



## **Waste Core Strategy Site Options Consultation**

### **Waste Site Assessment**

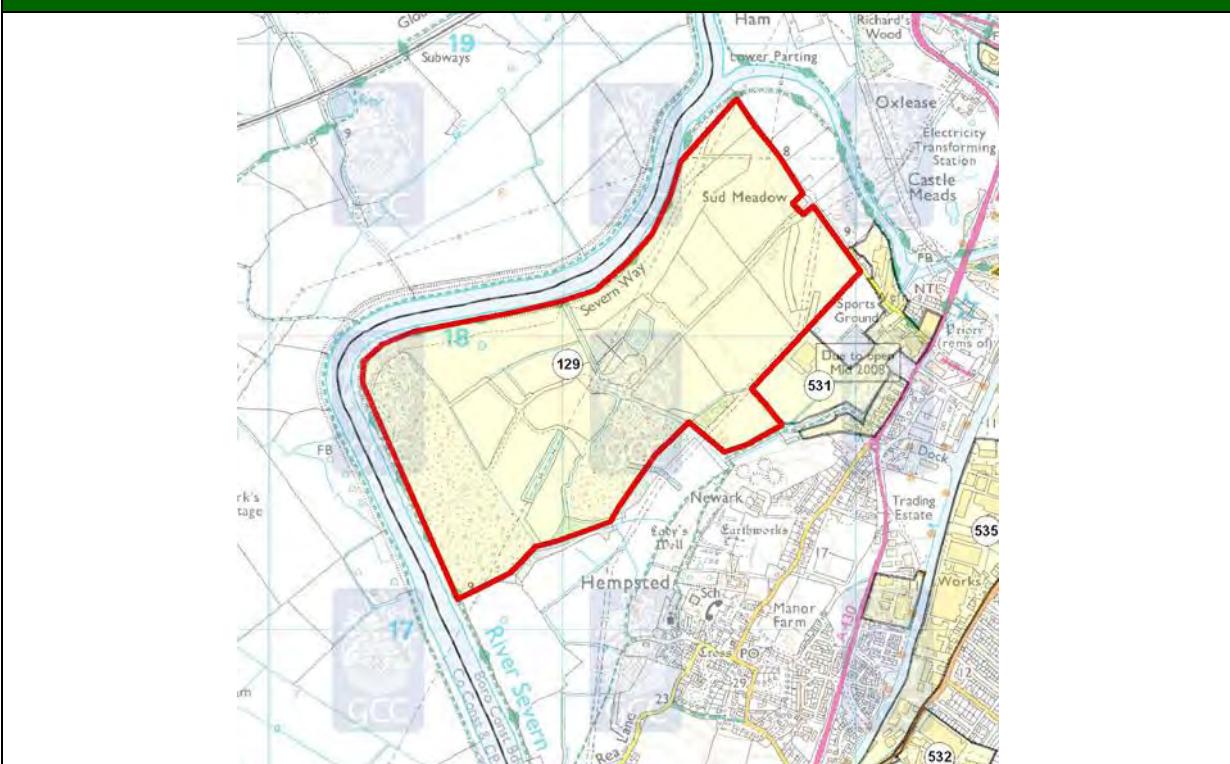
#### **Appendix C.13: Site 129 - Sudmeadow Hempsted**

**October 2009**

## Appendix C.13: Site 129 - Sudmeadow Hempsted

### *Site Maps and Images*

#### Site Map



#### Aerial Photo



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## Appendix C.13: Site 129 - Sudmeadow Hempsted

### Site Images



### Locational Information

| Site Details  |  |          |        |
|---|--|----------|--------|
| District  | Gloucester   |          |        |
| Parish  | Gloucester Non-Parish  |          |        |
| Easting   | 381160   | Northing | 217903 |
| Approximate Site Area (hectares)  | 125  |          |        |
| Reasons for inclusion<br><i>NB: Slight anomalies in site boundaries may have arisen from 'clustering' of sites from more than one source and/or the absence of detailed site plans in source documents.</i> | The site was a site in the Gloucestershire Waste Local Plan and contains existing waste management facilities. |          |        |
| Date of WPA officer visit   | 10th September 2008  |          |        |

## Appendix C.13: Site 129 - Sudmeadow Hempsted

|  |   |
|--|---|
| Broad Description of Site (including current activities on site, location and neighbouring uses) | <p>The site comprises a large area accessed from Hempsted Lane. It is divided into two, the landfill site operated by Cory Environmental Ltd and the Household Recycling Centre (HRC) operated by May Gurney Ltd. There are large areas of restored grassland and scrubby pasture. The site also contains a leachate treatment facility and a landfill gas engine, currently producing around 5.4MW electricity which is exported to the national grid. Sheep are now grazing on part of the former landfill area. At the time of the site visit the HRC site was due to be located to an area nearer to the entrance road (opposite the gas cylinders area which is earmarked for housing development (c.180 houses). Once the HRC has been relocated that area will be landfillled and eventually restored. Current estimates are that the site will be completed by 2012/2013.</p> <p>Additional Sensitive Receptors: Sports ground, football ground, college. Most of the site to north and north west is unproblematic as it is bounded by the River Severn and pastureland.</p> |
|--|---|

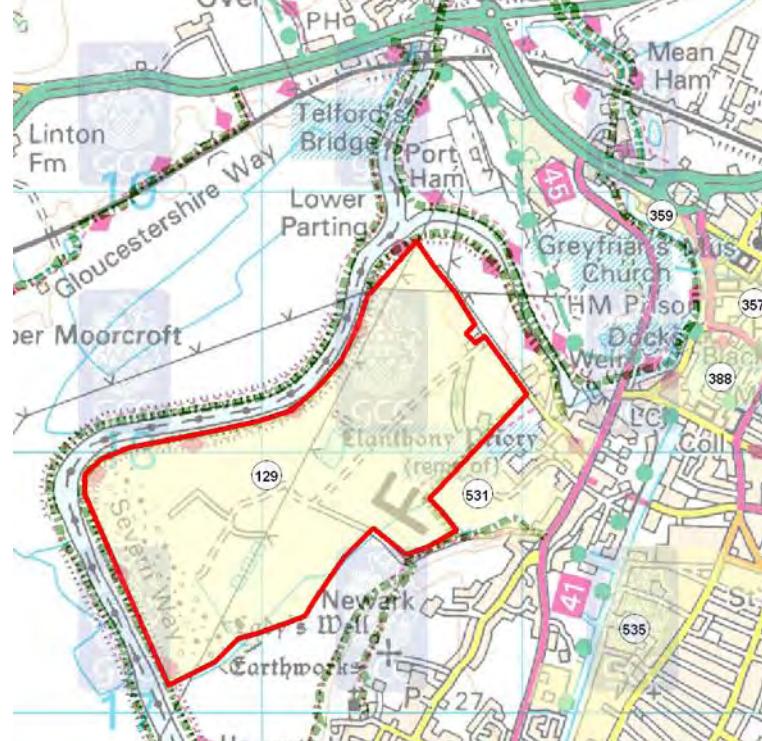
### *Site Assessment Factors/Criteria for Consideration*

|                     |   |
|---------------------|---|
| Landscape           |   |
| Comments            | The site is located on land that has been landfillled and is not within or adjacent to a national landscape designation such as AONB. |
| Landscape Character | The Rea, Maisemore Ham and Longford Floodplain Farmland.  |
| Green Belt          |   |
| Comments            | The site is outside of the Gloucester/Cheltenham Green Belt.  |

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| <b>Highways</b><br><i>(Based on information provided by Gloucestershire County Council's Highways Development Co-ordination team)</i>  |   |            |  |
|--|---|------------|--|
| <b>Routes to access Strategic Network</b><br><i>This denotes the assumed roads that would be used in order for vehicles to travel to and from the proposed site and the wider road network.</i>  | minor, A430   |            |  |
| <b>Proximity to Strategic Highway Network</b><br><i>Assessment of the proximity of the site to different types of road (as specific entrance points are not known have made assumptions about where entrance might be), with reference to the GCC Advisory Freight Route Map (notwithstanding obvious changes arising from new roads etc).</i> | Medium  | Definition | Access from (or in close proximity to) routes identified for local journeys (A and B roads).   |
| <b>Sustainable Transport</b><br><i>Potential for operational access to the site to be by (or involve) non-road modes of transport, based on broad consideration of distance from water/rail and general location, rather than knowledge that it may or may not be technically practical.</i>   | High  | Definition | Site has potential for rail and/or water based transport to play a significant role (site will generally back directly on to water/rail).                              |
| <b>Employee Accessibility</b><br><i>Potential for employees to be able to access the site using non-car modes.</i>   | Low   | Definition | Site is located some distance from residential areas, and has limited scope for non-car access.  |
| <b>Other Transport Issues</b><br><i>This column comments on any other relevant transport issues for the site, which will have partly arisen from discussions with area/stakeholder managers.</i>   | Not that close to main roads. Existing landfill apparently close to capacity. |            |  |
| <b>Recommendation</b><br><i>This category provides an overall view of the potential of the site to be used as a strategic waste facility in transport terms.</i>   | Possible  | Definition | Site has some concerns from a transport perspective, and could still be taken forward depending on views of other disciplines, but may require significant mitigation. |

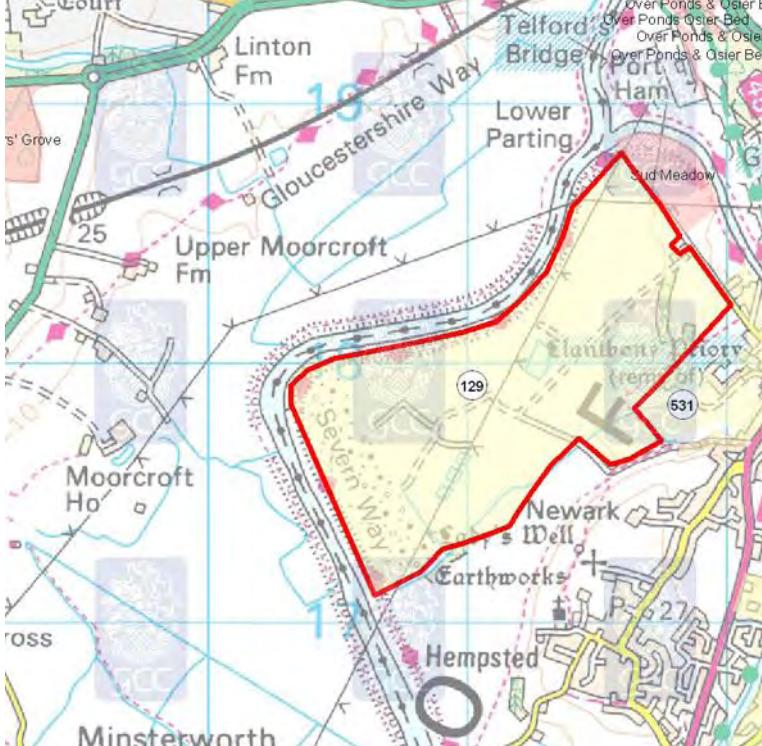
## Appendix C.13: Site 129 - Sudmeadow Hempsted

| Public Rights of Way<br>(Based on information provided by Gloucestershire County Council's Public Rights of Way (PRoW) team) |  |
|--|--|
| Score  | 0  |
| Score Definition   | Presence of Public Rights of Way network but no re-routing required.   |
| Additional Comments  | No diversion necessary - No enhancements likely.   |
| Map Legend   |  <b>Public Right of Way</b> |
| PRoW Map   |                           |

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| Aerodrome Safeguarding<br>(based on safeguarding maps provided by Gloucestershire Airport and the Ministry of Defence (MOD))                |   |
|---|---|
| Comments  | The site lies within the Gloucestershire Airport zone for - All buildings, structures, erections and works exceeding 90 metres in height (295.3 feet) plus all applications involving major tree planting schemes, mineral extraction or quarrying, a refuse tip, a reservoir, a sewage disposal works, a nature reserve or a bird sanctuary and all applications connected with an aviation use. |
| NB. Where a site lies across more than one safeguarding zone the entire site has been defaulted to lowest height category for consultation. |   |

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| <b>Ecology/Biodiversity</b><br><i>(Based on information provided by Gloucestershire County Council's Ecologist and the Gloucestershire Centre for Environmental Records (GCER))</i> |   |
|---|---|
| Score   | 0*  |
| Score Definition  | <p>Overall impact on biodiversity could be potentially negative, uncertain or positive. Identified important ecological constraint up to and including 250 metres distant</p> <p>Scores 0* indicate designated aquifer fed/surface water/flood water dependent site(s) over 1km distant which may be affected (where chosen waste technology and development design poses a risk to the water environment)</p>  |
| Additional Comments   | Scores with * indicate designated aquifer fed/surface water/flood water dependent site(s) over 1km distant which may be affected, site as named above.  |
| Nearby Internationally & Nationally Designated Sites Recorded   | None  |
| Other Internationally & Nationally Designated Sites (wetlands)  | Walmore Common SPA/Ramsar/SSSI [6,029m], Severn Estuary SAC/SPA/Ramsar/SSSI [11,050m]   |
| Ecology Legend  |  <ul style="list-style-type: none"> <li> SSSI Site of Special Scientific Interest</li> <li> Key Wildlife Site - area</li> <li> SAC Site</li> <li> Ramsar Site</li> <li> SPA Site</li> </ul> |
| Constraints Map   |  <p>A detailed map of the Gloucestershire area showing various geographical features and constraints. A red polygon highlights the area around Sudmeadow and Hempsted. Key locations labeled include Court, Linton Fm, Gloucestershire Way, Upper Moorcroft Fm, Moorcroft Ho, Minsterworth, Newark Well, Earthworks, and Ham. Roads 19, 25, 129, and 531 are shown. The map also indicates 'Over Ponds &amp; Oyster Bed' areas.</p>   |

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| Geodiversity<br>(Based on information provided by the Gloucestershire Geology Trust at the Geological Records Centre) |  |
|---|--|
| Comments  | There were no recorded geological features on the site or within 250m of its boundary. |

| Archaeology and the Historic Environment<br>(Based on information provided by Gloucestershire County Council's Archaeology team) |   |
|--|---|
| Score  | ++  |
| Score Definition   | <p>The site fulfils one or more of the following:-</p> <ul style="list-style-type: none"> <li>* No known historical or archaeological remains</li> <li>* Has no known archaeological potential</li> <li>* Previous development is known to have removed archaeological deposits from all or part of the site</li> </ul> |
| Additional Comments  | Part of this site comprises landfill of no archaeological significance - There may be archaeological remains in undeveloped areas, but there is no indication of this.  |

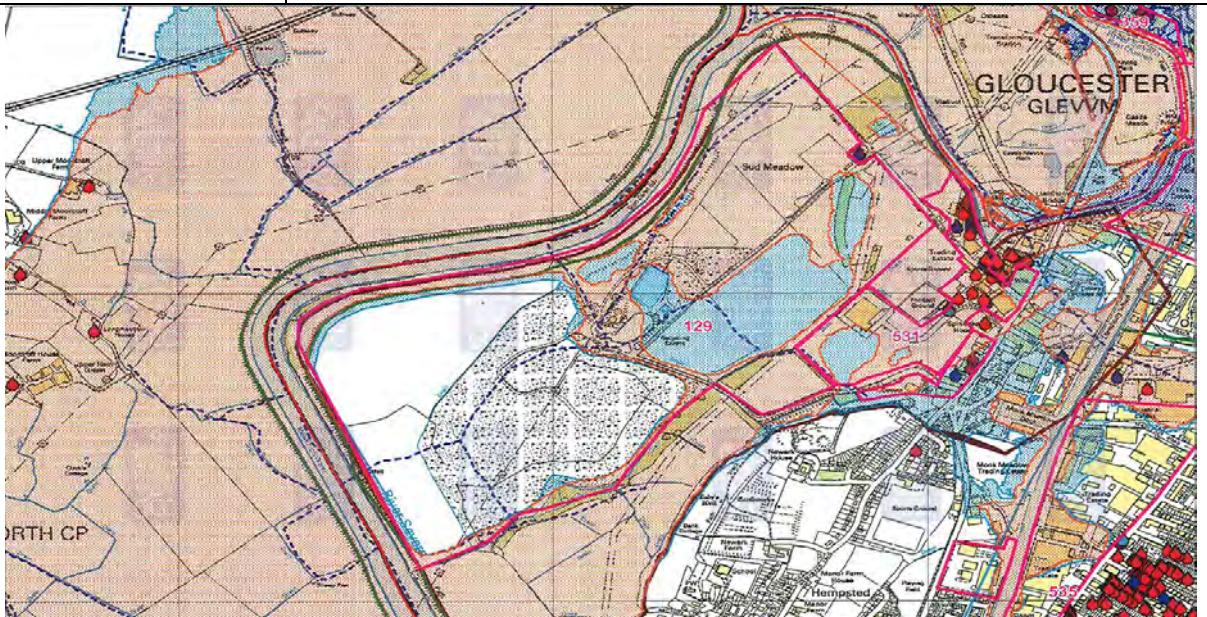
| Contaminated Land<br>(Based on information provided by the appropriate district council) |   |
|--|---|
| Comment  | The site or adjoining land is not classified as 'contaminated land' under the Environment Act 1995, but Gloucester City Council identified the site or adjoining area as a site of potential concern. Gloucester City Council also provided the following information in relation to the site "Located on existing Hempstead landfill site (waste licensed). Some concerns regarding migrating landfill gas – control available under PPC regulations, also cover completion & restoration of the site. Development of a waste facility may provide opportunities for further environmental improvement." |

| Flood Risk<br>(Based on information provided by Halcrow)  |   |
|---|---|
| Site Description  | Site is located within Sud Meadow to the west of Hempsted. Approximately 50% of the site lies within Flood Zones 2, 3a and 3b. The River Severn flows around the northern, western and southern edges of the site. A series of flood embankments are located between the watercourse and the site. A series of minor watercourses and drains are located within the site itself and along the southern boundary of the site. Some of these watercourses appear to be culverted through the site.  |
| Watercourse(s)  | River Severn and Unnamed Minor Watercourses and Drains  |
| Flood Zone  | 1, 2 and 3a   |
| Flood Zone Information (Method used to derive Flood Zones & Confidence in Flood Zone information) | <p>Modelled flood outlines exist for the River Severn. The Level 1 SFRA used modelled outlines for Flood Zones 3a and 3b. However, analysis of the modelled flood outlines for Flood Zone 2 indicated differences with the existing Flood Zone maps. Following consultation with the Environment Agency, it was recommended that the existing Flood Zones were used for Flood Zone 2.</p> <p>No Flood Zones have been produced for the unnamed minor watercourses and drains. The Flood Zones shown to affect the site are from the River Severn.</p> |

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|  |  |
|--|--|
| <b>Fluvial Flood Risk Posed to Site (including climate change)</b> | <p>The northern part of the site is located within Flood Zones 2, 3a and 3b. The southern half of the site lies within Flood Zone 1; however, the Flood Zone maps indicate that Flood Zones 2, 3a and 3b completely surround this part of the site during a flood event. Flood Zone 2 has been used to represent a 100 year climate change scenario. This is not deemed robust and the depth and extent of flooding should be verified as part of a FRA. It is expected that sites located in Flood Zones 2 and 3 will be subject to more frequent and potentially deeper flooding as a result of climate change. In addition, the tidal section of the Severn may be subject to increased storm surges and wave height in the future.</p> <p>The Level 1 SFRA identified a series of natural storage areas along the Lower Severn. This site is located within a natural flood storage area at Hempstead (SO 8144 1791). The earth embankments have a SoP of typically 1 in 20 years (or less). During a flood event, water from the River Severn spills into the storage area and is contained by a series of high embankments and function by removing large volumes of flood water, retaining it, and then allowing it to drain back to the main channel after the peak of the flood event. It is imperative that any storage areas used as a means of attenuation of flood waters should be maintained to ensure their efficient operation during a flood event. If the storage areas are not maintained this may lead to an increased risk of flooding at locations downstream.</p> <p>Site lies fully in Flood Zone 1. While the unnamed minor watercourses and drains do not show fluvial flood risk, in reality some risk is posed.</p> |
| <b>Historic Flooding/Flooding From Other Sources</b>               | <p>Historic flood outlines for the River Severn indicate that the whole site has been affected by fluvial flooding on a number of occasions including: January 1939, March 1947, January 1990, December 2000 and more recently July 2007. There are no recorded incidents of flooding from other sources of flooding such as groundwater and surface water within the site itself. The Level 1 SFRA identified a number of recorded incidents of flooding to the north east of the site. In the majority of cases the exact source of flooding is unknown.</p>   |
| <b>Canals (Raised - breach/overtopping)</b>                        | <p>The Gloucester and Sharpness Canal is located approximately 700m to the east of the site but does not enter the site itself. There are no records of breach or overtopping from the canal within the vicinity of the site. Consultation with BW did not identify any sections of raised canal.</p>  |

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|   |  |  |   |  |
|---|--|--|---|--|
| Flood Defences<br>(Location/Type/SoP/Residual Risk)   | A series of defences are located along the River Severn main channel to the west of the site consisting of predominantly earth embankments. The area adjacent to the River Severn would be at risk of tidal flooding every high tide if the extensive embankments, defences and tidal outfall flaps and gates used to keep the tidal water were not there. It is expected that the tidal section of the Severn might be subject to increased storm surges and wave height in the future. The site itself is located within a natural flood storage area located along the left bank of the River Severn at Hempsted (SO 8144 1791). The earth embankments have a SoP of typically 1 in 20 years (or less). It is imperative that any storage areas used as a means of attenuation of flood waters should be maintained to ensure their efficient operation during a flood event. If the storage areas are not maintained this may lead to an increased risk of flooding at locations downstream. |  |   |  |
| Culverts<br>(Location/Type/Watercourse/Residual Risk)   | The unnamed minor watercourses and drains may be culverted beneath the site in places. This would need to be verified as part of a FRA and any residual risk confirmed.  |  |   |  |
| Score   | --   |  |   |  |
| Score Definition  | Site is mainly in Flood Zone 3b (Historical flood risk, flood risk from other sources and residual risk has been incorporated into the determination of the suitability score).  |  |   |  |
| Additional Comments   | Development of this site should be strongly discouraged due to its presence in a flood storage cell.   |  |   |  |
| Legend  | <table border="0"> <tr> <td style="vertical-align: top;">           Council Boundary<br/>           Council Boundary<br/>           Watercourse Centre Line<br/>           Minor Watercourse<br/>           Canal         </td> <td style="vertical-align: top;">           Environment Agency Flood Defence<br/>           Council Owned Flood Defence<br/>           Flood Zone 2 (Medium Probability)<br/>           Flood Zone 3a (High Probability)<br/>           Flood Zone 3b (Functional Floodplain)         </td> <td style="vertical-align: top;">           Recorded Flooding - Impounded Water Bodies<br/>           Recorded Flooding - Artificial Drainage<br/>           Recorded Flooding - Surface Water<br/>           Recorded Flooding - Fluvial<br/>           Recorded Flooding - Unknown         </td> </tr> </table>  | Council Boundary<br>Council Boundary<br>Watercourse Centre Line<br>Minor Watercourse<br>Canal  | Environment Agency Flood Defence<br>Council Owned Flood Defence<br>Flood Zone 2 (Medium Probability)<br>Flood Zone 3a (High Probability)<br>Flood Zone 3b (Functional Floodplain) | Recorded Flooding - Impounded Water Bodies<br>Recorded Flooding - Artificial Drainage<br>Recorded Flooding - Surface Water<br>Recorded Flooding - Fluvial<br>Recorded Flooding - Unknown |
| Council Boundary<br>Council Boundary<br>Watercourse Centre Line<br>Minor Watercourse<br>Canal | Environment Agency Flood Defence<br>Council Owned Flood Defence<br>Flood Zone 2 (Medium Probability)<br>Flood Zone 3a (High Probability)<br>Flood Zone 3b (Functional Floodplain)  | Recorded Flooding - Impounded Water Bodies<br>Recorded Flooding - Artificial Drainage<br>Recorded Flooding - Surface Water<br>Recorded Flooding - Fluvial<br>Recorded Flooding - Unknown |   |  |
| Flood Map   |  <p>The map displays the River Severn flowing through Gloucester and Glevum. It shows various flood zones (3a, 3b, 2) and recorded flooding types. Site 129 is located in a flood storage cell, indicated by a blue shaded area. Other sites are marked with numbers 531 and 503. The map also shows the Gloucester Canal and various roads and settlements.</p>   |  |   |  |

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### Environment Agency Comments (amended to remove individual's names)

#### Strategic Flood Risk Assessments (SFRA)

SFRAs are a requirement for the evidence base of all development plans, in accordance with Planning Policy Statement 25: Development and Flood Risk (PPS 25). The Gloucestershire Level 1 SFRA was undertaken by Halcrow on behalf of the County Council (to assist the District and Borough Councils in the County with the evidence base for their Core Strategies). As it is a Level 1 SFRA, it was primarily a desk-based exercise, in which Halcrow used various existing data sources to compile a 'broad-brush' picture of all sources of flooding across the County. As part of this, our Flood Zone maps were provided to inform the project. (It should be noted that our flood zone maps only show fluvial flood risk, generally from main rivers.)

As the Level 1 SFRA was primarily a desk based exercise utilising existing data, it would not be expected to pick up site specific alterations to land levels that have occurred that may affect the floodplain. Furthermore our flood maps would not necessarily be expected to show these changes either.

Therefore it is a fair assumption that the Level 1 SFRA may not provide a detailed, accurate analysis of flooding for all sites in Gloucestershire. This is, however, to be expected from such a high level /broad brush document. The advantage of the Level 1 SFRA is that it gives an indication of the flood risk locations within the County to inform strategic planning.

One of the purposes of the SFRA is to provide Planning Authorities with an indication of flood risk from all sources across their administrative area to assess the appropriateness of potential strategic development allocations. If, as a result of other material planning considerations, an allocation must be pursued despite it being located in an area of flood risk (as indicated by the Level 1 SFRA), then the Planning Authority will need to undertake a detailed Level 2 SFRA to further understand the flood risk at the location.

Level 2 SFRA generally involve modelling to ascertain much more detailed information about flood risk, such as extents of floodplains, depths and velocities of flooding. The more detailed Level 2 SFRA therefore serves to provide the basis for how, or whether, to take strategic sites forward where it is not possible to locate these outside of areas at risk of flooding.

However one of the key principles of PPS 25 is the Sequential Approach and Test which means wherever possible development should be located away from areas at risk of flooding. Therefore wherever possible Planning Authorities should use their Level 1 SFRA to inform the location of development outside of flood risk areas, and ideally Level 2 SFRA will not be necessary as flood risk locations for development will not need to be sought.

#### Approach of Gloucestershire County in the Waste Core Strategy

The County Council has adopted a robust approach to flood risk in its work on the Waste Core Strategy to date. For the current work on consideration of strategic waste allocations the Planning Authority has undertaken a cross-referencing exercise of potential sites against the findings of the Level 1 SFRA. Sites have been scored for their suitability in flood risk terms. The Planning Authority has taken the approach of discounting sites that are indicated to be in flood risk areas. This is a robust approach to strategic planning that is in accordance with the Sequential Approach and key principles of PPS 25, including the risk-based, precautionary approach. We strongly support this approach.

We anticipate that on the basis of this approach, the Planning Authority will not include Hempsted as a potential strategic waste site due to its location in a flood risk area.

The Level 1 SFRA is the main basis for this process. Whilst Cory raised questions as to the detail of

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the Level 1 SFRA in this location (due to historic land raising), this does not alter the appropriateness of the Planning Authority's approach. The Level 1 SFRA is a strategic document meant primarily for strategic planning purposes. Therefore it represents the appropriate level of evidence on which to base a sequential approach to strategic allocations where these are located outside of flood risk areas.

We would note that even if the land raising that has taken place alters the floodplain at Hempsted, we consider it is likely that the area will still generally be located within the 1 in 100 year floodplain, possibly the functional floodplain (zone 3b).

We consider it would be for the developer to undertake more detailed work/submit further evidence to 'disprove' the Level 1 SFRA and our flood zone maps. Indeed should Cory wish for Hempsted to be considered as a strategic waste site as indicated, then they may wish to undertake a Level 2 SFRA for the location. Our view is that as the Planning Authority has discounted sites in flood risk locations according to the Level 1 SFRA (and as this is a robust approach in line with National Planning Policy) it would be for a developer to provide further evidence to attempt consideration of their site.

Even if such evidence is submitted by a developer, the Planning Authority may choose not to accept this evidence, regardless of the outcome of a further/more detailed studies by developers. This is because the approach already taken is considered robust and defendable and they may wish not to alter this approach for one site as it would mean other sites could do likewise. The Planning Authority may also consider this process to be unnecessary if it has already identified sufficient strategic sites located outside areas at risk of flooding. Furthermore the Planning Authority will have its own time constraints for finalising potential sites. Ultimately these are decisions for the Planning Authority, but we have made it clear that we support their approach and would assist them in defending this approach at Examination In Public of the Waste Core Strategy if required.

To conclude this section, the approach of the Planning Authority to consider only sites not located in flood risk areas as per the Level 1 SFRA is a robust and adequate approach in accordance with PPS 25. In our view if there are sufficient sites outside the floodplain then there is no need or obligation for the Planning Authority to consider other sites even if developers undertake further work to attempt to 'disprove' the Level 1 SFRA and our flood zone maps. Finally in relation to Hempsted, we suspect it is unlikely that the area is located out of the 1 in 100 year floodplain regardless of land raising that has occurred.

### Individual development proposals

In correspondence, Cory referred to individual planning applications for waste developments at the Hempsted site. There have indeed been a number of planning applications over recent years for proposals at Hempsted. In these cases, individual Flood Risk Assessments (FRAs) for the developments have accompanied the planning applications and have been acceptable.

It should be noted that the Waste Core Strategy process is different from that of the planning application process for individual development proposals: One is a strategic process that considers waste allocations across the County. The other is a detailed proposal for a specific site. As such the processes in assessing these will be different, and are treated differently within PPS 25.

Therefore whilst Hempsted might not be included in the selected sites for the Waste Core Strategy, it does not necessarily mean that individual proposals will not be acceptable – individual proposals will need to be judged on their merits across a range of planning issues including flood risk. In making these judgements, it is important that for individual planning applications, the Sequential Test is undertaken as well as detailed FRAs that assess the risks involved.

I trust this letter clarifies our position in relation to the approach taken to flood risk in the Waste Core Strategy and also helps to understand the purpose of the Strategic Flood Risk Assessment. If there are any queries, please do not hesitate to contact me if you wish to discuss matters. I also welcome further discussion with Cory Environmental of our flood mapping process if this is required.

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### Source Protection Zones (SPZs)

|          |     |
|----------|-----|
| Comments | N/A |
|----------|-----|

### Groundwater/Aquifer details

|          |  |
|----------|--|
| Comments | Site 129 is within 250m of a Minor Aquifer Intermediate 1. |
|----------|--|

### Land Ownership and General Deliverability Issues

*(Based on research undertaken in-house)*

The landowner has expressed an interest in promoting the site as being available to develop for residual MSW treatment.

### General Comments

Officer comments: Potential sensitive receptors would need further investigation in relation to this site.

Safeguarding: Gloucestershire Airport would need to provide comments on safeguarding in relation to this site. This may be difficult for them to do so without knowing a specific technology for the site.

Ecology/Biodiversity: Further consultation would be required in order to assess any potential impacts upon the above mentioned sites.

Contaminated Land: Further investigative work may be required.

Groundwater/Aquifer: Information would be required from the Environment Agency as to the potential impacts upon the above mentioned areas.

### Potential for Further Discussion within the WCS

Despite the fact that the site is already operating as a strategic waste management facility and the landowner has expressed an interest in promoting the site, the flood risk comments strongly recommend against any further development of this site. Therefore this site will not be taken forward into the WCS.