

Operational development less than 1 hectare in Flood Zone 1

- surface water drainage information

For operational developments¹ of less than 1 hectare site size falling within Flood Zone 1, the main flood risk issue to consider will usually be managing surface water run-off. The following is offered as good practice towards sustainable surface water management.

If a known drainage problem exists and the Local Planning Authority would like assurance from the developer that flood risk has been addressed, reference should be made to FRA note 1.

Is the proposal part of a larger development site?

Reserved matters applications in Flood Zone 1 might be part of larger sites, which already have outline permission. In such cases, the Local Planning Authority should ensure that any conditions that were applied to the larger site to manage surface water drainage are taken into account in the reserved matters application, in order to prevent a 'piecemeal' approach to drainage.

Best practice advice-sustainable drainage (SUDS)

Surface water run-off should be controlled as near to its source as possible through a sustainable drainage approach to surface water management (SUDS). SUDS are an approach to managing surface water run-off which seeks to mimic natural drainage systems and retain water on or near the site as opposed to traditional drainage approaches which involve piping water off site as quickly as possible. SUDS involve a range of techniques including soakaways, infiltration trenches, permeable pavements, grassed swales, ponds and wetlands. SUDS offer significant advantages over conventional piped drainage systems in reducing flood risk by attenuating the rate and quantity of surface water run-off from a site, promoting groundwater recharge, and improving water quality and amenity.

Support for the SUDS approach to managing surface water run-off is set out in paragraph 22 of Planning Policy Statement 1 (PPS): Delivering Sustainable Development and in more detail in Planning Policy Statement 25: Development and Flood Risk at Annex F. Paragraph F8 of the Annex notes that "Local Planning Authorities should ensure that their policies and decisions on applications support and complement Building Regulations on sustainable rainwater drainage".

Approved Document Part H of the Building Regulations 2000 establishes a hierarchy for surface water disposal, which encourages a SUDS approach. Under Approved Document Part H the first option for surface water disposal should be the use of SUDS, which encourage infiltration e.g. soakaways or infiltration trenches. In all cases, it must be established that these options are feasible, can be adopted and properly maintained and would not lead to any other environmental problems. For example, using soakaways or other infiltration methods on contaminated land carries groundwater pollution risks and may not work in areas with a high water table. Where the intention is to dispose to soakaway, these should be shown to work through an appropriate assessment carried out under BRE Digest 365.

Flow balancing SUDS methods which involve the retention and controlled release of surface water from a site may be an option for some developments at a scale where uncontrolled surface water flows would otherwise exceed the local greenfield run off rate. Flow balancing should seek to achieve water quality and amenity benefits as well as managing flood risk.

Further information on SUDS can be found in annex F of PPS 25, the PPS25 Practice Guide, in the CIRIA C522 document *Sustainable Urban Drainage Systems-design manual for England and Wales* and the *Interim Code of Practice for Sustainable Drainage Systems*. The Interim Code of Practice provides advice on design, adoption and maintenance issues and a full overview of other technical guidance on SUDS. The Interim Code of Practice is available electronically on both the Environment Agency's web site at: www.environment-agency.gov.uk and CIRIA's web site at: www.ciria.org.uk

Disposal to public sewer

Where it is intended that disposal is made to public sewer, the Water Company or its agents should confirm that there is adequate spare capacity in the existing system taking future development requirements into account

Other flood risk issues to consider for development in Flood Zone 1 - Dry Islands

There are some areas within Flood Zone 1 that are surrounded by areas at a higher risk of flooding i.e. areas falling within Flood Zones 3 and 2. In certain cases development within such 'dry islands' can present particular hazards to public safety and risks such as those risks associated with maintaining safe access and exit for occupants during flood events. The distribution of dry islands and risks posed by them in terms of access/exit vary considerably across the country. If you are in any doubt about how flood risks associated with 'dry islands' may affect your Authority area, please contact your local Environment Agency Planning Liaison team.

End of Comment

¹ Operational developments are those which are not limited purely to material changes of use i.e. they involve works such as building, mining or engineering operations which could have an impact on surface water run-off.