

This Appendix provides specific information on the following subjects for Christchurch:

- (1) Hydrology
- (2) Relevant local planning policy from the Christchurch Borough Council Development Plan, 2001-2011
- (3) Sewer flooding
- (4) Reservoirs
- (5) Key points from the SFRA specific to Christchurch

(1) Hydrology

Through Christchurch flows the lower reaches of both the Rivers Stour and Avon. The River Stour flows along the western boundary of the borough, being joined by the Moors close to Blackwater Hill. The River Avon follows the eastern boundary of the borough to Winton where the river flows in a southerly direction to join the River Stour just before flowing out into Christchurch Harbour. Within the eastern part of the borough lies the Bure Brook and the River Mude both of which flow directly into Christchurch harbour.

(2) Christchurch Borough Council Development Plan, 2001-2011

The key policy relating to development within key floodplain areas is Policy ENV7. This states that:

“Within the flood plains identified on the proposals map planning permission will not be granted for new development including the raising of land levels where such proposals are likely to impede the flow of water or increase the risk of flooding elsewhere”.

In addition, the ‘knock on’ effect of development has been considered by Policy ENV8. This states that:

“Development will not be permitted if it would result in any increase in flood risks in areas downstream and upstream, due to additional surface water run off, unless measures are undertaken to overcome such risk”.

Policies ENV7 and ENV8 are still appropriate and do not need updating.

Also, Policy ENV9 aims to safeguard the marine environment from inappropriate development: This policy states that:

“Within the coastal area identified on the proposals map development will only be permitted provided that the following criteria are satisfied:

- 1) proposals do not prejudice existing or proposed public access to the water or beach.*
- 2) proposals are designed to respect the scale and character of neighbouring buildings and landscape features and to ensure that the existing skyline is not broken.*
- 3) proposals do not detract from the visual dominance of the cliffs, being subservient to them.*
- 4) existing trees are lost only in the interests of good arboricultural practice. Where a tree belt is affected to such a degree as to prejudice its overall effect when viewed from the sea, and other parts of the coast, then new trees will need to be planted to compensate for the losses.*
- 5) geological features are respected.*
- 6) proposals do not prejudice coast protection works”.*

There is a need to re-consider the wording of Policy ENV9 to ensure that it takes into account the guidance set out in the draft RSS. There is some overlap between Policy ENV9 and Policy CO1 in the draft RSS, and further consideration is necessary to ensure they are compatible. Also, Policy ENV9 should ensure that the likely impacts of climate change are taken into account, and

that Local Development Documents are fully integrated with other relevant guidance, in particular and where appropriate, the Western Solent and Southampton Water Shoreline Management Plan. There is also a need to ensure that the Coastal Zone is appropriately delineated, based on the most up to date technical evidence.

(3) Sewer flooding within Christchurch

Wessex Water’s sewer flooding plan for Christchurch shows the majority of flooding is located in the vicinity of Highcliffe, whilst there is a single event in Friar’s Cliff. It is likely that the incidents are associated with network incapacity as a result of development along the coastline or through poor performance of either one of the many Sewage Treatment Works or pumping stations located in the area. The sewer network is combined and thus it is likely that the system is now under capacity as a result of greater surface water connectivity and /or storm intensity. The flooding events comprise 4 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, and are considered appropriate for the areas which have already been extensively developed.

(4) Reservoirs within Christchurch and their flood risk category*

| Grid reference | Reservoir | Location | Capacity (m³) | Flood category assigned under Reservoirs Act, 1975 | Flood category assigned under EA review of South Wessex reservoirs (2007) |
|-----------------------|----------------------------|-----------------|---------------------------------|---|--|
| SZ156935 | Reid Street/ River Avon | Christchurch | 27,800 | n.a. Service reservoir | n.a. Service reservoir |

* 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 Christchurch

- Flooding from the sea has in the past affected coastal areas of Christchurch. Coastal flooding has been caused by high tide levels in combination with high river levels, often exacerbated by heavy rain and strong winds.
- No groundwater flooding events have been recorded in Christchurch.
- Four properties are currently at risk of sewer flooding within Christchurch, but Wessex Water intends to implement solutions to alleviate flooding in these properties by March 2010.
- The variations in flood depth for the 1% flood event within Christchurch (Figure 6.5) can be used as an indication of where to direct development to reduce flood risks, but 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 future for development.

- Tile Set B shows several flood defences within Christchurch, particularly around the harbour. 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 Christchurch to the tidal Avon & Stour
- A Major Incident Plans (MIP) is in place for Christchurch which is of a very good standard. MIPs describe the nature of flood risk, defences, flood warning procedures, roles and responsibilities before, during and after a flood incident.
- 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 Christchurch. However prior to implementing these techniques, each site should confirm that the use of infiltration drainage will not increase the risks of groundwater flooding.
- The Building Regulations Part H state that the preferred option for the disposal of property runoff is via soakaway. However, Christchurch Borough engineers discourage the use of soakaways near cliffs.
- The coastal flood zones delineated in **Volume II, Tile Set D** illustrate the 0.5% annual probability flood event in 2070 and 2115 with an allowance for climate change. These flood extents correspond with the design life for a commercial development (60 years) and a residential development (100 years). If development is proposed near the coast, wave action must be considered and an allowance made for the potential effects of increased wind speeds and wave heights.
- The 0.5% tidal annual probability flood extent for 2070 and 2115, with an allowance for climate change, has potential implications on the following policy areas:
 - Green Belt
 - Flood Plain
 - Coastal Area
 - Harbour Policy Area
 - Site of Special Scientific Interest
 - Built Environment Policies
 - Nationally Important Archaeological Site
 - Existing Open Space

These implications fall across the breadth of the Harbour Area, as well as implications further inland. In particular, both the 2070 and 2115 scenarios have implications on residential properties within the Purewell, Stanpit and Mundeford areas, around the town centre and further upstream for the Avon (around Bridge Street, the A35 and the railway line) and the Stour (particularly east of Stour Road).

- The Area of Search for development identified by Christchurch Borough Council intersects with Climate Change Flood Zones 3b and 3a, as does the existing urban area of Christchurch. In allocating sites for development Christchurch Borough 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.