

# Sequential Flood Risk Test for Mid Sussex Neighbourhood Plans

## Introduction

This Sequential Test has been prepared to assess the flood risk of sites within the parish that have been identified as suitable, available and achievable for housing development through the Mid Sussex District Council Housing Supply Document (2013) and any additional sites considered in the preparation of a Neighbourhood Plan.

The sequential test draws upon information gathered and detailed within the District Council's Strategic Flood Risk Assessment (SFRA) (March 2008). The tests follow the steps outlined in the National Planning Policy Framework and accompanying technical guidance, and follows examples of best practice as highlighted by the Environment Agency.

The National Planning Policy Framework (paragraph 100) requires Plans such as the District Plan and Neighbourhood Plans to “apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change, by applying the **Sequential Test**, and, if necessary, applying the **Exception Test**”

Neighbourhood Plans have been prepared to enable Towns and Parishes to plan how their communities will change and develop in the future. In addition to strategic sites identified in the consultation draft District Plan (and subject to a separate flood risk assessment) each Neighbourhood Plan Area has indicated a level of additional homes that are being planned for. In preparing Local Plans the Council are required to undertake a flood risk test. A sequential approach is used to steer new development to areas at the lowest risk of flooding.

The District Plan sets the framework for Neighbourhood Plans and has identified that a proportion of homes over the plan period to 2031 are to be delivered through Neighbourhood Plans.

The Strategic Flood Risk Assessment identified that approximately 9 sq kilometres of the District is at high risk of fluvial (river) flooding. The risk of river flooding of an area is categorised by the probability of flooding occurring in that area in any given year and these categories are summarised in Table 1.

Flood Zone	Risk of Fluvial Flooding
1	Low probability – land assessed as having a less than 1 in 1,000 annual probability of flooding (<0.1%)
2	Medium probability – land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of flooding (1% - 0.1%)
3a	High probability – land assessed as having a 1 in 100 or greater annual probability of flooding (>1%)
3b	This zone comprises land where water has to flow or be stored in times of flood.

**Table 1: Summary of Flood Risk Zones**

Technical Guidance to the National Planning Policy Framework classifies types of development into five categories of flood risk vulnerability; essential infrastructure, highly vulnerable, more vulnerable, less vulnerable and water-compatible development. Appendix B lists the types of development that are classified under each flood risk vulnerability classification.

### **The Sequential Test**

Within each flood zone, new development should be directed first to sites at the lowest probability of flooding and the flood vulnerability of the intended use matched to the flood risk of the site, i.e. higher vulnerability uses should be located on parts of the site at lowest probability of flooding. The Sequential Test is the process to ensure that this happens (Appendix A).

The Sequential and Exception Test are national planning policy requirements. These tests are not intended to prevent all development on sites liable to flooding; accepting that some form of development may have to be located here. The Exception Test is only appropriate when there are large areas in Flood Zones 2 and 3, where the Sequential Test alone cannot deliver acceptable sites but where some continuing development is necessary for wider sustainable development reasons.

It may also be appropriate where restrictive national designations such as landscape, heritage and nature conservation designations prevent the availability of unconstrained sites in lower risk areas.

Table 2 shows which type of development can be appropriately located in each flood zone, and where the Exception Test is required.

Flood risk vulnerability classification		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
<b>Flood Zone</b>	<b>Zone 1</b>	✓	✓	✓	✓	✓
	<b>Zone 2</b>	✓	✓	Exception test required	✓	✓
	<b>Zone 3a</b>	Exception test required	✓	X	Exception test required	✓
	<b>Zone 3b functional floodplain</b>	Exception test required	✓	X	X	X

Key: ✓ Development is appropriate.  
 X Development should not be permitted.

**Table 2: Flood risk Vulnerability and flood zone compatibility**

## APPENDIX A – Neighbourhood Plan Areas

### West Hoathly

#### Analysis of proposed development areas identified for housing and employment development

This table shows the following:

- Locations identified for potential development through the West Hoathly Neighbourhood Plan.
- The existing flood risk characteristics of these locations.
- The existing land use(s) of each area.
- The proposed use(s) of each area.
- The flood risk vulnerability classification for each existing and proposed use (see Appendix A for definitions of these classifications).

Location	Flood risk zone/s (area of site within flood zone)	Existing Flood Defences	Existing Uses	Proposed Development	Flood vulnerability classification	Can the proposed development be located in the net developable area?
Land north of Top Road, Sharpthorne	1 (1.2ha)	None	Agriculture	Residential – up to 24 new homes	More vulnerable	<b>Yes;</b> the site is located within Flood Zone 1.
Land adjacent to Cookhams, south of Top Road, Sharpthorne	1 (1.4ha)	None	Unused Land	Residential – up to 16 new homes	More vulnerable	<b>Yes;</b> the site is located within Flood Zone 1.
Land known as Bluebell Woods, Bluebell Lane, Sharpthorne	1 (3.12ha total size, 1.56ha developable land)	None	Woodland and former brickworks	Residential – up to 15 dwellings	More vulnerable	<b>Yes;</b> the site is located within Flood Zone 1, however there have been historical flood incidents at this location that would need investigating.

## APPENDIX A – Neighbourhood Plan Areas

<b>WHP10 Bluebell Railway, Former West Hoathly Station Site</b>	1	None		Proposals to establish a halt for the Railway	More vulnerable	<b>Yes;</b> the site is located within Flood Zone 1.
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### The Sequential Test

Potential development sites within the Neighbourhood Plan are all located within Flood Zone 1 as shown below.

<b>1. Are the proposed development areas in Flood Zone 1 – Low probability of flood risk?</b>	
Yes	Development areas wholly within Flood Zone 1:  <b>West Hoathly Garage, Selsfield Road, West Hoathly</b> <b>Land north of Top Road, Sharpthorne</b> <b>Land adjacent to Cookhams, south of Top Road, Sharpthorne</b> <b>Bluebell Railway, Former West Hoathly Station Site</b>
No	None.

### Conclusion

As all locations are wholly within Flood Zone 1, development is considered appropriate in flood risk terms. There is no requirement to carry out the Exception Test.

## APPENDIX B – Flood Risk Vulnerability Classification (as per “Technical Guidance to the National Planning Policy Framework”)

<p><b>Essential infrastructure</b></p> <ul style="list-style-type: none"><li>- Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk.</li><li>- Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood.</li><li>- Wind turbines.</li></ul>
<p><b>Highly vulnerable</b></p> <ul style="list-style-type: none"><li>- Police stations, ambulance stations and fire stations and command centres and telecommunications installations required to be operational during flooding.</li><li>- Emergency dispersal points.</li><li>- Basement dwellings.</li><li>- Caravans, mobile homes and park homes intended for permanent residential use<sup>3</sup>.</li><li>- Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as “essential infrastructure”).</li></ul>
<p><b>More vulnerable</b></p> <ul style="list-style-type: none"><li>- Hospitals.</li><li>- Residential institutions such as residential care homes, children’s homes, social services homes, prisons and hostels.</li><li>- Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.</li><li>- Non-residential uses for health services, nurseries and educational establishments.</li><li>- Landfill and sites used for waste management facilities for hazardous waste.</li><li>- Sites used for holiday or short-let caravans and camping, <i>subject to a specific warning and evacuation plan</i>.</li></ul>
<p><b>Less vulnerable</b></p> <ul style="list-style-type: none"><li>- Police, ambulance and fire stations which are <i>not</i> required to be operational during flooding.</li><li>- Buildings used for shops, financial, professional and other services, restaurants and cafes, hot food takeaways, offices, general industry, storage and distribution, non-residential institutions not included in “more vulnerable”, and assembly and leisure.</li><li>- Land and buildings used for agriculture and forestry.</li><li>- Waste treatment (except landfill and hazardous waste facilities).</li><li>- Minerals working and processing (except for sand and gravel working).</li></ul>

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- Water treatment works which do *not* need to remain operational during times of flood.
- Sewage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place).

### **Water-compatible development**

- Flood control infrastructure.
- Water transmission infrastructure and pumping stations.
- Sewage transmission infrastructure and pumping stations.
- Sand and gravel working.
- Docks, marinas and wharves.
- Navigation facilities.
- Ministry of Defence defence installations.
- Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.
- Water-based recreation (excluding sleeping accommodation).
- Lifeguard and coastguard stations.
- Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.
- Essential ancillary sleeping or residential accommodation for staff required by uses in this category, *subject to a specific warning and evacuation plan.*