

**This Appendix provides specific information on the following subjects for East Dorset:**

- (1) Hydrology
- (2) Relevant local planning policy for East Dorset
- (3) Sewer flooding
- (4) Reservoirs
- (5) Key points from the SFRA specific to East Dorset

#### **(1) Hydrology**

East Dorset lies largely within the Stour catchment, with the eastern fringes of the district bordered in parts by the River Avon. The River Stour flows into the district just upstream of Shapwick, where it continues onto Sturminster Marshall and is joined by the River Winterborne. From here the river flows in a south-east and then westerly direction to Wimborne Minster. In Wimborne Minster the Stour is joined by the River Allen from the north, and then meanders in a south-easterly direction along the districts boarder with Purbeck and Bournemouth, and eventually onto Christchurch. In the eastern part of the district lies the River Crane which flows through Cranborne and around the westerly and southerly edges of Verwood and onward through the Moors to where it changes its name to the 'Moors'. To the west of the Moors is Uddens Water, which flows into the Moors before the watercourse flows out of East Dorset and onto Christchurch.

#### **(2) East Dorset District Local Plan (January 2002)**

The Planning & Compulsory Purchase Act 2004 allowed local planning authorities to save Local Plan policies for an initial three-year period until replaced by new policies in Local Development Frameworks. This initial period expired on September 2007.

East Dorset District Council submitted to the Secretary of State a list of which current local plan policies it wished to retain beyond September 2007, and which it considered could be deleted.

The reason for their deletion was that they repeat national policy word-for-word, or cover matters which can be appropriately dealt with by other legislation. The effects on the policies concerning the water environment are as follows:

- WENV1 – Repeats RPG10, policy RE1
- WENV2 – Repeats PPS25, paras 16-20
- WENV3 – Repeats PPS25, paras 16-20
- WENV4 – Policy has been saved

Also, Policy WENV4:

*“Development should be sited and designed to protect or enhance the visual and physical quality and natural history interest of rivers or their tributaries, and their landscape settings. This policy will apply to the Rivers Avon and Stour.”*

Supplementary Planning Guidance (SPG): Flood Risk, Groundwater and Sustainable Drainage. The SPG identifies that planning applications that are likely to raise significant flood risk issues are where the proposal is:

- located in an undefended or defended flood plain or washland;
- within or adjacent to any watercourse;
- adjacent to, or including flood bank or other flood control structures;

- situated in an area where the Environment Agency, or the Council as local drainage authority for non-main rivers, has indicated there may be drainage problems;
- is of such a size that it may cause a significant increase in surface water run-off; or
- located in an area known to suffer from high groundwater.

In order to address run-off minimisation and water conservation the SPG states that:

*“Whilst it is accepted that developing at higher densities reduces the need to develop further ‘green-field’ land, and is consistent with wider sustainability objectives, consideration should be given in the design of such developments to keeping the amount of hard surfacing to a practicable minimum. Opportunities should also be seized through the development process to minimise the amount of run-off by ensuring that the use of natural seepage to the ground is used where possible and capturing and recycling water for use in activities such as landscape maintenance and vehicle washing. Developers are encouraged to incorporate measures into the design of their schemes which utilise, ‘clean’ run-off water sources.”*

In addition, in order to promote run-off reduction, it states that:

*“Development cannot proceed without adequate surface water drainage arrangements. To minimise flooding, surface water run-off from new development should be attenuated (slowed down), as near to the source as possible, to equate with that which would occur on the equivalent ‘green-field’ site.”*

The SPG advocates the use of Sustainable Drainage Systems (SUDS) which should seek to control surface run-off as close to its origin and attempts to mimic natural drainage processes, thereby reducing flood risk and pollution. Accordingly, a SUDS for a new development should meet the following basic requirements:

- for ‘green-field’ sites there should be no greater run-off than exists prior to development, and for ‘brown-field’ sites there should be a reduction in the run-off. This is in order to prevent flooding of downstream watercourses by controlling the peak run-off rate and volume from a site.
- downstream watercourses and habitat should not be damaged by run-off generated by the development.
- pollution in the run-off from a development should be treated or intercepted before discharge.
- the wider needs of the community and catchment should be considered in the development of the design.

The SPG identifies the importance of safeguarding groundwater resources in East Dorset. It states that:

*“Almost the whole of the District is underlain by aquifers from which water supplies are already drawn. For the larger public abstractions the Environment Agency has identified catchment areas known as Source Protection Zones and has subdivided these into three zones of sensitivity according to the estimated time that water takes to travel to the abstraction point. There may be proposed developments on an aquifer, outside of an SPZ, where the protection of groundwater may be a consideration during the planning process.”*

It goes on to state that:

*“Certain types of proposal may not be acceptable in Zone 1 (the inner most sensitive part) of an SPZ, and hydrological risk assessments may be required depending on the location and nature of the proposals. Within the inner zones of an SPZ, drainage schemes which are based on infiltration may be unacceptable and it may be necessary to direct run-off to the nearest surface water sewer.”*

### **(3) Sewer flooding within East Dorset**

Wessex Water’s sewer flooding plan for East Dorset shows the majority of flooding is located in the developed residential areas of Wimborne Minster, West Parley & Corfe Mullen located to the north of Poole. It is likely these incidents are associated with network incapacity as a result of

development or through poor performance of either one of the many STW or pumping stations located in the area. The flooding events comprise 4 DG5AI's (2 internal incidents in 10 years) and 16 DG5BI's (1 internal incident in 10 years). Solutions comprising storage, diversion, local upsizing of sewers and upgrading of pumping stations may alleviate current flooding, however if further development in the area is proposed consideration should be given to the provision of new infrastructure.

**(4) Reservoirs within East Dorset and their flood risk category\***

Grid reference	Reservoir	Location	Capacity (m <sup>3</sup> )	Flood category assigned under Reservoirs Act, 1975	Flood category assigned under EA review of South Wessex reservoirs (2007)
ST997075	Crichel Lake	Wimborne St Giles	91,000	D	D
SZ061980	Longham Lake	Bournemouth	304,000	Not assigned	C
SY96719793	Orchard Coppice, Henbury	Wimborne Minster	-	Not under Act	C
SU04480339	White Sheet Farm No.1 d/s	Wimborne Minster	-	Not under Act	C
SU04480339	White Sheet Farm No.2 mid	Wimborne Minster	-	Not under Act	C
SU04480339	White Sheet Farm No.3 u/s	Wimborne Minster	-	Not under Act	C
SU04510658	Ferndown Forest	Wimborne Minster	-	Not under Act	D
SU05700835	Woodland Park (Remedy Oak Gc)	Wimborne Minster	-	Not under Act	D
SU12461131	Warren Park Farm No. 1 d/s	Ringwood	-	Not under Act	D
SU12461131	Warren Park Farm No. 2 u/s	Ringwood	-	Not under Act	D
SU10741235	Daggons	Ringwood	-	Not under Act	C
SU11321384	Bull Hill Farm (Actually Lakefm) No.1 u/s	Ringwood	-	Not under Act	D
SU11321384	Bull Hill Farm (Actually Lakefm) No.2 d/s	Ringwood	-	Not under Act	D
SU11321384	Bull Hill Farm (Actually Lakefm) No.3	Ringwood	-	Not under Act	D
SU01300441	Gaunts House	Wimborne Minster	-	Not under Act	D

\* This table details all reservoirs identified by the Environment Agency under their review of South Wessex reservoirs in February 2007.

#### **(5) Key points from the SFRA specific to East Dorset**

- A limited number of domestic and commercial properties, transport links and farmland have been subjected to damage and disruption by groundwater flooding.
- Twenty properties are currently at risk of sewer flooding within East Dorset, but Wessex Water intends to implement solutions to alleviate flooding in these properties by March 2010.
- There are 15 reservoirs within East Dorset for which a breach is likely to cause negligible loss of life. However, if development is proposed downstream of one of these reservoirs a detailed breach and overtopping assessment needs to be undertaken.
- The variations in flood depth for the 1% flood event within Ringwood (Figure 6.3) can be used as an indication of where to direct development to reduce flood risks in this small part of the district. However, a more in-depth analysis will need to be undertaken as part of a Level 2 SFRA if sites within Flood Zone 3 are to be considered for future development.
- Tile Set B shows several flood defences within East Dorset, particularly within Wimborne Minster, Sturminster Marshall and Shapwick. If development is proposed behind any of these defences a detailed breach and overtopping assessment will need to be carried out to inform the sequential test and to ensure that the potential loss of life can be safely managed throughout the lifetime of the development.
- The Environment Agency has flood warning procedures in place for the Stour catchment, the Middle and Lower Avon, and Cranborne Chase.
- Major Incident Plans (MIP) are in place for Wimborne, Sturminster Marshall and Shapwick. MIPs describe the nature of flood risk, defences, flood warning procedures, roles and responsibilities before, during and after a flood incident. All three MIPs are basic, but Sturminster Marshall and Shapwick no longer meet the MIP criteria.
- In the application of SUDS techniques it is recommended that priority is given to the use of surface water drainage techniques due to the generally permeable soils throughout East Dorset. However prior to implementing these techniques, each site should confirm that the use of infiltration drainage will not increase the risks of groundwater flooding.
- Three out of four of the Area of Search for development identified by East Dorset District Council intersect with Climate Change Flood Zones 3b and/or 3a, as does the existing urban areas of Wimborne, St Leonards, Verwood, Shapwick and Sturminster Marshall. In allocating sites for development East Dorset District Council will be required to undertake the Sequential Test if proposing any sites that lie within Flood Zones 2, 3a and 3b at any point in the developments life. This will ensure the more vulnerable uses of land can be allocated to the lowest risk sites.