



Section 7.0 Ecological Protection

Guidance Notes:

This section contains details of ecological considerations (such as nesting seasons, protected species etc) and steps required to safeguard ecology during construction.

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CONSTRUCTION

FORTH REPLACEMENT CROSSING – FIFE ITS

FRC/ITS/GC/ECMP/01
Ecological Management Plan

Contents

- 7.1 Objective**
- 7.2 Legislation**
- 7.3 Licensing Requirements**
- 7.4 Consultation**
- 7.5 Ecological Clerk of Works**
- 7.6 Summary/ Maps of all known areas of nature conservation interest, protected habitats and species which may be affected due to construction, including access routes**
- 7.7 Species or Habitat Management Plans**
- 7.8 Ecological Control Measures/ Mitigation**
- 7.9 Consultation regarding the programme of Ecological Surveys**
- 7.10 Control of Invasive and Alien Species**
 - 7.10.1 Invasive Plant Species
 - 7.10.2 Identification
 - 7.10.3 Presence of Invasive Species
 - 7.10.4 Control Measures for Invasive Plants
 - 7.10.5 Control and Eradication
- 7.11 Protection of Trees**
 - 7.11.1 Tree surgery/ felling
 - 7.11.2 Tree Planting and Replacement

7.1 Objective

To carry out construction works in such a way as to avoid unnecessary impacts to valuable habitats and species through development of appropriate working methods and implementation of appropriate mitigation measures.

7.2 Legislation

Works will comply with relevant legislation, including the:

- Wildlife and Countryside Act 1981, as amended
- Nature Conservation (Scotland) Act 2004
- Conservation (Natural Habitats, & c.) Regulations 1994, as amended
- Protection of Badgers Act 1992
- Environmental Protection Act 1990
- Wild Mammals (Protection) Act 1996
- Salmon and Freshwater Fisheries Act 1975

7.3 Licensing Requirements

An Ecological Survey undertaken on 17/08/2011 (see section 7.6 for a summation of the survey findings) did not identify any issues associated with the presence of protected species at any of the gantry locations it has considered. On this basis, no licensing requirements in respect of protected species would be required as part of the Fife ITS contract.

7.4 Consultation

Consultation with SNH regarding the Ecological Management has taken place and updated accordingly. SNH has approved the Ecological Management Plan.

7.5 Ecological Clerk of Works

We have appointed an Ecological Clerk of Works who will be responsible for implementation of the Ecological Management Plan and will oversee the construction works and provide advice and input on all ecological site issues. The CV of the ECoW has been issued to the Employer and approved.

The suitably qualified ECoW will be onsite during the site clearance works. The ECoW will monitor vegetation removal and associated activities, these activities will be taken outside of the main bird breeding season. The ECoW will also provide advice on landscape issues to the construction site management team in accordance with the relevant sections of the ER's.

The ECoW will be onsite a minimum of one day per week during any clearance activities. If the site clearance team are working in one specific area for the week then one visit should be adequate. If the clearance activities are spread out over a number of areas then the ECoW will be onsite as many days as necessary. The ECoW will carry out an inspection of each gantry location prior to the clearance works commencing in that area.

7.6 Summary/ Maps of all known areas of nature conservation interest, protected habitats and species which may be affected due to construction, including access routes

The site Ecological Plan has been issued with the site clearance package to the Employer.

Below is a summary of the Ecological Survey carried out on 17/08/2011.

- None of the sites where a gantry or other signage to be installed as part of the Fife ITS contract exhibited otter, badger or red squirrel potential.

- There is limited potential for nesting birds during the breeding season at Locations 2, 3, 6, 7, 8, 13, 17, 19, 21. Locations 4, 6 and 7 which are scheduled for clearance offer bird nesting potential.
- Sites where scrub and semi-mature trees are present (Locations 1, 4, 6, 7, 10, 12 and 20) show no potential for bats in terms of roosts. A single tree was identified to be of suitable age / size to be considered suitable for roost potential (Site 25, VMS – Variable Message Site). However, this tree is not scheduled for felling and therefore there are no licensing issues with regard to bats.
- There is limited evidence that any of the linear plantations would act as important bat commuting routes.
- Some of the sites may offer a suitable habitat for reptiles, such as Locations 2, 11, 13, 17 and 19. However, the absence of hibernacula at most locations (combined with little or no connectivity due to urbanisation or expansive arable fields) results in an environment of limited value to reptiles. Consultation with the National Biodiversity Network (NBN) at www.nbn.org.uk shows that there is no recorded evidence of reptiles within the survey area. It is therefore highly unlikely that reptiles will be present on the given locations.
- A small watercourse is present at Location 12. Given its size and depth, the watercourse is considered to be of little value to freshwater fish and otter.

Note - The ES has not identified any protected species issues at any of the gantry locations it has considered.

7.7 Species or Habitat Management Plans

Given the limited ecological issues within the Fife ITS Project it is not considered necessary to develop habitat management plans as identified within section 10.2.4 of the CoCP.

7.8 Ecological Control Measures/ Mitigation

- An ecological walkover survey has been completed in advance of site clearance works at specified ITS gantry locations to verify the baseline ecological conditions disclosed in the Environmental Statement. The results of the walkover will be submitted for approval with the site clearance package.
- Clearance of trees/ scrub at Locations 1, 4, 6, 7, 10, 12 and 20 will be undertaken outwith the bird breeding season and this will therefore avoid any potential conflict with respect to nesting birds.
- Habitat loss and clearance for construction will be limited to the minimum area necessary for works (within the LMA) and site compounds/ access routes will be sited sensitively.
- Caution will be exerted during site clearance and site operatives will be made aware of this requirement through the site induction, method statements, risk assessments and tool box talks.
- Native species of local provenance will be used where replacement planting/ habitat creation is required.
- Where protected species are discovered when work has already commenced on site, work will be stopped immediately in that area and the Site Manager will seek expert advice from SNH and/ or SEPA on how to proceed.
- The Pollution Incident Response Plan will be implemented in the event of a pollution incident.
- We will have regard to other requirements of this EMP relating to noise and vibration, dust and air quality, and protection of the water environment, respectively, to protect areas of ecologically important habitats and species adjacent to the construction site.

Note

- RIAs/ Appropriate Assessments – Not relevant to Fife ITS.
- Relocation or Translocation of species – Note relevant to Fife ITS.

7.9 Consultation regarding the programme of Ecological Surveys

We have consulted with the relevant authorities including the Scottish Ministers, SNH and local authorities regarding monitoring and survey works to be undertaken prior to construction to verify the baseline ecological and arboriculture conditions set out in the Environmental Statement.

7.10 Control of Invasive and Alien Species

7.10.1. Invasive Plant Species

Invasive plants are those, which can rapidly spread and take over areas to the detriment of other existing plant and animal species and the environment. Invasive plants not only cause damage to the environment and ecosystems but some can also cause severe damage to structures and some are hazardous to health.

Those invasive species most commonly found in the UK are:

- Japanese Knotweed
- Himalayan Balsam
- Common Ragwort
- Giant Hogweed

7.10.2 Identification

Japanese Knotweed



Ragwort



Giant Hogweed**Himalayan Balsam**

7.10.3 Presence of Invasive Species

The ES undertaken on the Fife ITS corridor has not identified any form of invasive species that should be affected by construction activity. Areas identified as containing invasive species were outwith the Fife ITS site boundary.

7.10.4 Control Measures for Invasive Plants

In the event that evidence of invasive species was uncovered the following control measures should be implemented:

- Ensure that a survey has been carried out by a competent person and that a distribution map has been drawn up to indicate specific locations of the plant on site.
- Ensure the plant and the surrounding area is fenced off. The fence should be at least 4 metres away from the outer perimeter of the plant.
- Sign the area – Environmentally sensitive area – Keep Out.
- Inform site staff not to enter the fenced off plant areas.
- Include information and basic requirements with regards to the invasive plant identified as part of the site environmental awareness training so that everyone is aware of the requirements.
- Assess whether or not the invasive plant identified needs to be removed to ensure works can be completed without spreading it.
- Draw up a method statement for dealing with the invasive plants.
- Ensure that the control and management of the invasive weed is regularly monitored for any spread, regrowth or reintroduction.
- Keep records and plans of where the invasive plant was found and how it was managed.
- Consult with the regulator if spraying herbicides within 5M of a watercourse.
- If invasive plants are disposed of off site, they should be dealt with as waste in accordance with the Duty of Care Requirements.
- If plant and machinery are working in a contaminated area, ensure wheels are washed on exit.
- Never stockpile invasive plants on clean soil as this may cause the plant to spread. Stockpile on impermeable surface.

- Avoid double handling of the contaminated materials to reduce the risk of spreading the plant and to reduce.

7.10.5 Control and Eradication

Currently there are various means by which invasive plants can be eradicated from sites. These include:

- Long-term treatment with herbicides.
- Excavation and disposal at a licensed landfill site.
- Excavation, deep burial and/or bunding on site prior to treatment with herbicide.

Due to site specific variations in soil type, topography, adjacent sensitivities and degree of invasive weed infestations, combinations of various control methods should be used. It is important that Japanese knotweed is controlled as soon as possible. These methods are generally expensive with costs increasing as the infestation size and duration increases.

7.11 Protection of Trees

- Trees will be protected in line with the recommendations in BS 5837 Trees in Relation to Construction.
- An Arboriculturist survey has not been carried out as the site clearance areas are defined and all the trees within the clearance boundary will be removed regardless of their condition.
- Tree felling has been kept to a minimum where there are no windthrow issues.
- Temporary fencing has been erected around areas of existing vegetation to be retained within the Site for the duration of the contract. This temporary fence will remain in position in accordance with 24.7.2.2 of the contract.
- Temporary fencing has been erected to ensure that non-essential access or damage to protected areas of vegetation or ground conditions does not occur during the works. If any damage occurs necessary remedial works will be agreed with the relevant party and completed.

7.11.1 Tree surgery/ felling

- Any tree surgery operations will comply with the recommendations in BS 3998 Recommendations for Tree Works, as appropriate.
- Tree felling will be carried out taking appropriate consideration of the Forestry Commission's Forest and Water Guidelines 2003 to mitigate risks from felling areas of woodland and trees on the freshwater environment. Where there are no windrow or landscape visual issues, tree felling will be reduced to that necessary to allow the safe construction and operation of the proposed scheme. Any tree felling operations will consider the legal protection given to roosting bats and breeding birds.

7.11.2 Tree Planting and Replacement

- Any trees intended to be retained which are felled or die as a consequence of construction works will be replaced. Where reasonably practicable, the size and species of replacement trees will be selected to achieve a close resemblance of the original trees most effectively using locally occurring native species of local provenance and taking cognisance of any management plans for immediately adjacent areas of woodland.

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CONSTRUCTION

- The supply, storage, handling, planting and maintenance of new planting will be undertaken in accordance with appropriate British Standards, including BS 5837 Trees in relation to construction; BS 3998 Recommendations for Tree Works and BS 4428 Code of Practice for General Landscape Operations (excluding hard surfaces) and other guidance including the UK Forestry Standard and the UKWAS Standard.