

Bromsgrove and Redditch SFRA and WCS

Addendum

Bromsgrove District and Redditch Borough
Councils

January 2009

Final Report

9T1791/9T2337

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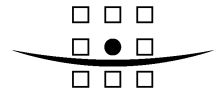
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CONTENTS

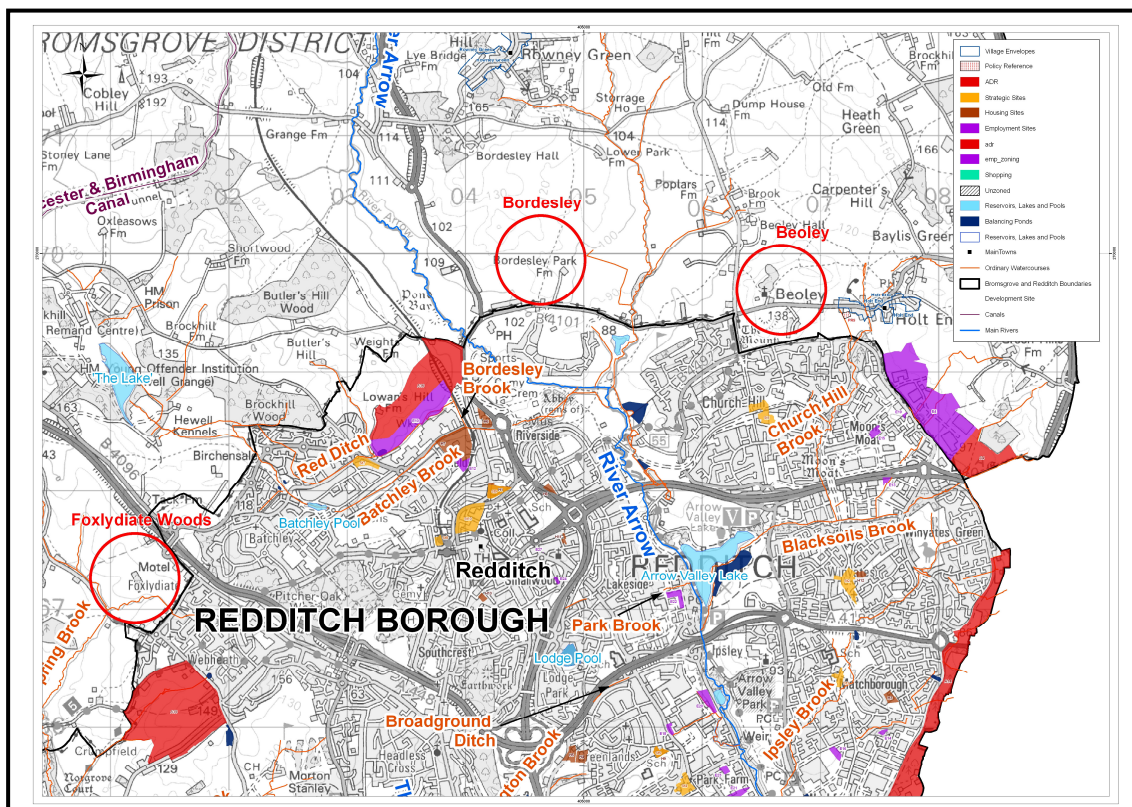
	Page
1 INTRODUCTION	1
2 BEOLEY	2
2.1 SFRA Results	2
2.1.1 Flood Zones	2
2.1.2 Impact of Climate Change	2
2.1.3 Flood Defence, Flood Warning, Flood Watch	2
2.1.4 Source Protection Zones	2
2.2 WCS Results	2
2.2.1 Flood Risk	2
2.2.2 Water Supply	2
2.2.3 Wastewater	3
2.2.4 Summary	3
3 BORDESLEY PARK	4
3.1 SFRA Results	4
3.1.1 Flood Zones	4
3.1.2 Impact of Climate Change	4
3.1.3 Flood Defence, Flood Warning, Flood Watch	4
3.1.4 Source Protection Zones	4
3.2 WCS Results	4
3.2.1 Flood Risk	4
3.2.2 Water Supply	4
3.2.3 Wastewater	4
3.2.4 Summary	5
4 FOXLYDIATE WOODS	6
4.1 SFRA Results	6
4.1.1 Flood Zones	6
4.1.2 Impact of Climate Change	6
4.1.3 Flood Defence, Flood Warning, Flood Watch	6
4.1.4 Source Protection Zones	6
4.2 WCS Results	6
4.2.1 Flood Risk	6
4.2.2 Water Supply	6
4.2.3 Wastewater	7
4.2.4 Summary	7

1

INTRODUCTION

Following the completion of the Draft Level 1 Strategic Flood Risk Assessment (SFRA) and Water Cycle Strategy (WCS) for Bromsgrove District and Redditch Borough, three additional potential development sites were identified as part of a study carried out by White Young Green¹ to accommodate the development requirements for Redditch Borough. These are all located within Bromsgrove District, in proximity to the northern border of Redditch Borough, as shown in **Figure 1**.

Figure 1: Location of Additional Development Sites (indicated by red circles)



This Addendum will review these three sites in light of the findings from both the WCS and the SFRA and will summarise the site specific results, as included in the two main reports for all the other development sites.

¹ "Study into the Future Growth Implications of Redditch: Second Stage Report", White Young Green, 2008

2 BEOLEY

2.1 SFRA Results

2.1.1 Flood Zones

Beoley village is located on a hill with no watercourses in direct proximity. However, the Church Hill Brook is located to the southeast and a tributary of the Dagnell Brook runs to the northwest. The Church Hill Brook has no Flood Zone definition, whereas the Dagnell Brook tributary has Flood Zones defined by JFLOW. Dependent upon the exact location of the development site, it should not be affected by direct fluvial flooding. However, if it falls in proximity to either of these watercourses it is recommended that a site specific FRA is carried out.

Occurrences of surface water flooding have been reported in proximity to this site and, again depending upon the exact extent and location, may require further investigation as part of a site specific FRA .

2.1.2 Impact of Climate Change

Most of the site should be located outside Flood Zone 2 and therefore the risk of flooding is not affected by climate change. However, as the Church Hill Brook has no Flood Zone definition, it is recommended that a site specific FRA is carried out or a new model is constructed for this watercourse to assess the flood risk to the site, including the effect of climate change.

2.1.3 Flood Defence, Flood Warning, Flood Watch

The site is not protected by a flood defence or covered by a flood warning or flood watch area.

2.1.4 Source Protection Zones

The site is not located in proximity to a Source Protection Zone (SPZ)

2.2 WCS Results

2.2.1 Flood Risk

As the site is located upstream from Redditch Town and areas which have suffered from fluvial flooding in the past and is predominantly Greenfield, it will pose additional runoff issues to existing development. However, it is not thought that a major upgrade will be required to the watercourse.

2.2.2 Water Supply

This site is located close to existing development, but is predominantly Greenfield so, dependent upon the type and size of development, improvements may be required to provide a sufficient water supply to the site.

2.2.3 Wastewater

The wastewater from this site will feed into the Redditch sewer system which is already identified as being under pressure. The system may therefore require some upgrade to accommodate the additional flow. As it is predominantly Greenfield then additional sewer pipes may be required to connect this site to the existing wastewater network.

2.2.4 Summary

This summary table relates directly to the conclusion tables shown in Section 8 of the main WCS report.

Flooding	Water Supply	Wastewater

3 BORDESLEY PARK

3.1 SFRA Results

3.1.1 Flood Zones

Bordesley Park Farm is located between the Dagnell Brook, to the east, and the River Arrow, to the West (beyond the A441). Both these watercourses have Flood Zones defined, although the extents of both are located some distance from Bordesley Park Farm. However, if the planned development falls in proximity to either of these watercourses it is recommended that a site specific FRA is carried out.

One report of storm sewer flooding has been reported in proximity to this site.

3.1.2 Impact of Climate Change

Most of the site should be located outside Flood Zone 2 and therefore the risk of flooding is not affected by climate change. However, as neither of the watercourses have been sufficiently modelled, it is recommended that the existing Flood Zone 2 be used to represent flood zone 3 with climate change until the watercourse has been assessed in greater detail.

3.1.3 Flood Defence, Flood Warning, Flood Watch

The site is not protected by a flood defence or covered by a Flood Warning or Flood Watch, although Flood Watch areas do cover the areas in proximity to the River Arrow and the Dagnell Brook.

3.1.4 Source Protection Zones

The site is not located in proximity to a Source Protection Zone (SPZ)

3.2 WCS Results

3.2.1 Flood Risk

As the site is located upstream from Redditch Town and areas which have suffered from fluvial flooding in the past and is predominantly Greenfield, it will pose additional runoff issues to existing development. However, it is not thought that a major upgrade will be required to the watercourse.

3.2.2 Water Supply

This site is not located in close proximity to existing development, and is predominantly Greenfield. It will therefore be necessary to make fairly substantial improvements to the water supply system to provide water to the site.

3.2.3 Wastewater

The wastewater from this site will feed into the Redditch sewer system which is already identified as being under pressure. The system may therefore require some upgrade to

accommodate the additional flow. As it is predominantly Greenfield then additional sewer pipes may be required to connect this site to the existing wastewater network.

3.2.4 Summary

This summary table relates directly to the conclusion tables shown in Section 8 of the main WCS report.

Flooding	Water Supply	Wastewater

4 FOXLYDIATE WOODS

4.1 SFRA Results

4.1.1 Flood Zones

The area around Foxlydiate is drained by a number of Ordinary Watercourses, which are tributaries to the Spring Brook. As these watercourses have not been modelled, the site will require a site specific FRA. The Spring Brook has been modelled with JFLOW and the downstream area of the site may be located within Flood Zones 2 or 3.

One report of foul sewer flooding has been reported in proximity to this site.

4.1.2 Impact of Climate Change

As the adjacent watercourses have not been modelled and subsequently have no Flood Zone definition it is recommended that a site specific FRA is carried out and a model constructed to assess the risk of climate change. For areas of the site located within the Flood Zones defined for the Spring Brook it is recommended that the existing Flood Zone 2 be used to represent flood zone 3 with climate change until the watercourse has been assessed in greater detail.

4.1.3 Flood Defence, Flood Warning, Flood Watch

The site is not protected by a flood defence or covered by a Flood Warning or Flood Watch.

4.1.4 Source Protection Zones

The site is located in proximity to, and partially underlain by, Inner and Outer sections of a Source Protection Zone (SPZ). This may limit the type of SUDS techniques which can be used in the development.

4.2 WCS Results

4.2.1 Flood Risk

The site is Greenfield and is located upstream from areas of Redditch Borough which have experienced occurrences of fluvial flooding in the past. It will also drain into the Swans Brook, which has been highlighted in the SFRA as being the cause of previous flooding in parts of Redditch Borough, such as Feckenham village. The additional runoff will therefore pose a risk to existing development and has the potential exacerbate existing drainage problems, potentially resulting in a need to upgrade the existing drainage system.

4.2.2 Water Supply

This site is located fairly close to existing development, and is predominantly Greenfield. It will therefore be necessary to make some improvements to the water supply system to provide water to the site.

4.2.3 Wastewater

The wastewater from this site will either require pumping over the 'ridge' into the Redditch sewer system which is already identified as being under pressure, or will drain to the Priest Bridge sewage treatment works, which has been identified in the WCS as having no spare capacity. The system may therefore require substantial upgrade to accommodate the additional flow. As it is predominantly Greenfield then additional sewer pipes may be required to connect this site to the existing wastewater network.

4.2.4 Summary

This summary table relates directly to the conclusion tables shown in Section 8 of the main WCS report.

Flooding	Water Supply	Wastewater