would be extremely vulnerable should a flood defence embankment or sea wall be breached, in particular because of the speed of flooding in such circumstances (see paragraph 69 below).*

We believe that the site could be developed subject to the outcome of the modelling as the Environment Agency do not have an objection in principle.

The full flood risk assessment will be prepared on this basis.

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## Appendix 5.

References and Sources of  
Information.

## 8 References and sources of information

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