



**Zone 1 Low Probability**

**Definition**  
This zone comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%).

**Appropriate uses**  
All uses of land are appropriate in this zone.

**FRA requirements**  
For development proposals on sites comprising one hectare or above the vulnerability to flooding from other sources as well as from river and sea flooding, and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off, should be incorporated in a FRA. This need only be brief unless the factors above or other local considerations require particular attention. See Annex E for minimum requirements.

**Policy aims**  
In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage techniques.

**Zone 2 Medium Probability**

**Definition**  
This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% – 0.1%) in any year.

**Appropriate uses**  
The water-compatible, less vulnerable and more vulnerable uses of land and essential infrastructure in Table D.2 are appropriate in this zone.

**FRA requirements**  
Subject to the Sequential Test being applied, the highly vulnerable uses in Table D.2 are only appropriate in this zone if the Exception Test (see para. D.9.) is passed.

**Policy aims**  
In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development, and the appropriate application of sustainable drainage techniques.

**Zone 3a High Probability**

**Definition**  
This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

**Appropriate uses**  
The water-compatible and less vulnerable uses of land in Table D.2 are appropriate in this zone. The highly vulnerable uses in Table D.2 should not be permitted in this zone. The more vulnerable and essential infrastructure uses in Table D.2 should only be permitted in this zone if the Exception Test (see para. D.9.) is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.

**FRA requirements**  
All development proposals in this zone should be accompanied by a FRA. See Annex E for minimum requirements.

**Policy aims**  
In this zone, developers and local authorities should seek opportunities to:  
i. reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage techniques;  
ii. relocate existing development to land in zones with a lower probability of flooding; and  
iii. create space for flooding to occur by restoring functional floodplain and flood flow pathways and by identifying, allocating and safeguarding open space for flood storage.

**Zone 3b The Functional Floodplain**

**Definition**  
This zone comprises land where water has to flow or be stored in times of flood. SFRAs should identify this Flood Zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes).

**Appropriate uses**  
Only the water-compatible uses and the essential infrastructure listed in Table D.2 that has to be there should be permitted in this zone. It should be designed and constructed to:  
– remain operational and safe for users in times of flood;  
– result in no net loss of floodplain storage;  
– not impede water flows; and  
– not increase flood risk elsewhere.

**FRA requirements**  
Essential infrastructure in this zone should pass the Exception Test.

**Policy aims**  
In this zone, developers and local authorities should seek opportunities to:  
i. reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage techniques; and  
ii. relocate existing development to land with a lower probability of flooding.

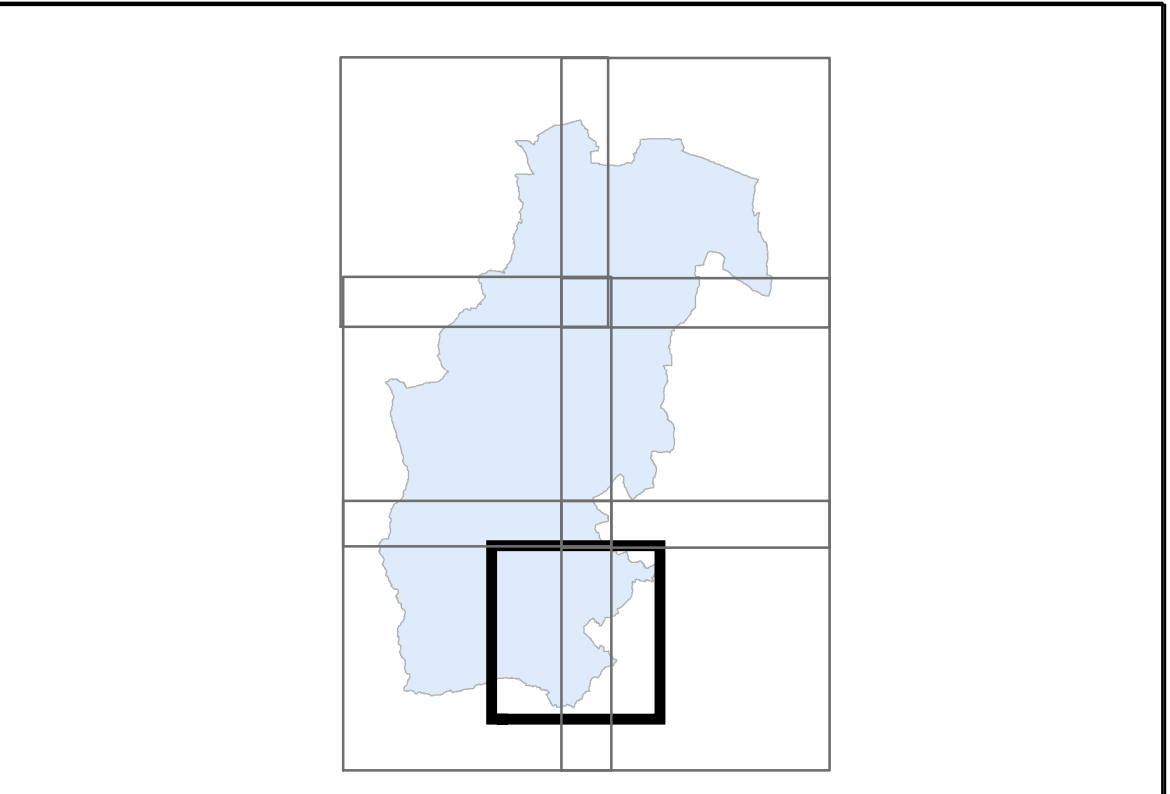
**Zone 3c The Functional Floodplain**

**Definition**  
This zone comprises land where water has to flow or be stored in times of flood. SFRAs should identify this Flood Zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1%) flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes).

**Appropriate uses**  
Only the water-compatible uses and the essential infrastructure listed in Table D.2 that has to be there should be permitted in this zone. It should be designed and constructed to:  
– remain operational and safe for users in times of flood;  
– result in no net loss of floodplain storage;  
– not impede water flows; and  
– not increase flood risk elsewhere.

**FRA requirements**  
Essential infrastructure in this zone should pass the Exception Test.

**Policy aims**  
In this zone, developers and local authorities should seek opportunities to:  
i. reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage techniques; and  
ii. relocate existing development to land with a lower probability of flooding.



This map is to be read in conjunction with the Volume II Tables and the SFRAs report (Volume I) for the application of the Sequential Test. The test is the most important flood risk management tool for spatial planning, as it implements the high level measures of avoidance / prevention and substitution.

A planning authority applies the Sequential Test to demonstrate that there are no reasonably available sites in areas with less risk of flooding that would be appropriate to the type of development or land use proposed. Preference should be given to locating new development in Flood Zone 1. If there is no reasonably available site in Flood Zone 1, the flood vulnerability of the proposed development can be taken into account in locating development in Flood Zone 2 and then Flood Zone 3. Within each Flood Zone new development should be directed to sites with lower flood risk from all sources as indicated by the SFRAs.

**PPS25 : Flood Risk Vulnerability Classification**

Flood Risk Vulnerability Classification	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable
Essential Infrastructure	<ul style="list-style-type: none"> <li>Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk, and strategic utility infrastructure, including electricity generating power stations and grid and primary substations.</li> </ul>	<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.</li> <li>Installations requiring hazardous substances consent.</li> </ul>	<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, subject to a specific warning and evacuation plan.</li> </ul>	<ul style="list-style-type: none"> <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> <li>Water treatment plants.</li> <li>Sewage treatment plants (if adequate pollution control measures are in place).</li> </ul>
Water-compatible Development	<ul style="list-style-type: none"> <li>Flood control infrastructure.</li> <li>Water transmission infrastructure and pumping stations.</li> <li>Sewage transmission infrastructure and pumping stations.</li> <li>Sand and gravel workings.</li> <li>Docks, marinas and wharves.</li> <li>Navigation facilities.</li> <li>MCD defence installations.</li> <li>Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.</li> <li>Water-based recreation (including sleeping accommodation).</li> <li>Lifeguard and coastguard stations.</li> <li>Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.</li> <li>Essential ancillary sleeping or residential accommodation for staff required by users in this category, subject to a specific warning and evacuation plan.</li> </ul>			

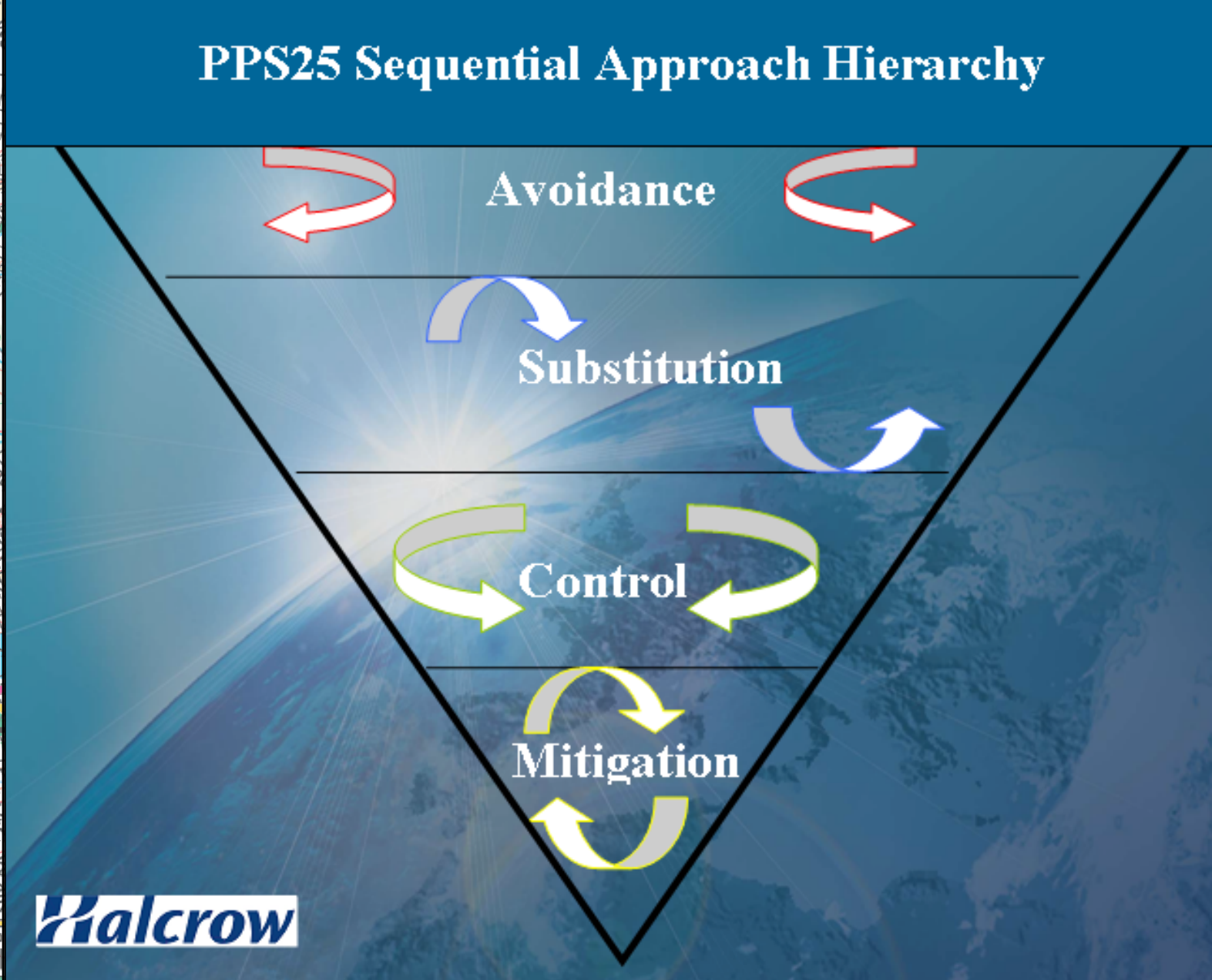
**PPS25 : Flood Risk Vulnerability and Flood Zone Compatibility**

Flood Risk Vulnerability Classification	Essential Infrastructure	Water compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Zone 1	v	v	v	v	v
Zone 2	v	v	Exception Test required	v	v
Zone 3a	Exception Test required	v	x	Exception Test required	v
Zone 3b (vulnerable uses)	Exception Test required	v	x	x	x

**TILE G**

**Legend**

- Surface Water Events
- Groundwater Events
- Highways Drainage Issues
- Fluvial Events
- Foul Water Sewers
- EA main river
- Flood Zone 3b
- Flood Zone 3a
- Flood Zone 2
- Sevenoaks District Boundary



DRN: IC  
DATE: NOV 2007  
HALCROW REF: WBSEVR

1:50,000

0.5 0.25 0 0.5 Kilometers

**Halcrow**  
GEOMATICS  
5th FLOOR READING BRIDGE HOUSE,  
KINGS MEADOW ROAD,  
READING, BERKS, RG1 8PP

**Sevenoaks**  
DESIGN & CONSULT

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