

Appendix F – Waterbody status and Flood Risk in Harborough District

Table 4.5: Ecological Status of water bodies in Harborough

Waterbody	Type	Status	Certainty
Countesthorpe Brook from Source to River Sence	River	Bad	Quite Certain
River Soar from source to Soar Brook	River	Moderate	Uncertain
River Soar from Soar Brook to Thurlaston Brook	River	Bad	Quite Certain
R Sence from Burton Brook to Countesthorpe Brook	River	Moderate	Very Certain
Burton Brook from Source to River Sence	River	Poor	Very Certain
River Sence from Source to Burton Brook	River	Poor	Very Certain
Whetstone Brook Catchment (trib of River Soar)	River	Bad	Very Certain
Evington Brook from Source to Willow Brook	River	Bad	Quite Certain
Willow Brook from Source to Evington Brook	River	Moderate	Very Certain
Syston Brook Catchment (trib of Wreake)	River	Bad	Very Certain
Queniborough Brook Catchment (trib of Wreake)	River	Poor	Quite Certain
Jordan	River	Poor	Quite Certain
Welland	River	Moderate	Very Certain
Langton Brook	River	Moderate	Uncertain
Welland	River	Bad	Very Certain
Chater	River	Poor	Very Certain
Stonton Brook	River	Bad	Very Certain
South Gwash	River	Moderate	Uncertain
Medbourne Brook	River	Poor	Very Certain
Eye Brook	River	Moderate	Very Certain
Welland	River	Poor	Quite Certain
R Avon - Claycoton Yelvertoft Bk to conf R Sowe	River	Poor	Quite Certain
R Swift source to conf Avon	River	Poor	Quite Certain
Eyebrook Reservoir	Lake	Moderate	Uncertain
Stanford Reservoir	Lake	Moderate	Uncertain
Grand Union Canal, Leicester Line, summit to Aylestone	Canal	Moderate	No Information
Grand Union Canal, Leicester Line (Welford Arm)	Canal	Good	No Information
Grand Union Canal, Leicester Line, summit pound	Canal	Good	No Information

Source: Environment Agency (2014)

Flood risk 7.3 *Contextual review*

The Flood and Water Management Act¹²³ sets out the following approaches to flood risk management:

- Incorporating greater resilience measures into the design of new buildings, and retro-fitting at risk properties (including historic buildings);
- Utilising the environment, such as management of the land to reduce runoff and harnessing the ability of wetlands to store water; and Identifying areas suitable for inundation and water storage.

Three **Catchment Flood Management Plans (CFMP)** cover the District – River Welland CFMP, River Trent CFMP and River Severn CFMP. The CFMP's detail the extent of flooding and set policies for managing flood risk within the catchment.

The Welland Flood Risk Management Strategy¹²⁴ suggests that the risk of flooding from the Welland is relatively low for Market Harborough. The proposed policy for this area is to continue with current flood management practices. However, it is recommended that development incorporates resilience measures so that the location, layout and design can reduce flood risk.

The current and projected baseline

A Level 1 Strategic Flood Risk Assessment (SFRA) was undertaken by Scott Wilson in 2009 on behalf of HDC¹²⁵. The results of this SFRA are summarised below.

Surface Water Flooding

Surface water (pluvial) flooding occurs when heavy rainfall exceeds the capacity of local drainage networks and water flows across the ground. The flashy nature and short duration of such events can make them difficult to mitigate.

Harborough and its town centres regularly suffer from flooding:

- Market Harborough, Peatling Magna, Dunton Bassett, North Kilworth and Kibworth Beauchamp are particularly susceptible to surface water flooding;
- The last major flood in Market Harborough occurred in July 2002 from the River Welland. Over 70 business properties were flooded within the town centre. The main factor attributed to this flooding was insufficient capacity of the drainage system. The town also experienced flooding in 1999 and 2006;
- The last major flood in Lutterworth occurred during 2008 from the River Swift. There was regular more localised flooding, caused by inadequate drains, affecting Station Road near the Town Hall;
- Great Glen has flooded eight times since 1999;
- Kibworth has flooded three times since 2004;
- The 2008 flooding event affected a number of Harborough's rural areas including Great Glen, Foxton, Billesdon, Burton Overy, Newton Harcourt, Kibworth, Thurnby, Lubenham and Scraftoft.

An increase in impermeable surfaces in urban areas is one of the main causes of increased surface water flooding. Many flood events are the result of heavy rain running off impermeable surfaces which then overwhelms drainage systems or small water courses

resulting in fast-rising flood water. Climate change is likely to cause more extreme weather events so an effective way to reduce the risks of surface water flooding in urban areas is to reduce the percentage of impermeable surface. New development could lead to an increase in impermeable surfaces, but also offers the opportunity to implement measures that help to manage surface water flood risk.

Sewer Flooding

Sewer flooding is thought to be the most common cause of flooding in the UK. It is usually caused by excess surface water entering the drainage network but can also be due to 'one off' events such as trees falling and fly tipping blocking drains and screens. The data provided by Severn Trent Water (STW) and Anglian Water (AW) shows that sewer and drainage flooding have occurred throughout the District, with a particular clustering of events in Market Harborough, Billesdon, Great Glen and Lutterworth.

Groundwater Flooding

Groundwater flooding occurs as a result of water rising up from an aquifer or from water flowing from abnormal springs. No records of groundwater flooding were found during the SFRA baseline study. However, this does not mean that groundwater flooding does not occur, more that it has not been reported. There may be potential for groundwater flooding to occur following periods of sustained high rainfall and this should be considered in the planning process of any new developments within the District.

Overall Flooding

The SFRA provided a flood risk map for the District (see Figure 7.1). Flood risk is classified in the following zones:

- Zone 1: Areas considered to be at low risk of fluvial (or tidal) flooding. Whilst fluvial and tidal flooding is not a major concern in these areas, the risk of flooding from other sources, such as surface water, groundwater, sewers or artificial sources may still be an issue;
- Zone 2: This is the extreme 1 in 1000 year fluvial flood event outline;
- Zone 3a: This is the 1 in 100 year fluvial flood event outline that is outside of Flood Zone 3b. It has been determined with an allowance for climate change; and
- Zone 3b: The functional floodplain.

Overall, less than 10% of the administrative area of HDC falls within Flood Zone 3, with the majority of the flood zones falling in rural areas. Nevertheless, as detailed above and shown on Figure 7.1, there are a number of urban locations likely to be affected by flooding. Indeed, recent years have seen more areas within the District suffer from flooding. For example, the leisure centre in Market Harborough experienced surface water flooding during winter 2012/2013 as did the neighbouring football club and the Pumping station on Northampton Road. Great Bowden Cemetery, although not flooded on this occasion has previously been flooded and work has been carried out on the adjacent watercourse to alleviate the problem.

In July/August 2013 the District was also hit with flooding including The Square in Market Harborough when many retail outlets were affected and the Town Centre had to be closed to traffic.

There are approximately 23 flood defence balancing areas within the District, some of which are maintained by HDC and an annual inspection and condition survey is carried out on all of them (see Figure 7.1). There are also six critical ordinary watercourses within the District that are also inspected on an annual basis. These are located in Billesdon, Fleckney Foxton, Little Bowden, Lutterworth and Walcote; and are all currently in 'good condition' and receiving maintenance to an acceptable or good standard¹²⁶.

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Climate change is anticipated to increase the frequency and intensity of flood events, so it is reasonable to anticipate similar flooding events in the future, with resulting disruption to economic activity.

Figure 7.1: Flood zones 2 and 3 in Harborough District

