



Deuchar Mill
Preliminary Ecological Assessment (PEA)
For Ferguson Planning

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Version

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The report, and the information contained in it, is intended to be valid for a maximum of 12 months from the date of the survey, providing no significant alterations to the site have occurred.



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1. Executive Summary

Ellendale Environmental Limited was commissioned by Ferguson Planning, on behalf of their client, to undertake a Preliminary Ecological Assessment (PEA) for an area of land at Deuchar Mill ('the site'). It is proposed to develop a residential property on the site ('the proposed development').

Surveys undertaken at the site as part of the PEA included an Extended Phase 1 Habitat survey and a Preliminary Protected Species walkover. The Extended Phase 1 Habitat survey was undertaken following a Phase 1 survey methodology (JNCC, 2010) to list the plant species associated with each habitat. The preliminary protected species walkover was conducted for the site and the surrounding area.

The site is located to the west of Selkirk, near Yarrow in the Scottish Borders, and is accessed off the A708 at Deuchar Mill. The site is 0.2 hectares in size and comprises an open-sided agricultural shed and associated yard area which was being used as a compound for Scottish Water works in the local area at the time of the survey. Around the edges of the site there is semi-improved neutral grassland. Yarrow water and its adjacent riparian habitat is located 50m to the south of the site.

The semi-improved grassland within the site does not provide suitable habitat for ground nesting birds as the sward height is too short. In addition, the grassland does not provide suitable cover for common reptiles, amphibians or small mammals and there was no refugia present within the site.



The agricultural shed present within the site is open-sided and has a thin corrugated iron roof. It is unsuitable for roosting bats as there are no spaces within the roof structure which could be used as a roost. It has therefore been assessed as providing Negligible Roost Potential. The trees adjacent to Yarrow Water may provide suitable habitat for foraging and commuting bats.

There is a barn owl nest box present within the northern end of the shed. No evidence of barn owl (pellets) was noted; however, this inspection was limited due to there being a tall stack of pallets within the shed and heavy plant were tracking across the site meaning evidence of barn owl could have been destroyed or hidden. The nest box was only inspected from ground height during the survey.

There was a rabbit burrow present to the south-east corner of the site which had rabbit droppings located outside it.

Overall, the site is assessed as providing low suitability to support protected species and no evidence of protected species was identified during the survey.

Impacts on Yarrow Water and the River Tweed SAC that may arise through construction of the development, such as run-off from sediment and pollutants from exposed earth during construction, and the spillage of oils and chemicals used during construction, should be mitigated following good practice in line with GPP5 *Works and maintenance in or near water*.

Recommendations are also made for modest post-construction ecological enhancements at the site that are proportionate with the low level of environmental impact from the proposed development.



2. Introduction

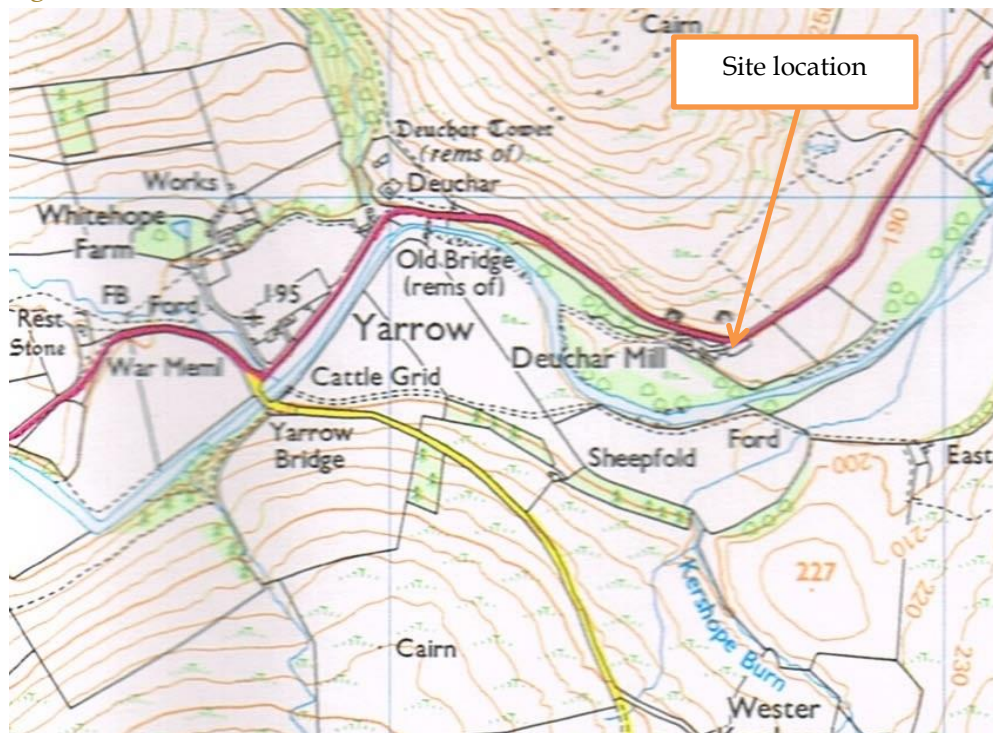
2.1 Commission

Ellendale Environmental Limited was commissioned by Ferguson Planning, on behalf of their client, to undertake a Preliminary Ecological Assessment (PEA) for an area of land at Deuchar Mill ('the site'). A development of a residential property is proposed for the site ('the proposed development').

2.2 Site Details

The site is located west of Selkirk, near Yarrow in the Scottish Borders, at OS grid reference NT 3665 2771.

Figure 1: Site location



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2.3 Survey Objectives

On the basis of the brief provided by the client, Ellendale Environmental conducted an ecological survey to fulfil the following needs:

- ☛ Obtain baseline information on the current habitats and ecological features in and around the site;
- ☛ Identify any further specialist surveys that may be required;
- ☛ Identify the presence (or potential presence) of any protected species whose disturbance may require consent under the Wildlife and Countryside Act, 1981 (as amended); and
- ☛ Identify any species or habitats which may require special mitigation during the development of the site.



3. Methodology

3.1 Data Search

Publicly available databases, including MAGIC and the NBN Atlas, were consulted for historical evidence of:

- ☛ Statutory Land-Based Designations;
- ☛ Non-Statutory Land-Based Designations; and
- ☛ Protected Species.

The data search was conducted within a 2km radius of the site boundaries.

3.2 Extended Phase 1 Habitat Survey

An Extended Phase 1 Habitat survey of the site area was undertaken, and the habitats present on the site were mapped following the Phase 1 survey methodology (JNCC, 2010), listing the plant species associated with each habitat. This methodology was an extended Phase 1 habitat survey, whereby all habitats were surveyed and recorded onto a base plan, and any habitats that were considered to be of potential interest to nature conservation were recorded through the use of target notes to annotate a Phase 1 habitat map.

3.3 Preliminary Protected Species Survey

The site and surrounding areas were examined for signs of protected species, particularly badger, as it was considered that the site had the greatest potential to support these species or groups of animals.

The presence/potential presence of protected or notable species of conservation concern was recorded using target notes, following the Chartered Institute of Ecological and Environmental Management guidance (CIEEM, 2012).



3.4 Survey Area

The survey covered the entire site and areas within 30m (where accessible).

3.5 Survey Limitations

The aim of this survey was not to record every species present on the site, as one survey acts as a snap-shot, recording only those species which are present at the time or whose presence can be indicated through the occurrence of field signs, such as feeding remains, droppings or places used for shelter or foraging.

Evidence collected has been used to draw conclusions about the flora and fauna within the boundary of the site and to provide an assessment of their ecological and nature conservation value.

Weather was not a limiting factor to the survey. The prevailing conditions at the time of the survey are summarised in Table 1.

Table 1: Survey weather conditions

SURVEY DATE	TEMPERATURE (°C)	WIND SPEED (MPH)	CLOUD COVER / PRECIPITATION
12/03/21	10	5	30% cloud cover, dry.



4. Results

4.1 Ellendale Environmental

The survey was undertaken by Sarah Miller, Ecologist at Ellendale Environmental, who is an Associate member of CIEEM and has over two years' experience of undertaking ecology surveys and assessments throughout the UK.

4.2 Desk Study

A 2km data search for existing biological records was undertaken from publicly available databases. There is one statutory designated site within 2km, namely:

- ☛ Yarrow Water is located 50m to the south of the site and is designated as part of the River Tweed Special Area of Conservation (SAC) and is a Site of Special Scientific Interest (SSSI).

The data search revealed no non-statutory designated sites within 2km of the site.

The following protected species were identified within 2km of the site boundaries by the data search:

- ☛ Eurasian red squirrel *Sciurus vulgaris*; and
- ☛ European otter *Lutra lutra*.

Approximately 86 bird species have been recorded within 2km of the site and are shown on the NBN Atlas; however, none of these records are for within the site boundaries. There are records for barn owl *Tyto alba* within 2km of the site and two records for grey squirrel *Sciurus carolinensis* within the site boundaries.



4.3 Extended Phase 1 Habitat Survey

The site is located to the west of Selkirk, near Yarrow in the Scottish Borders, and is accessed off the A708 at Deuchar Mill. The site is 0.2 hectares in size and comprises an open-sided agricultural shed and associated yard area which was being used as a compound for Scottish Water works in the local area at the time of the survey. Around the edges of the site there is semi-improved neutral grassland. Yarrow Water and its adjacent riparian habitat is located 50m to the south of the site.

The site is accessed through a gap in a stone wall to the north of the site and consists of an open-sided agricultural shed which has a corrugated iron roof. Much of the site had bare ground and was being used for material and vehicle storage by Scottish Water.

Around the periphery of the site there are some soil bunds and a stock fence (which was damaged in places), with ground flora of semi-improved neutral grassland which had a short sward height. Species present in the grassland includes Yorkshire fog *Holcus lanatus*, cocksfoot grass *Dactylis glomerata*, willowherb *Epilobium spp.*, broadleaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, dandelion *Taraxacum officinale agg.*, lesser celandine *Ficaria verna*, creeping thistle *Cirsium arvense* and foxglove *Digitalis purpurea*. The habitat extends into the field beyond the site on the eastern and southern boundaries, and a residential property is present beyond the western boundary.



Photograph 1: showing a view of the site from the north-west



Approximately 50m south of the site there is a further stock fence which separates the grassland field from riparian habitat parallel to Yarrow Water. The river is approximately 20m wide with a stony substrate and was up to one metre deep in places at the time of the survey. The tree species present include beech *Fagus sylvatica*, ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus* and alder *Alnus glutinosa*.

Impacts on the river and the River Tweed SAC may arise through construction of the development. Run-off from sediment and pollutants from exposed earth during construction, and spillage of oils and chemicals used during construction, can occur and enter the river without adequate mitigation measures in place. Mitigation should follow good practice, including GPP5 *Works and maintenance in or near water*, and should include silt fencing around the site, correct storage of fuels and oils, good site management and waste control.



Photograph 2: showing a view of Yarrow water and riparian habitat 50m from the south of the site



4.4 Preliminary Protected Species Survey

The semi-improved grassland within the site does not provide suitable habitat for ground nesting birds as the sward height is too short. In addition, the grassland does not provide suitable cover for common reptiles, amphibians or small mammals and there was no refugia present within the site.

The shed present within the site is open-sided and has a thin corrugated iron roof which is unsuitable for roosting bats, as there is no spaces in the roof structure which could be used as a roost. It is therefore assessed as providing Negligible Roost Potential. The trees adjacent to Yarrow Water may provide suitable habitat for foraging and commuting bats.



There is a barn owl nest box present within the northern end of the shed. No evidence of barn owl (pellets) was noted; however, this inspection was limited due to there being a tall stack of pallets within the shed and heavy plant were tracking across the site meaning evidence of barn owl could have been destroyed or hidden. The nest box was only inspected from ground height during the survey.

Photograph 3: Showing a view of the barn owl nest box within the shed



There was a rabbit *Oryctolagus cuniculus* burrow present to the south east corner of the site which had rabbit droppings outside of it.

Overall, the site is assessed as providing low suitability to support protected species and no evidence of protected species was identified during the survey.



5. Conclusions

5.1 Conclusion

The site is located to the west of Selkirk, near Yarrow, and is accessed off the A708 at Deuchar Mill. The site is 0.2 hectares in size and comprises an open-sided agricultural shed and an associated yard area which was being used as a compound for Scottish Water works in the local area at the time of the survey. Around the edges of the site there is semi-improved neutral grassland. Yarrow Water and its adjacent riparian habitat is located 50m to the south of the site.

The semi-improved grassland within the site does not provide suitable habitat for ground nesting birds as the sward height is too short. In addition, the grassland does not provide suitable cover for common reptiles, amphibians and small mammals and there was no refugia present within the site.

The shed present within the site is open-sided and has a thin corrugated iron roof. It is unsuitable for roosting bats as there are no spaces in the roof structure which could be used as a roost. It is therefore assessed as providing Negligible Roost Potential. The trees adjacent to Yarrow Water may provide suitable habitat for foraging and commuting bats.

There is a barn owl nest box present within the northern end of the shed. No evidence of barn owl (pellets) was noted suggesting the box is not in use. Recent vehicle movements may have destroyed or hidden evidence of barn owl activity.

There was a rabbit burrow present to the south-east corner of the site which had rabbit droppings located outside it.

Overall, the site is assessed as providing low suitability to support protected species and no evidence of protected species was identified during the survey.



5.2 Main Recommendations

Impacts on Yarrow Water and the River Tweed SAC that may arise through construction of the development, such as run-off from sediment and pollutants from exposed earth during construction, and the spillage of oils and chemicals used during construction, should be mitigated following good practice in line with GPP5 *Works and maintenance in or near water*.

The following recommendations are also made for modest post-construction ecological enhancements at the site that are proportionate with the low level of environmental impact from the proposed development:

- ☛ As part of any eventual construction, it is recommended that vegetation clearance is undertaken outside of the bird breeding season, i.e., March to July, as all nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). If nesting birds are found, these areas of the site will need to be protected from disturbance until the young have fledged naturally.
- ☛ A further inspection of the barn owl nest box may be necessary. If it is identified as being used by a barn owl, then alternative provision would be required to provide an alternative nest box 30 days prior to the start of construction. It is recommended that the barn owl nest box inspection and/or removal it is conducted by a suitably qualified and experience ecologist out with the breeding season, as barn owls are protected under Schedule 1 of the Wildlife and Countryside Act.
- ☛ As part of the building design, the dwelling could have a barn owl nest box fitted on the outside of the building or on a nearby tree which would provide nesting opportunities for barn owl post-construction. Barn owl nest boxes for both trees and buildings are available from the Barn Owl Trust. Alternatively, a barn owl nesting space could be incorporated as part of the building design.



6. Target Notes

6.1 Botanical Target Notes (TN)

TN1 - Much of the site had bare ground and was being used for material and vehicle storage by Scottish Water during works in the local area.

TN2 - Around the periphery of the site there are some soil bunds and a stock fence which was damaged in places. The ground flora comprises semi-improved neutral grassland with a short sward height and includes the species Yorkshire fog, cocksfoot grass, willowherb, broadleaved dock, common nettle, dandelion, lesser celandine, creeping thistle and foxglove.

TN3 - The semi-improved neutral grassland habitat extends into the field beyond the site on the eastern and southern boundaries.

TN4 - Approximately 50m south of the site there is a further stock fence which separates the grassland field from riparian habitat parallel to Yarrow Water. The tree species present include beech, ash, sycamore and alder.

TN5 - Yarrow Water is approximately 20m wide with a stony substrate and was up to one metre deep in places at the time of the survey.

6.2 Animal Target Notes (AN)

AN1 - There is a barn owl nest box present within the northern end of the shed. No evidence of barn owl (pellets) was noted; however, this inspection was limited due to there being a tall stack of pallets within the shed and heavy plant were tracking across the site meaning evidence of barn owl could have been destroyed or hidden. The nest box was only inspected from ground height during the survey. The shed is open-sided and has a thin corrugated iron roof. It is unsuitable for roosting bats as there are no spaces in the roof structure which could

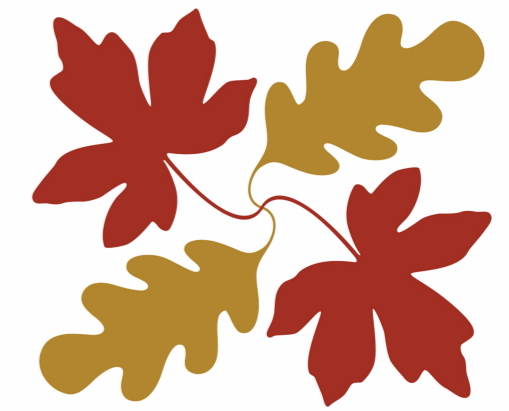


be used as a roost. It is therefore assessed as providing Negligible Roost Potential.

AN2 – A rabbit burrow is present in the south-eastern corner of the site.



7. Extended Phase 1 Habitat Map



ELLENDALE
ENVIRONMENTAL

Drawing Title;
Deuchar Mill
Extended Phase 1 Map

Client;
Buccleuch Estates

Date;
17/03/21

Drawn By;
SP

Project Number;
EEL348

Version Number;
v1.0



Target Note

● TN

Animal Note

● AN

Built-up Area

— Wall

— Fence

■ Building

▨ Hard Standing

▨ Bare Ground

Water

■ Running Water

Woodland and Scrub

■ Semi-natural Broadleaf Woodland

Grassland

■ Semi-improved Neutral Grassland