

D Requirements for future developments

D.1 Requirements for future developments in Flood Zone 1

All development (essential infrastructure, highly vulnerable, more vulnerable, less vulnerable and water-compatible development) is allowed in Flood Zone 1. Opportunities should be sought to reduce the overall levels of flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage techniques.

D.1.1 Developments >1ha

A detailed site-specific FRA, including drainage impact assessment, should be undertaken in accordance with PPS25 and the relevant Council's policies assessing risk from other sources of flooding (Surface Water, Sewer and Groundwater) which are not considered by the Flood Zone maps.

The effects of any flood risk identified should be mitigated by suitable methods without increasing flood risk elsewhere.

The development should meet the following drainage requirements to reduce flood risk elsewhere:

- Greenfield discharge rates
- Use of SuDS

D.1.2 Developments <1ha

The developer should identify whether the site is at risk from 'other sources' of flooding, which in the case of Adur and Worthing includes surface water, sewer and groundwater. If so, then the same requirements should be met as described above for a site >1ha, including a detailed FRA. For those proposed developments where there is not a known drainage issue then a detailed FRA is not required. Nevertheless, the proposed development should include the appropriate application of SuDS techniques so as to maintain, or preferably reduce the existing runoff and flood risk in the area.

D.1.3 Flood risk assessments for sites in Flood Zone 1

If the site is greater than 1ha in size, or less than 1ha with an identified flood risk then a detailed site-specific FRA will need to be undertaken.

The FRA should:

- Identify and detail the level of risk to a development from all sources;
- detail how this risk will be managed and the consequences mitigated against;
- where possible show how overall flood risk will be reduced;
- undertake a drainage impact assessment to identify the impact of the proposed development on surface water drainage, including the potential impact upon areas, and recommend the approach to controlling runoff to the required discharge rates; and
- show that safe access can be provided to an appropriate level for the type of development.

If a detailed FRA is required, it should be undertaken by a suitably qualified professional. Assessments should be on a site by site basis making use of local knowledge, but an initial assessment of potential sources of flooding can be made by consulting the maps in this SFRA.

D.2 Requirements for future developments in Flood Zone 2 (Medium Probability)

Flood Zone 2 is considered suitable for water-compatible, less vulnerable, more vulnerable and essential infrastructure. Highly vulnerable development is only allowed where the Exception Test is passed.

Opportunities should be sought to reduce the overall levels of flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage techniques, through the consideration of the following:

- A detailed site-specific FRA must be undertaken in accordance with PPS25 and relevant Council policies, assessing risk from tidal flooding, risk from all 'other sources' of flooding, and the effect of climate change on flood risk over the lifetime of the development .
- The effects of the flood risk identified should be mitigated by suitable methods without increasing flood risk elsewhere.
- Safe access should be provided to an appropriate level for the type of development.
- The development should meet the following drainage requirements to reduce flood risk elsewhere.
- Greenfield discharge rates.
- Use of SuDS.

In addition, any proposed development be required to provide evidence that the Sequential Test, and if required the Exception Test, have been passed.

D.2.4 Flood risk assessments for Flood Zone 2

A detailed site specific FRA should be undertaken for any development in Flood Zone 2. It is strongly recommended that the Sequential Test, and, depending on the vulnerability of the development (see Table D.2 of PPS25), the first two parts of the Exception Test, be satisfied before the FRA is commenced.

The FRA should meet the following criteria:

- Where necessary demonstrate whether the site is at residual risk from tidal flooding.
- Identify and detail the level of risk to a development from all sources.
- Detail how all sources of flood risk will be managed and the consequences mitigated against.
- Where possible show how overall flood risk will be reduced.
- Undertake a drainage impact assessment to identify the impact of the proposed development on surface water drainage, including the potential impact upon areas, and recommend the approach to controlling runoff to the required discharge rates.
- Show that safe access can be provided to an appropriate level for the type of development.

Detailed FRAs should be undertaken by a suitably qualified professional. Assessments should be on a site by site basis making use of local knowledge, but an initial assessment of potential sources of flooding can be made by consulting the maps in this SFRA.

D.3 Requirements for future developments in Flood Zone 3a (High Probability)

Water-compatible uses and less vulnerable development are allowed in this Flood Zone, following testing within the sequential process. Highly vulnerable development is not permitted, and essential infrastructure and more vulnerable development need to pass the Exception Test. Essential infrastructure should be designed and constructed to remain operational and safe for users in times of flood.

Developers should aim 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; relocate existing development to land in zones with a lower probability of flooding; and create space for flooding to occur by restoring surface water flood flow pathways and by identifying, allocating and safeguarding open space for flood storage. The following should be considered:

- A detailed site-specific FRA must be undertaken in accordance with PPS25 and the relevant Council's Local Development Framework policies, assessing residual risk

from tidal flooding, risk from all 'other sources' of flooding, and the effect of climate change on flood risk over the lifetime of the development .

- The effects of the flood risk identified should be mitigated by suitable methods without increasing flood risk elsewhere.
- Safe access should be provided to an appropriate level for the type of development.
- The development should meet the following drainage requirements to reduce flood risk elsewhere.
- Greenfield discharge rates
- Use of SuDS
- Flood flow routes are preserved, and floodplain storage capacity is not reduced, but where necessary is compensated for on a level for level basis outside of the floodplain.
- Consultation with emergency planners and emergency services with regards emergency/evacuation plans.

In addition, any proposed development be required to provide evidence that the Sequential Test, and if required the Exception Test, have been passed.

D.3.5 Flood risk assessments for Flood Zone 3a

A detailed site specific FRA should be undertaken. It is strongly recommended that the Sequential Test, and, depending on the vulnerability of the development (see Table D.2 of PPS25), the first two parts of the Exception Test be satisfied before the FRA is commenced.

The FRA should meet the following criteria:

- If the development is within tidal Flood Zone 3a, assess the flood risk from a breach in, or overtopping of, the tidal defences.
- Where necessary demonstrate whether the site is at residual risk from tidal flooding.
- Identify and detail the level of risk to a development from all sources.
- Detail how all sources of flood risk will be managed and the consequences mitigated against.
- Where possible show how overall flood risk will be reduced.
- Undertake a drainage impact assessment to identify the impact of the proposed development on surface water drainage, including the potential impact upon areas, and recommend the approach to controlling runoff to the required discharge rates.
- Show that safe access can be provided to an appropriate level for the type of development.
- Show that flood flow routes are preserved and floodplain storage capacity is not reduced.

Detailed FRAs should be undertaken by a suitably qualified professional. Assessments should be on a site by site basis making use of local knowledge, but an initial assessment of potential sources of flooding can be made by consulting the maps in this SFRA.

D.4 Requirements for future developments in Flood Zone 3b (Functional Floodplain)

Currently undeveloped functional floodplain should be protected from development. Therefore development should not be permitted if it would result in the net loss of functional floodplain as defined in PPS25.

Water compatible development, essential infrastructure and redevelopment may be allowed in Flood Zone 3b.

On brownfield sites, buildings, unless permeable to floodwaters, are not considered to be part of the functional floodplain. Land/infrastructure around these buildings is considered to be functional.

If proposed, brownfield floodplain redevelopment must not exceed the existing footprint of the site as the land around these sites is considered to be functional. In addition, where brownfield

redevelopment is proposed the Councils should request a detailed site-specific FRA, seek opportunities to apply the policy aims of PPS25, and consider the following:

- Removal of buildings and restoration of the natural floodplain.
- Changing the land use to a less vulnerable classification.
- Changing the layout and form of the development (e.g. reducing the building footprint).
- Preserving and improving flow routes.
- Improving conveyance/storage, e.g. replacing solid building with building on stilts.
- Sequential approach to design of site.

Brownfield redevelopments within the functional floodplain should also be fully flood resilient to minimise damage and enable quick recovery from flooding.

It should be noted that this only applies to regeneration in functional floodplain areas. In Zone 3a, whilst the same policy aims are included in PPS25, there is a greater presumption that redevelopment can occur, applying the Exception Test where necessary, except where the residual risks are significant.

Essential development which should locate in a functional floodplain will be designed to remain operational at times of flood or incorporate means of mitigation.

D.4.6 Flood risk assessments for Flood Zone 3b

Only planning applications for essential infrastructure, water compatible development or redevelopment will be considered in Flood Zone 3b. It is strongly recommended that the Sequential Test, and (if the development is essential infrastructure), the first two parts of the Exception Test, be satisfied before the FRA is commenced.

A detailed FRA should be produced covering all the requirements for Flood Zone 3a. In addition development should at a minimum:

- Not increase the building footprint on the site, and if possible reduce it.
- Preserve and where possible improve flow routes.
- Improving conveyance/storage, e.g. replacing solid building with building on stilts.
- Be fully flood resilient
- Undertake a sequential approach to design of site.

A detailed FRA should also show that the following have been considered and if not suitable provide justification as to why:

- Removal of buildings and restoration of the natural floodplain.
- Changing the land use to a less vulnerable classification.
- Changing the layout and form of the development (e.g. reducing the building footprint).

Essential infrastructure built within the functional floodplain should:

- 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.

D.5 Sites within more than one Flood Zone

Where sites cross more than one Flood Zone the sequential approach is applied within development sites to design the site layout to reduce flood risk as much as possible, in accordance with PPS25. Most large developments involve a range of land uses, providing the opportunity to locate more vulnerable land uses in areas of lower risk. High risk areas closer to the river in Flood Zone 3b should be used for recreation and amenity. Further advice is given in the Practice Guide to PPS25.

It should be noted that the sequential approach is not limited to sites with areas within more than one Flood Zone and should be applied throughout the process.