

# Wheelabrator, Harewood, Energy From Waste Facility, Hampshire Biodiversity Representation To Stage Two Consultation

## 1.0 Introduction

1.1 This report has been prepared by Jonathan Cox MCIEEM on behalf of KTBV to provide a review of the biodiversity assessment of the proposed energy-from-waste facility at Harewood, Hampshire. The developers of this proposed facility are seeking a Development Consent Order (DCO) for the scheme and are at present at Stage 2 of the pre-application consultation and have issued their Preliminary Environmental Impact Report (PEIR).

1.2 This report is based upon a review of the following chapters of the PEIR:

- Chapter 10: Biodiversity
- Appendix 10-1: Preliminary Ecological Appraisal
- Appendix 10-2: Amphibian Report
- Appendix 10-3: Breeding Birds and Barn Owl
- Chapter 11: Water Resources and Flood Risk

## 2.0 Assessment Methodology

2.1 The Biodiversity assessment chapter identifies a series of ecological Zones of Influence (ZOI) to scope the range of ecological receptors to be assessed. The identified ZOI range from 10km for internationally designated sites to 2km for other statutorily designated sites and protected and notable species and 1km for Ancient woodlands and notable habitats (outside of designated sites).

2.2 Guidelines for the preparation of ecological Environmental Impact Assessment have been published by the CIEEM (CIEEM, 2018)<sup>1</sup>. The Guidelines identify a number of questions to be considered by the assessment to help determine the ZOI, these include:

- What 'important' ecological features are known to occur within the project site and the surrounding area?
- What other 'important' ecological features could occur within the project site and surrounding area based on knowledge of the local distribution of relevant habitats and species?
- What activities may generate ecological impacts and which of these might have an influence on ecological features beyond the site boundaries?
- Is the project likely to affect migratory species?
- Is the area used by mobile species that make regular movements to, from, or across the site?

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<sup>1</sup> CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

- What are the key ecological processes or species activity periods? Are there seasonal variations in distribution, abundance and activity?
  - What are the key hydrodynamic processes at the site (e.g. tidal currents, wave activity)? Are there seasonal or cyclic variations in these?
  - Does the project affect any sites, directly or indirectly, that are designated or likely to be designated in the foreseeable future? What are the reasons for designation?
  - What is required for the maintenance of particular ecosystems, networks, habitats or
  - species populations? How would these be affected by project activities?
    - o What are their distribution and status elsewhere for comparison?
    - o What were their historical distributions, status and management compared with present?
    - o Is anything known about the key factors influencing distribution and abundance of the feature(s)?
    - o What are their scales of variation, vulnerability and likely exposure to the project?
- 2.3 The assessment chapter fails to fully appreciate the important ecological features of the surrounding area of the Test Valley and the hydrodynamic and other wider environmental effects of the proposed development on these. This then results in the Zone of Influence being drawn too tightly, particularly in relation to migratory species and mobile species that make regular movements to, from and through the Test Valley. This includes a number of species of high nature conservation value including bird, bat and fish species.
- 2.4 Despite the tightly drawn Zone of Influence identified for protected and notable species, Table 10-4: Desk Study Data Sources refers to the standard HBIC data search for designated sites and protected and notable species within 2km. This search of the Hampshire Biodiversity Information Centre (HBIC) data-base is a requirement for almost all development in the county and is likely to have revealed a long list of species. Whereas it is normal practice to reproduce in full the results of such a search in the Appendices to the ES, this is not provided in either the Biodiversity Chapter or the associated Appendices. Only a summary of the Desk Study Data is provided in Appendix 10-1.

### **3.0 Surveys**

- 3.1 The Biodiversity Chapter provides information for a range of 'compliance' surveys undertaken of the application site in the form of an Extended Phase 1 Habitat Survey. These cover all the protected species groups necessary for such an application but due to the very confined nature of the survey area they reveal little about the more important and potentially significant implications of the proposed development on the ecology and nature conservation importance of the wider landscape.
- 3.2 Bat survey**
- 3.3 The bat survey considers the potential for bats of both the Construction Site and the adjacent Laydown/Works Area, the Existing Bund, and the Owl Lodge Shooting School land. The bat survey assesses both the potential for bat roosts to be present within these areas and their use by bats through activity surveys. The activity surveys use both a transect and fixed logger approach as recommended by the appropriate guidelines (Collins, 2016). However, these surveys assume that all of

the habitat is of low value for bats and consequently only three activity surveys have been undertaken of the Laydown/Works Area, Bund and Owl Lodge land. In reality, the Phase 1 Habitat Survey identifies that these areas contain a mix of habitats including rough grassland and scrub that are likely to provide habitat of at least 'moderate' value and as such, should have been subject to at least one survey visit per month between April and October. If the habitat is considered to be 'good' for bats, then two survey visits per month should have been undertaken.

3.4 The significance of this lack of survey effort for bats is considered further in Section 4.13

### 3.5 Dormouse survey

3.6 The Hazel Dormouse is a European Protected Species and therefore receives a high level of legal protection. The absence of dormouse survey data in the PEIR makes it impossible to assess the potential impact of the proposed development on this species.

## 4.0 Assessment of impacts on the Construction Site and its surroundings

### 4.1 Habitats of European Importance

4.2 The Biodiversity Chapter correctly reports that there are no internationally sites within 10km of the development site. However, it fails to recognise that the development could have significant effects on habitats of European importance, even if these are not included within a European designated site. Article 6 of the Habitats Directive requires that plans or projects affecting a European Site should be subject to a specific assessment (in the UK this is referred to as a Habitats Regulations Assessment). Although there is no requirement to make such an assessment of impacts of the proposed energy-from-waste facility, Article 2 states of the Directive states that it is designed to maintain and restore all habitats and species of European importance at a favourable conservation status. Pursuant to this, Article 17 of the Directive requires that Member States report to the European Commission every six years on the Conservation Status of all Annex I habitat types.

4.3 In this context, it is important that the impact of the proposed development on habitat types listed on Annex 1 of the EU Habitats Directive are properly assessed in the Environmental Statement. This should include Floating *Ranunculus* habitat (H3260), a habitat type that forms one of the interest features of the River Test SSSI, but also the Alkaline Fen (H7230) and Molinia Meadow (H6410) habitats found within Bransbury Common SSSI. These habitat types are highly vulnerable to changes in air pollution and consequent nutrient deposition as well as to changes in water quality and quantity. The latest Article 17 reports for these habitats all show that they are currently assessed as having Bad or Bad and Declining Conservation Status in the UK due to declines in extent and adverse effects on habitat structure and function including from water pollution and air pollution<sup>2</sup>. The PEIR currently has no appreciation of the importance of SSSI for habitat types of international

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<sup>2</sup> <http://archive.jncc.gov.uk/pdf/Article17/FCS2007-H6410-Final.pdf>,  
<http://archive.jncc.gov.uk/pdf/Article17/FCS2007-H3260-Final.pdf>  
and <http://archive.jncc.gov.uk/pdf/Article17/FCS2007-H7230-Final.pdf>

importance within less than 2 km from the proposed development site. This is considered a major flaw in the assessment.

#### 4.4 Protected and/or Notable Species

#### 4.5 Birds

4.6 **Breeding Farmland Birds:** The breeding bird surveys undertaken of the proposed development site identify good populations of a number of species listed on Red and Amber lists of Bird of Conservation Concern. This includes several farmland species including Skylark and Yellowhammer. Birds of Conservation Concern <sup>4</sup> identifies that farmland birds as a group have declined more dramatically than any other habitat associated group of birds in Britain (12 out of 26 species are on the Red List).

4.7 The assessment of construction impacts on this group of birds is considered temporary (5-10 years duration) and therefore not significant. We consider that an impact of 5-10 years is more than temporary as this could have knock on effects to populations of these birds nesting on adjacent farmland resulting in significant adverse effects on the wider meta-population. This would be particularly the case if the Laydown/Work Area or the Owl Lodge land provided important foraging habitat for birds nesting in this wider landscape. We consider the construction could have long term adverse effects on farmland birds and should be more fully assessed in the ES.

4.8 **Wintering Farmland Birds:** Central Hampshire farmland is not only important for breeding farmland birds but also provides habitat for an equally important assemblage of wintering birds. This includes many of the Red and Amber listed species that nest in the vicinity such as yellowhammer, Linnet and Corn bunting as well as wintering flocks of Lapwing and Golden plover. The impact of the proposed development on wintering birds of Conservation Concern has not been considered in the PEIR and represents a significant gap in the assessment. Records of wintering birds both within and in the vicinity of the development site should have been obtained from HBIC and dedicated winter bird surveys undertaken of the site and its surrounding to support these records.

4.9 **Stone Curlew:** The chalk landscape of central Hampshire is of national importance for its population of breeding Stone Curlew. This migratory bird is nationally rare with a UK population estimated at between 320 and 380 breeding pairs in 2016. Stone Curlew are also listed at a species of principal importance in Section 41 of the NERC Act (2006) and Annex 1 of the EU Birds Directive and hence is a species for which the UK is required to designate Special Protection Areas (SPA) to conserve the most important places for this species. Both Porton Down and Salisbury Plain have been classified as SPA to conserve the populations of Stone Curlew they support.

4.10 Stone Curlew are ground nesting birds of open grassland and arable landscapes. They nest at very low density with each pair occupying around 16ha on semi-natural habitat and rarely exceeding one-tenth of that density on arable land. Stone Curlew are also highly sensitive to disturbance nesting at even lower densities within 1.6 km of development and main roads.

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<sup>3</sup> <https://www.bto.org/our-science/publications/psob>

- 4.11 There is anecdotal evidence of Stone Curlew nesting within a mile of the proposed energy-from-waste facility. This is supported by reference to the National Biodiversity Network Atlas which shows 35 records of Stone Curlew within the 10km grid square containing the Site. No records for Stone Curlew appear to have been obtained from the HBIC search undertaken for the PEIR. This may be due to the non-specific way in which rare species records are 'sensitised' in HBIC records.
- 4.12 Given the high nature conservation importance of this species and its vulnerability to disturbance it is imperative that a comprehensive Stone Curlew survey is undertaken within 2km of the proposed development. Should Stone Curlew be identified as breeding within this area, it is important that the implications of the proposed development for this species are fully assessed. In light of the recent European Court of Justice judgement<sup>4</sup> it may also be necessary to assess impacts on this population in accordance with the UK Habitats Regulations to determine any effects on the conservation of the adjacent Porton Down SPA. Although this is over 10km from the Site it is possible that there are interactions at a meta-population level over this wider landscape area that need to be considered.
- 4.13 Bats**
- 4.14 The PEIR assesses the assemblage of bat populations using the development site as being of County importance. However, this is on the basis of only three activity and data logger surveys of the Laydown Works Area, Bund and Shooting School Land. Given that this land appears to provide at least Moderate suitability for bats, the survey effort for this area is currently inadequate. With appropriate survey effort it is probable, if not likely, that other species including the Barbastelle bat will be identified as foraging within this area. No data from the HBIC 2km species search is provided in the PEIR to confirm the potential presence of this species within the vicinity of the proposed development. This may be due to the sensitised nature of the records or lack of survey effort.
- 4.15 Like all bat species, the Barbastelle bats is a European protected species. It is also listed on Annex II of the EU Habitats Directive which requires Member States to designate SAC for their conservation. The population of Barbastelle bats in the southern Test Valley is internationally important and the Mottisfont Bats SAC has been designated to conserve the most important breeding sites for this population. However, these bats are known to forage widely within the Test Valley with radio tracking studies showing that 80% of bats from the SAC travel less than 7.28 km from their roost site<sup>5</sup>. As a consequence, development likely to result in adverse impacts to the foraging habitat of this species within 7.5km of the SAC is subject to a Habitats Regulations Assessment.
- 4.16 Survey effort for Barbastelle and other bat species in the upper Test Valley around the proposed development site has been much less intensive than in the south of the Valley. Despite this, the abundance of highly suitable habitat for Barbastelle bats suggests that it is probable that a breeding population of this species occurs in this section of the Valley. Habitat use studies of Barbastelle bats at Mottisfont have shown that agriculturally unimproved grassland and mosaics of grassland, scrub and

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<sup>4</sup> ECJ Case C-461/17 Holohan v An Bord Pleanala

<sup>5</sup> Davidson-Watts, I. & McKenzie, A. (2006) Habitat use and Ranging of Barbastelle Bats of the Mottisfont Estate, Hampshire. ID Wildlife Report to the National Trust

woodland provide important foraging habitat for these bats. Given the presence of this habitat within the proposed development site and its vicinity, it is considered possible, if not probable, that Barbastelle bats use this area for foraging. Further bat survey effort is required to fully understand and assess the potential impact of the proposed development on Barbastelle bats.

## **5.0 Impact Pathways**

### **5.1 Air quality**

- 5.2 It is extremely disappointing that the impact of the proposed development on air quality from both road traffic and stack emissions was not completed in time to be assessed as part of the PEIR. This is a very significant omission given the sensitivity of habitats in the vicinity of the proposed development to air quality and in particular nitrogen deposition.
- 5.3 The PEIR states that on the basis of Initial stack emission modelling “adverse impacts on protected sites and notable habitats cannot yet be ruled out”.
- 5.4 As has previously been mentioned, SSSI in the vicinity of the development site support habitats of European importance including Alkaline Fen and Molinia meadows. These and other habitats present in these SSSI are highly vulnerable to air quality impacts.
- 5.5 Despite the clear threat to habitats of national and international importance from the proposed development, no assessment has been made of these impacts. This is a major omission from the PEIR. To leave this to be assessed only at the Environmental Statement (ES) stage is a significant flaw in the assessment process.

### **5.6 Water quality**

- 5.7 Chapter 11 on the PEIR on Water Resources and Flood Risk correctly identifies the sensitivity of the River Test to impacts of the proposed development, but fails to appreciate that the River Dever, which is only 0.8 km to the south of the development site, not only flows into the River Test, but is itself also part of the River Test SSSI.
- 5.8 Chapter 11 describes a series of mitigation measures designed to prevent both surface water and ground water contamination during both the construction and operational phases of the proposed development. The effectiveness and reliability of these measures is not considered in Chapter 10 on Biodiversity, however, it is clear that there are real and significant potential impacts to ground water and surface water from the proposed development that could impact on the River Test SSSI. This could include both short and long term contamination of surface water flows with fine sediment as well as contamination to ground water. Measures are proposed to mitigate these potential impacts. Whereas it is accepted these measures will reduce the risk of pollution, they may not be entirely effective, for example, in removing all suspended fine sediment, or they may be subject to accidental or unpredicted failure. Further assessment of the effectiveness and reliability of the proposed mitigation strategy is required to be confident in its applicability and the conclusions of impact that are subsequently drawn.

### **5.9 Water resources**

- 5.10 Th PEIR identifies the quantities of water consumed by the development during both construction and operational phases. During construction the PEIR concludes that water demand may represent a short-term, temporary increase in supply volumes to the Site. “This is assessed as having potentially an adverse, low magnitude impact

on Southern Water's available water resources." Chapter 11 of the PEIR goes on to state that the "Proposed Development is predicted to generate a demand of 135,000m<sup>3</sup> per annum for boiler feedwater, potable water, and fire water. This is the equivalent of ~370m<sup>3</sup> per day. Southern Water are committed to providing this volume from currently licenced sources. The PEIR concludes; "Placed in overall catchment scale terms (and the water stress status), it is considered that the magnitude of impact is very low in the medium to long term. Therefore, the overall effect is assessed as negligible. This effect is considered not significant."

- 5.11 Despite these assertions, there is a significant debate about impacts of current levels of abstraction on flows within the River Test SSSI and, with predicted climate change, this could become even more acute. Placing this additional burden on an already heavily abstracted aquifer needs to be very carefully assessed. The total lack of any consideration of impacts of water use on features of high nature conservation value is considered a significant omission from the Biodiversity chapter of the PEIR.

## **6.0 Summary of omissions**

- 6.1 The PEIR is considered to have a number of important omissions in both the baseline evaluation and assessment stages. These are summarised below.
- 6.2 Zones of Influence for the assessment are drawn too tightly and fail to appreciate the wider effects of the development on mobile and migratory species, in particular birds, bats and fish.
- 6.3 This lack of a wider perspective is carried through into the ecological surveys that have been undertaken. These again fail to consider the wider impacts of the proposed development, this result, in particular to;
- insufficient survey effort to assess impacts on bats and especially the barbastelle bat.
  - lack of information on the presence of habitats of European importance in SSSI within 2 km of the proposed development.
  - Poor assessment of the impacts of the proposed development on breeding farmland birds of conservation concern.
  - No consideration of the impact of the development on wintering farmland birds.
  - No assessment of the impact of the proposed development on breeding Stone Curlew or the potential implications of this for the Porton Down SPA.
- 6.4 In addition, the PEIR chapter on biodiversity provides no assessment of the impact of changes to air quality, from both road traffic and stack emissions, on habitats of acknowledged national and international importance.
- 6.5 Chapter 10 on biodiversity also provides no assessment of the implications of the proposed development on water resources or water quality, in particular impacts on the River Test SSSI.

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2<sup>nd</sup> December 2019