

Plan for strategic management of surface waters and their local environment in the Forest of Marston Vale

The Surface Waters Plan

Executive Summary



Bedfordshire and River Ivel Internal Drainage Board and The Forest of Marston Vale

The Marston Vale Surface Waters Plan – Executive Summary

The Surface Waters Plan has been published on behalf of the Marston Vale Surface Waters Group. It describes some of the key challenges and opportunities facing Planning and Land Drainage Authorities, Landowners and Developers, and other parties concerned with management of surface waters in the area of the Forest of Marston Vale.

The Plan seeks to face up to the challenges and see advantage taken of the opportunities by promoting a series of policies to encourage an integrated and sustainable approach in the context of major proposed development in the area.

In preparing the Plan, the Surface Waters Group seeks to support Government objectives relating to flood defence and the environment and guidance contained in

Planning Policy Guidance Note 25 (PPG25) 'Development and Flood Risk'. The main purposes of the Surface Waters Plan are to:

- Promote the policies of the Surface Waters Group.
- Support local plan policies dealing with flooding and surface water drainage.
- Assist with consideration of development proposals.
- Identify solutions for dealing with the impact of development pressure on watercourses and lakes.
- Provide guidance to landowners and developers on approaches to management of surface water.
- Encourage schemes that result in a range of benefits including management of flood risk and enhancement of the environment.

The Forest of Marston Vale

The Forest of Marston Vale covers an area of around 16,000 hectares to the south and west of Bedford. It encompasses the valley of Elstow Brook and low ridges to the west and east and stretches from small settlements at Salford and Brogborough, around and to the south of the urban conurbation of Kempston and Bedford, to the villages of Willington and Cople in the east.

The Forest has a gently undulating topography and is predominantly an open arable landscape with local areas of pasture, paddocks and set aside. Pockets of woodland provide contrast within the landscape. The continuing significance of brick making is very apparent with the brickwork's chimneys, pits and belts of screening poplars being the most visible features. Restoration of pits by landfilling has provided three substantial domed landforms on the generally flat floor of the vale. Gravel pits have become a feature on the north east of the Forest in recent years.

The nineteen villages in the Vale are typically

areas of housing constructed over the last forty years spreading out from the old village centres. This is an on-going process arising from pressure for more housing. The Bedford urban fringe has changed dramatically over recent years with the construction of the southern bypass and infill development for housing and commercial uses.

Transport corridors are another significant landscape feature with busy trunk roads radiating out towards Milton Keynes, Luton and Stevenage and two railways cutting through the vale from Bedford towards the south.

A network of small watercourses carries surface water to Elstow Brook, the principal watercourse that serves most of the Forest area. The flood plain extends across low lying fields, spreading out more widely upstream of historic man-made constrictions. Elstow Brook flows eastwards to its confluence with the River Great Ouse near Willington where the flood plain of the Ouse extends into the eastern parts of the Forest.

Marston Vale Millennium Country Park

Located between Marston Mortaine and Stewartby, Marston Vale Millenium Country Park is the hub of the Forest of Marston Vale. It encompasses Stewartby Lake and interconnected wetlands, offering a range of habitats for fauna and flora, and recreational and educational opportunities. Stewartby Lake also provides very substantial attenuation of flood flows passing to downstream reaches of the Elstow Brook.

The lake and wetlands at Stewartby are a prime example of a major surface water facility and it is this strategic, multi-functional and integrated approach that the Marston Vale Surface Waters Group seeks to promote to address future needs.

Development pressure in the Marston Vale is high and is expected to remain so, particularly as the Bedfordshire Structure Plan 2011 has identified the area as a Strategic Development Corridor.

Surface Water Run-off

Taken as a whole, the developments proposed for the Marston Vale through the current Local Plan processes represent very substantial increases in impermeable surface within the catchment of the Elstow Brook with the potential to increase flood flows. All of the developments will require some form of surface water run-off control to avoid increasing flood risk to other properties. Many of the developments could have an adverse impact, increasing run-off and flood risk if appropriate mitigation measures are not taken.

Mitigation can be achieved in a number of ways, including:

- 'Source control' methods such as soakaways and swales that allow surface run-off to percolate into the ground.
- Strategic watercourse improvements or balancing ponds designed to serve large development areas.
- Balancing tanks or similar systems forming part of the adopted piped sewerage system.
- Private balancing tanks or ponds serving individual developments

For most of the Marston Vale, strategic facilities represent the best option for managing surface water run-off for all developments of any significant size, because of the generally clayey nature of the sub-soil. In general, strategic facilities also afford a better prospect for enhancement of the water environment and ecology, for example by providing a variety of habitats, increased opportunities for land and water based recreation, and improved management of all flow conditions. It is also more likely that such facilities would be adopted and maintained by a body that is publicly accountable.

Whilst the emphasis of the above concerns the effects of increased surface water run-off from developments, it is also essential to protect and, if possible, enhance, the existing functions and environmental features of Elstow Brook and its tributaries, including its flood plains. In general this will mean avoidance of development within flood plains. New development should be designed to provide protection against fluvial flooding.

Surface Waters Group Policies

The policies of the Surface Waters Group for management of surface waters in the Marston Vale are as follows. **The Surface Waters Group will:**

- promote an integrated approach to flood risk management, surface water drainage and the water environment in response to development pressure in the Marston Vale
- promote government guidance contained in PPG25 'Development and Flood Risk'. This Surface Waters Plan provides a strategic framework for the site specific Flood Risk Assessments which must be produced in support of planning applications where flood risk is a material consideration, in accordance with PPG25
- seek support from the Planning Authorities in its efforts to encourage developers to consider and, where appropriate and practicable, implement strategic solutions to surface water drainage and flood risk that are sustainable and offer opportunities for environmental and recreational gains
- seek to assist developers with co-ordinating negotiations and studies where appropriate, primarily through the offices of the Drainage Board and Environment Agency, particularly where several landowners and developers are involved
- seek to encourage Planning Authorities and developers to protect watercourse corridors from development that would have an adverse impact on the drainage regime, flood risk and the river environment
- support measures to enhance the river system and environment by appropriate channel improvements, planting and other works
- seek to take a long-term view of development potential in the Marston Vale and opportunities that may arise to lay down early strategies for serving such development. Such opportunities may arise from continuing extraction of minerals in the area and subsequent restoration of pits and may have the potential to reduce flood risk for existing property in the face of adverse climate change
- lobby central government to address funding, adoption and related issues, in light of the deficiencies in present mechanisms for encouraging a strategic approach to surface water issues, particularly those arising from new development. In the view of the Surface Waters Group, it is essential that improved regulatory and financial mechanisms be introduced to deal with increasing development pressures and ensure that sustainable and environmentally acceptable solutions are implemented.

Review

The Surface Waters Plan will be reviewed and its policies updated from time to time to reflect the changing planning context. The base date of this first Surface Waters Plan is 1 July 2001. The Surface Waters Group will also seek to identify potential opportunities for creation of specific strategic surface water facilities that might serve particular developments, or provide enhanced management of the system. The first set of such Outline Proposals is given in Appendix H of the Surface Waters Plan.

The Marston Vale Surface Waters Group was established in 1997. Its membership comprises representatives of:

Bedfordshire County Council
Bedford Borough Council
Mid-Beds District Council
Forest of Marston Vale
Environment Agency
Bedfordshire and River Ivel
Internal Drainage Board

The Surface Waters Group welcomes representations from interested parties who should direct their communications to the Beds and River Ivel IDB (contact details below).

Full copies of the Surface Waters Plan and its Appendices, can be obtained by contacting the Planning Department of your Local Authority or:

The Bedfordshire and River Ivel IDB,
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Further information can also be obtained on the Drainage Board's web site www.idbs.org.uk.