

WLC 20025 Aberdour Footbridge

Preliminary Ecological Appraisal

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Prepared By:



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1 INTRODUCTION

1.1 Background

Wildlife Consulting Ltd (WLC) was commissioned by Realm Construction Ltd, on behalf of their client, Fife Council, to undertake of protected species survey and assessment in respect of the replacement of a collapsed footbridge at Aberdour in Fife.

1.2 Site Location

The Development site lies at the northern extent of Aberdour Harbour centred on British National Grid reference NT 19447 85220.

2 METHODS

2.1 Desktop Study

A desktop study was carried out at the start of the commission and ahead of the field survey. Information sources used for this study are described below:

- Google Earth (<http://earth.google.co.uk>) - aerial imagery was obtained and used to inform the field survey;
- SNH Website (protected areas) – the SNH website was used to inform on relevant legislation for protected species found to be present in the vicinity of the project;
- SNH Sitelink (<http://gateway.snh.gov.uk/sitelink/>) - sitelink was used to determine the location of any sites designated for nature conservation and their qualifying features; and
- Background protected species records as supplied by Fife Council.

2.2 Extended Phase 1 Habitat Survey

A Phase Habitat Survey was undertaken according to the standard Joint Nature conservation Committee (JNCC) method (JNCC, 2010). All semi-natural habitats were mapped according to the standard Phase 1 symbology, with descriptions of each habitat given in Section 3.2. Target notes are added describing the locations of features of ecological interest and invasive species. Target notes are presented in Appendix 6.3 and illustrated on Figure 1.

The survey area encapsulated all accessible land within 100m of the footbridge and was extended up to 250m along the Dour Burn upstream of the footbridge, specifically to record any evidence of otter.

The Extended element of the Phase 1 Habitat Survey records evidence of the presence of protected species. The methodologies used to record evidence of protected species are listed on Table 2-1 below. The protected species selected are based on our previous knowledge of the site and surrounding area and informed by the results of the Desk Study (Section 3.1). The survey was undertaken on 21st December, 2020.

Table 2-1: Protected Species Survey Methods

Species/Guild	Survey Methods
Birds	<p>Although outwith the breeding bird season, all bird species present were recorded during the survey visit.</p> <p>The site lies adjacent to the Firth of Forth SPA which is internationally designated on account of its wintering wading bird and wildfowl populations.</p> <p>The survey area for this receptor comprised accessible land within 100m of the site.</p>
Bats	<p>Coles (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. The buildings, wood and areas and standard trees within the site were categorised (high, medium, low or negative) for their potential to support roosting bats.</p> <p>The survey area for this receptor comprised accessible land within 50m of the Development site.</p>

Species/Guild	Survey Methods
Badger	<p>Harris et al. (1989) "Surveying Badgers". Evidence for the presence of badger was searched for including the presence of setts, foraging signs, latrines, prints, mamma paths and guard haers, as well as any badger sightings.</p> <p>The survey area for this receptor comprised accessible land within 100m of the site.</p>
Otter	<p>Chanin (2003) "Monitoring the Otter" and Liles (2003) "Conserving Otter Breeding Sites".</p> <p>The survey area for otter comprised suitable habitats within 250m of the site.</p>
Red squirrel	<p>Searches for striped cones and the presence of any dry structures in trees were undertaken within 100m of the site.</p>
Pine marten	<p>Searches for scats and potential densites were undertaken within 100m of the site.</p>
Invasive Species	<p>A walkover survey was undertaken to record the presence of any invasive species listed on Schedule 9 of the Wildlife and Countryside Act.</p>

3 RESULTS

3.1 Desktop Study

3.1.1 Statutory Designated Sites

Statutory designated sites located within 5 km of the development site are considered in this assessment. Statutory designated sites are protected by EU and UK legislation and include:

- Special Protected Areas (SPA);
- Special Areas of Conservation (SAC);
- Ramsar sites;
- Sites of Special Scientific Interest (SSSI);
- National Nature Reserves (NNR); and
- Local Nature Reserves (LNR).

The statutory sites designated for nature conservation are presented in Table 3-1 below.

Table 3-1: Statutory Sites Designated for Nature Conservation

Site Name	Designation	Proximity to Development Site (km)	Qualifying Feature
Firth of Forth	SPA	Adjacent to site	Qualifies on account of its wintering wader and wildfowl interest, specifically: bar-tailed godwit <i>Limosa lapponica</i> , common scoter <i>Melanitta nigra</i> , cormorant <i>Phalacrocorax carbo</i> , curlew <i>Numenius arquata</i> *, dunlin <i>Calidris alpina</i> *, eider <i>Somateria mollissima</i> *, golden plover <i>Pluvialis apricaria</i> , goldeneye <i>Bucephala clangula</i> *, great crested grebe <i>Podiceps cristatus</i> *, grey plover <i>Pluvialis squatarola</i> *, knot <i>Calidris canuta</i> , lapwing <i>Vanellus vanellus</i> *, Long-tailed duck <i>Clangula hyemalis</i> *, mallard <i>Anas platyrhynchos</i> *, oystercatcher <i>Haematopus ostralegus</i> *, pink-footed goose <i>Anser brachyrhynchus</i> , red-breasted merganser <i>Mergus serrator</i> *, redshank <i>Tringa tetanus</i> , red-throated diver <i>Gavia stellata</i> , ringed plover <i>Charadrius hiaticula</i> *, sandwich tern <i>Sterna sandvicensis</i> , scaup <i>Aythya marila</i> *, shelduck <i>Tadorna tadorna</i> , slavianian grebe <i>Podiceps auratus</i> , turnstone <i>Arenaria interpres</i> , velvet scoter <i>Melanitta fusca</i> * and wigeon <i>Anas penelope</i> *, and for its waterfowl assemblage. * Indicates assemblage qualifier only

Site Name	Designation	Proximity to Development Site (km)	Qualifying Feature
	SSSI	Adjacent to site	Similarly to the SPA the Firth of Forth SSSI is notified on account of its wintering wildfowl and wader populations. It is also notified for its breeding eider, shelduck and ringed plover populations; and on account of its coastal habitats and geological interest.
Firth of Forth	Ramsar	Adjacent to site	Notified on account of its non-breeding wader/wildfowl interest (bar-tailed godwit, goldeneye, knot, pink-footed goose, redshank, sandwich tern, shelduck, Slavonian grebe, turnstone, and its waterfowl assemblage).
Otterston Loch	SSSI	2.5 km west of the site	Notified on account of its wet woodland and transitional fen habitats.
Cullaloe Reservoir	SSSI/LNR	2.5 km north of the site	Notified as a eutrophic loch. Also listed as a Local Nature Reserve.

3.1.2 Desk Study Results

A summary of the background records provided by Fife Council is provided below.

Badger

[REDACTED]

Otter

[REDACTED]

Bats

[REDACTED]

Red squirrel

[REDACTED]

Pine marten

[REDACTED]

Birds

Observational bird records provided by Fife Council largely comprised sightings of coastal wader and wildfowl species. Of those, six Firth of Forth SPA qualifying species were recorded in estuarine habitats near to the site (common scoter, goldeneye, long-tailed duck, mallard, pink-footed goose and red-throated diver).

3.2 Fieldwork

The habitats recorded within the development site are summarised below.

3.2.1 Running Water

The Dour Burn runs through the site, and tributaries, immediately to the south into Aberdour Harbour and the Firth of Forth.

3.2.2 Broad-leaved woodland and Standard Broadleaf Trees

A line of mature standard broadleaf trees lie bankside on the lower reaches of the Dour Burn on the north side of the footbridge location. Species present include alder *Alnus glutinosa*, sycamore *Acer pseudoplatanus* and oak *Quercus* spp. Following the burn north the tree cover is more abundant and becomes riparian woodland.

3.2.3 Scattered Scrub

Scattered Scrub is present alongside the Dour Burn. This largely comprises hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus* agg.

3.2.4 Semi-improved Grassland

An area of this habitat is present on the east side of the Dour Burn sloping upward towards residential housing. The sward is dominated by coarse grasses such as Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis Glomerata* and perennial rye-grass *Lolium perenne*. Herb species present here comprise creeping buttercup *Ranunculus repens*, broad-leaved dock *Rumex obtusifolius*, white clover and dandelion *Taxacarium officinale*.

3.2.5 Marshy grassland

An area of marshy grassland dominated by soft rush *Juncus effusus* lies in a small depression at the foot of the slope within the semi-improved grassland.

3.2.6 Coastal Habitats

The rocky shore of Aberdour Harbour lies immediately downstream of the footbridge location.

3.3 Protected Species

3.3.1 Bats

[REDACTED]

3.3.2 Badger

3.3.3 Otter, Red Squirrel and Pine Marten

3.3.4 Birds

Bird species recorded during the PEA visit included: oystercatcher (three individuals foraging around the exposed rocky shore; eider (a group of five females near Pans Rocks); herring gull *Larus argentatus* loafing offshore in the Firth of Forth; and snipe *Gallinago gallinago* (single bird flushed from the marshy grassland). A number of common passerine species in and around scrub and woodland habitats upstream of the footbridge. Two of the species recorded (oystercatcher and eider) are Firth of Forth SPA species. The survey was conducted during a low tidal state, so it is not possible to comment on the presence of any high tide roosts.

3.3.5 Fish Fauna

The Dour Burn is of a riffle flow condition and is suitable for supporting juvenile migratory fish fauna, such as Atlantic salmon *Salmo salar* and brown/sea trout *Salmo trutta*. No obstacles to fish passage were recorded within the survey area.

4 Appraisal and Mitigation

4.1 Designated Sites

The Firth of Forth SPA, SSSI and Ramsar site lies adjacent to the site. These designations primarily cover ornithological interest, relating to aggregations of coastal species during the non-breeding season. The SSSI is also notified for supporting breeding ringed plover, eider and shelduck, but due to the fact this section of the shoreline is inundated at high tide, these species are unlikely to breed in and around the footbridge location. Should works be undertaken during the winter-time (October to March inclusive), there is the possibility of some localised disturbance to wintering bird species associated with the Firth of Forth SPA/Ramsar and SSSI. As such, it is recommended NatureScot (formally Scottish Natural Heritage) and the Royal Society for the Protection of Birds (RSPB) are consulted to determine whether they consider there is the potential for Likely Significant Effect on the SPA, thus triggering the need for a Habitats Regulations Appraisal (HRA) in relation to the works. This consultation should be accompanied by a Method Statement describing how the works will be undertaken, detailing number of site personnel, plant and the predicted timescale of the works.

4.2 Bats

[REDACTED]

4.3 Badger, Otter, Red Squirrel

[REDACTED]

4.4 Breeding Birds

The scrub and trees adjacent to the site provides nesting opportunities for birds. The bird breeding season runs from April to August inclusive.

It is recommended that construction is timed to either avoid the breeding season altogether, or Scheduled to start before the breeding season starts (ideally before mid-March) so that birds returning to the area to breed can choose a territory/nest location away from potentially disturbing activities. In the event this is not possible, prior to the commencement of clearance works, all suitable nesting habitat should first be checked by an experienced ecological clerk of works (ECoW). If an active nest is confirmed to be

present, an exclusion zone should be erected around the nest until all dependent young have fledged, or if the ECoW confirms that the nest is no longer active.

4.5 Fish Fauna

In order to safeguard fish fauna during instream works. A 'fish rescue' exercise should be undertaken using electrofishing and stop nets in situ until instream works are complete. The main salmonid spawning season occurs between November to December, but can occur between October and February inclusive, especially in larger catchments (SNH, Undated). Female fish lay their eggs in gravel depressions known as 'redds'. Once hatched the alevin remain in the redd until April or May. As such the sensitive period for the avoidance of potential spawning gravel in stream beds is considered to be October to May inclusive. If possible instream works should be scheduled to avoid this period.

5 REFERENCES

- Chanin P (2003).Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough
- Collins (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.
- Harris, S., Cresswell, P. & Jefferies, D. (1989) - Surveying for badgers. Occasional Publication of the Mammal Society No. 9. Mammal Society, Bristol.
- JNCC (2010) Handbook for Phase 1 Habitat Survey A Technique for Environmental Audit.
- Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004), 3rd Edition Bat Workers' Manual, 178 pages b/w photos, softback, ISBN 1 86107 558 8

6 APPENDICES

6.1 Appendix A (Figure)

See document attached

6.2 Appendix B (Legislation)

6.2.1 Birds

Protection

All wild birds in the UK are protected under the Wildlife and Countryside Act 1981 (as amended). Some rarer species, or those that are vulnerable to disturbance or persecution receive further protection.

Offences

It is an offence to intentionally or recklessly:

- kill, injure or take a wild bird;
- take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built (or at any time for a nest habitually used by any bird listed in Schedule A1);
- obstruct or prevent any wild bird from using its nest;
- take or destroy an egg of any wild bird;
- disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young, or whilst lekking;
- disturb the dependent young of any wild bird listed on Schedule 1; and
- harass any wild bird listed on Schedule 1A.

It is also an offence to possess or control a live or dead wild bird, an egg of a wild bird (or any such derivatives), or to knowingly cause or permit any of the above acts to be carried out.

There are additional offences in relation to use of prohibited methods of killing or taking wild birds, for the sale of live and dead wild birds (listed on Schedule 3) and for registration and keeping of captive wild birds (Schedule 4).

There are a number of exceptions to these offences including shooting outside of the closed season for certain species (Schedule 2).

With specific reference to forestry activities, disturbance is likely to arise where forest management or recreational activities cause specially protected birds to change their behaviour with potentially adverse effects on their breeding success. In the worst case, they could desert a nest or fail to rear young successfully. Such disturbance can be intentional, reckless or accidental, and can be caused by forest managers and their agents, or by event organisers or other users of the forest.

It is necessary for managers/users to be able to show that reasonable precautions were taken to avoid committing the damage or disturbance, and that if it occurred, that steps were taken to minimise or prevent further damage or disturbance. 'Reasonable' in this context may be open to interpretation, but general guidance on this is given in *Forest Operations and Birds in Scottish Forests* (Forestry Commission, 2006).

Licensing

Licences are available to allow specified people to carry out actions that could otherwise constitute an offence. As with any protected species, licences can only be issued for specific purposes that are set out in the legislation. If you are planning any activities that could affect wild birds or the places they use, you should make sure that you stay within the law.

If you are proposing to undertake an action that might otherwise constitute an offence, you may need a licence and should refer to the SNH website licensing and birds pages.

6.2.2 *Bats*

Protection

There are at least nine species of bat to be found in Scotland. All bat species are classed as European protected species and are fully protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This lists a number of offences in relation to bats and the places in which they live.

Offences

The following provides a summary of the offences in the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) in relation to bats.

It is an offence to deliberately or recklessly:

- capture, injure or kill a wild bat;
- harass a wild bat or group of bats;
- to disturb a wild bat in a roost (any structure or place it uses for shelter or protection);
- to disturb a wild bat while it is rearing or otherwise caring for its young (this would be a 'maternity' roost);
- to obstruct access to a bat roost or to otherwise deny the animal use of the roost;
- to disturb such a wild bat in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of that species; and
- to disturb a wild bat in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

It is also an offence to:

- damage or destroy a breeding site or resting place of such an animal (note: this does not need to be deliberate or reckless to constitute an offence); and
- keep, transport, sell or exchange or offer for sale or exchange any wild bat or any part or derivative of one (if obtained after 10 June 1994).

Licensing

Licences are available to allow specified people to carry out actions that could otherwise constitute an offence. As with any European protected species, licences can only be issued for specific purposes that are set out in the legislation. If you are planning any activities that could affect bats or their habitats, you should make sure that you stay within the law.

6.2.3 *Badger*

Protection

Badgers have been subject to a history of persecution, and as such badgers and their setts are protected by law in the Protection of Badgers Act 1992 (as amended).

Offences

Offences under the Protection of Badgers Act 1992 (as amended) include:

- wilfully taking, injuring or killing badgers;
- cruelty;
- intentionally or recklessly interfering with a badger sett*;
- selling and possession; and
- marking and ringing.

*Interfering with a badger sett includes damaging or destroying a badger sett or any part of it, obstructing access to a sett, disturbing a badger whilst it is in a sett, or causing or allowing a dog to enter a badger sett.

Licensing

Licences are available to allow specified people to carry out actions that could otherwise constitute an offence. Licences can only be issued for specific purposes that are set out in the legislation. If you are planning any activities that could affect badgers or their setts, you should make sure that you stay within the law.

6.3 Appendix C (Target Notes)

<i>Target Note Number</i>	<i>Grid Reference</i>	<i>Feature</i>
■	[REDACTED]	[REDACTED]
■	[REDACTED]	[REDACTED]
■	[REDACTED]	[REDACTED]
■	[REDACTED]	[REDACTED]