

## **Project Maestro: Infinis' development of 5 wind farms in Scotland & northern England – Ecological Protection**

Project Maestro is Infinis' development of five wind farms in Scotland and northern England, with a combined capacity of 52.5 MW.

The five Project Maestro sites are:

Gordonstown Hill, Aberdeenshire (12.5 MW)

Wingates, Northumberland (15 MW)

Blackstone Edge, South Yorkshire (7.5 MW)

Westfield, Fife (10 MW)

Tedder Hill, East Riding of Yorkshire (7.5 MW)

This document details how **ecological protection** has been incorporated into the development of these wind farms.

### **Gordonstown Hill**

There is a habitat management plan at Gordonstown Hill for the protection and management of a nationally important species of bird, the Golden Plover. Long term monitoring and management plans are in place for the protection of these birds identified as being at risk of collision with the turbines and hence the potential for an increase in mortality of an important species. Although not included as a planning condition, the HMP was required as part of the planning approval process and was agreed with the relevant parties prior to planning permission being granted. The HMP has a 3 phased approach 1) prescribed crop cultivation, 2) more stringent scaring or planting measures if needed 3) re-evaluation of monitoring or on-going programme as needed.

The habitat management required will, in the first instance, remain in keeping with the current arable farming. Crop cultivation will be prescribed for the fields close to the turbines to make those fields less attractive to the Golden Plover, mainly through the control of vegetation height. If golden plovers avoid the wind farm area because the area consists of unfavourable habitat, then collision risk should be minimised or prevented. A variety of crops can still be used, as there is only a small period of time when the crop height is crucial. More stringent methods would involve temporary fencing and conspicuous webbing, escalating to person/people and dog/dogs presence. Should these measures prove unsuccessful in keeping the Golden Plover presence to an acceptable level, the habitat management area will be planted and managed for a crop of Christmas trees.

The HMP will continue for the lifespan of the wind farm unless otherwise determined with appropriate consultation.

## Wingates

A number of ecological issues were relevant at Wingates: an extensive habitat management plan was produced, a compensatory woodland planting scheme developed, and an Ecological Clerk of Works (ECoW) employed to oversee and manage relevant ecological issues of the project.

A Phase 1 Habitat Survey was conducted as part of the EIA, and detail provided on the condition of existing vegetation. The value of the existing vegetation was assessed as low to moderate and the development was designed to avoid any areas of sensitive vegetation. The majority of the vegetation on site has been retained. The original site design involved an approximate loss of 10.5ha of habitat in a 106ha (greenfield) site of moderate to low quality. This was then increased to 12.1/11.9ha loss of moderate quality vegetation (Broadleaved plantation woodland) during the planning submission detailed in the Outline Habitat Management Plan. The total area of broadleaved plantation in the Wingates area is 190ha. Based on the data presented in the OHMP, it is estimated approximately 75% of broadleaved plantation woodland was retained within the site boundary. In addition, vegetation lost is being compensated for with a woodland planting scheme nearby. The Compensatory Woodland Planting Scheme was produced as part of the planning conditions and provides an ecological assessment of the proposed site; the design, preparation, installation and maintenance of the woodland; and on-going management and monitoring. During construction, the ECoW conducted regular site inspections/provided support to ensure protection of sensitive areas.

The area where the young broadleaved plantation woodland was cleared for the turbines and to allow sufficient distance to the woodland edge for the protection of bats was to be created into a species-rich grassland/wildflower meadow. The Habitat Management Plan presents a detailed account of the planting design with respect to plant selection. Whilst there is no specific reference made to climate adaptation, the principle of adapting the species selection to take into account changes is intrinsic to the proposals made. Use of local stock is also noted, and soil tests are included as part of the HMP. The compensatory woodland planting scheme takes into account local provenance and soil type/stability.

The ponds on site were assessed and areas protected as appropriate through the design and construction of the wind farm. At the EIA stage a low population of Great crested newts was identified in Pond 7 and hence design mitigation was employed to protect the pond. The layout of the site was developed with WTGs & most infrastructure over 500m from the pond. Further studies identified other ponds with Great Crested Newts within the wind farm area, but subsequent studies did not. No ponds were directly affected by the works, but precautionary measures were applied to the design and construction of the wind farm and two new ponds were created in the Development area detailed in the Habitat Management Plan.

During Construction, surveys were continued for nesting birds and protected mammal species as appropriate and reports produced by the ECoW.

### *Enhancements at Wingates*

The Outline Habitat Management Plan and Habitat Management Plan provide details of enhancements to the site. The plans were produced as part of planning application consultation and to meet the conditions of planning approval. Recommendations include: creation of species rich grassland/wildflower meadow (as outlined above), enhance and augment existing hedgerow resource

(primarily for the benefit of bats), creation of two new ponds to increase habitat resource for great crested newts and other amphibians, and the creation and management of an artificial otter holt. These recommendations were in addition to and separate from the Compensatory Woodland Planting Scheme. There is additional woodland being created compared to the amount lost as part of the Compensatory Woodland Planting Scheme and the inclusion of the grassland on site will improve the biodiversity of the site. Plans were developed and agreed as part of the planning application and approval process and were all developed by specialist ecologist input in coordination with/approval by NCC.

An artificial otter holt has been incorporated into the project. This was recommended/presented in the EIA for the project, the opportunity developed in the OHMP as part of planning consultation and incorporated into the project with the HMP produced to discharge Planning Condition 15. Four Great Crested Newt refugia have also been created as detailed in the Specification for tree removal also produced to satisfy planning conditions. The tree clearance required as part of the project included options for the disposal (re-use as mulch) and re-use of trees including the creation of great crested newt refugia. No vegetation left site as a result of the tree clearance. It was either used as mulch or used to create GCN refugia.

#### *Monitoring at Wingates*

The HMP was specifically produced to discharge Planning Condition 15 which required a plan for the creation and management of the agreed conservation measures. This was based on the principles of the Outline Habitat Management Plan and was to run from the commencement of development until the completion of decommissioning. A review of monitoring and management regimes has been set for 5 years into the programme. This plan is implemented and reviewed by Infinis, with likely management of some of the issues by the current landowner and monitoring will be carried out by a qualified ecologist appointed by Infinis. The HMP contains monitoring regimes for the management, habitat creation and conservation measures required. In addition, the Compensatory Woodland Planting Scheme incorporates a 10 year monitoring and management programme, detail is provided of maintenance during the 10 year period, and management is allocated to Wingates Wind Farm Limited.

#### *Net increase in ecological value of site at Wingates*

The ECoW for the project has produced a report outlining the progress on the implementation of the Habitat Management Plan (HMP) for Wingates following a monitoring site visit (attached). As can be seen, progress has been made on the HMP and there has been an increase in areas or features of high ecological value compared to the site baseline data. The net increase can be calculated from the report as follows:

As noted above, there was little area or features of high ecological value on-site prior to the development. The only area noted was the broadleaved plantation woodland, considered to be of moderate quality vegetation, which has been 100% compensated for with the Compensatory Woodland Planting scheme under planning condition 19. Also the GCN ponds were of high value. The hedgerow was of low quality as noted in the attached report. So all hedgerow and grassland planted is a new area or feature of high ecological value which did not exist previously, as is the otter holt. Table 3.2 of the attached HMP report (Page 6) notes % increases; however, this is taken against the total site area as opposed to the total site area of high ecological value. Taking into account that the loss of the woodland has been 100% compensated, to calculate net increase the calculation would be as follows:

100% increase in high quality hedgerow,  
30% increase in GCN ponds,  
100% increase in otter holts  
100% increase in neutral grassland/wildflower meadow

This averages to be 82.5% increase in areas or features of high ecological value.

### **Blackstone Edge**

Blackstone Edge wind farm had a planning condition to plant species rich hedgerow and re-instate the stone walls (as outlined above):

#### *Planning Condition 17:*

*Prior to the commencement of development a detailed scheme for the planting of species rich hedgerow and reinstatement of stone walls within the site shall be submitted to, and agreed in writing with the LPA. The scheme shall include but not be limited to details of hedgerow species, number and size of plants, mix, planting method and aftercare for a period of at least 5 years. Planting shall be carried out in accordance with the approved scheme during the first planting season following the date of commissioning of the site as identified in the condition 3 above. Unless otherwise agreed in writing by the LPA, reinstatement of stone walls be completed in accordance with the approved scheme within 2 years of the date of commissioning.*

The Blackstone Edge Hedge Planting Scheme (and Reinstatement of Dry Stone Walls plan) were produced to discharge this condition. A plan was produced to plant about 800m of new species rich hedgerow. This is both an enhancement of the existing hedgerows (classified as defunct in the EIA) and the creation of new wildlife habitat with a species-rich hedgerow. (Hedgerows are a UK BAP habitat.) The details of species and number and size of plants, mix etc was to be agreed with the Local Planning Authority (LPA). The Hedge Planting Scheme notes that native broadleaf species were provided to Infinis by the Biodiversity Officer at Barnsley Metropolitan Borough Council (LPA). The Plants would be indigenous, local root stocks sourced from a specialist hedgerow supplier. Management plans are in place for the Hedge Planting Scheme which was a Condition of planning approval. All plans are long term, with objectives and management specified for the first three years.

In addition, a donation of £5000 was noted in the EIA to the Coalfield Heathland Project. The project is restoring 300ha of heaths, creating new heaths on derelict aggregate sites and improving access and education. It involves the EA, English Nature, Local authorities, and local wildlife trusts.

The consented Restoration Plan for the re-instatement of the rest of the site notes that should any reseeded be required, this will be with a local planning authority approved seed mix.

### **Westfield**

The only planning conditions placed on ecological impact at Westfield related to the Ornithological monitoring plan which has been established for the Operational phase of the wind farm. The only other ecological impacts identified for management during construction and operation related to standard best practice measures of protection of watercourses and non-disturbance of wildlife (otters in

particular) which were covered in the construction environmental management plan. These were communicated via standard practice of tool box talks/briefings/site induction/notice boards, and inclusion in Method Statements and so on. During the site tour provided, the site team noted the presence otters and warnings were given not to disturb them.

The ornithological monitoring plan specifies surveys to be undertaken during operation and will be managed by Infinis. The plan is to assess actual bird collisions and monitor bird movement and displacement occurring once the turbines are operational. The programme is to run for 3 years and annual monitoring results will be provided to Fife Council. This site will continue to be managed by Infinis and hence this programme will be run by them.

### **Tedder Hill**

A full Phase 1 Habitat Survey was conducted as part of the Environmental Report for the site. The existing vegetation on the development site was assessed as intensively managed arable farmland and neutral, species-poor rush-pasture. There is a small amount of potentially ancient, and/or species-rich hedgerow, which would be classified as of value as well as a small pond and its surrounding habitat. Impact on hedgerows was planned to be avoided by using a route for access tracks which avoided them (*note: it is not 100% clear if this was followed through in the final design*), and the pond avoided and retained. The site selection and design iteration process included the consideration of ecological constraints. Any areas of moderate or high value habitat were avoided with the design and choice of development site.

A planning condition was imposed of a scheme of ecological mitigation during construction. This required the provision of nesting boxes, bird surveys, and compensatory hedge planting. The ecological issues to be managed were incorporated into a report produced by SLR to discharge this condition (PC17), produced as a result of conditions imposed by the Planning Appeal Decision. Additional surveys were conducted as part of the report produced to discharge Planning Condition 17. A pre-construction ecological survey was also conducted which included a review of nesting birds and other species/habitats. During Construction, inspections/nesting birds' surveys were carried out as appropriate and outlined in the SLR Report and SEMP.

The only loss anticipated was of 5 breeding pairs (out of 9) of Skylarks (detailed in the Environmental Report) due to displacement caused by construction. The majority of species of value identified in the Environmental Report (Hedgerows, small pond, Barn Owls, other birds) were to be protected as far as possible by the embedded mitigation of the site location, layout and design. 100% conservation of all these 4 species/features was anticipated, with 44% conservation of the Skylarks, resulting in 89% conservation/protection of ecological features identified as being of value. As noted, scheme design included avoidance of hedgerows and nesting birds and areas where nests were identified (Pre-construction ecology survey) were to be avoided during construction. An additional 6 nest boxes for barn owls were to be provided in the local area to compensate for the disturbance to the two existing boxes within the development site. Any hedgerow removed was also to be compensated with reinstatement on completion of works.