



Hallrule Farm, Bonchester Bridge
Extended Phase 1 Habitat Survey
For David MacTaggart

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1. Executive Summary

Ellendale Environmental was commissioned Mr T. Ferguson of Ferguson Planning Ltd on behalf of his client Mr D. MacTaggart, to undertake an Extended Phase 1 Habitat Survey and preliminary protected species survey for a site at Hallrule Farm, Bonchester Bridge.

To fulfil the brief, an Extended Phase 1 Habitat Survey was conducted for the site following the Phase 1 survey methodology (JNCC, 2010) to list the plant species associated with each habitat. A preliminary protected species walkover for the site was also conducted.

The survey area is 10.5 ha in size and comprises part of the valley of Hallrule Burn. It is proposed to develop part of the site as several holiday houses. The survey area comprises areas of mixed woodland, broadleaved woodland, scrub, semi-improved grassland, small areas of adjacent agricultural land as well as the Hallrule Burn itself.

The site is assessed as providing some habitat for protected species, although largely in areas which are understood to be unaffected by the proposed development. The areas of woodland and scrub provide suitable habitat for nesting passerine birds. Several field signs of otter *Lutra lutra* were identified along the burn. No evidence of badger *Meles meles* was found and no further surveys for protected species are recommended.

Some recommendations are made within this report for modest post-construction ecological enhancements at the survey site that are proportionate with the low level of environmental impact from the development. These measures aim to increase the diversity and abundance of species present on the site after the completion of any future development works.



2. Introduction

2.1 Commission

Ellendale Environmental was commissioned Mr T. Ferguson of Ferguson Planning Ltd on behalf of his client Mr D. MacTaggart to undertake an Extended Phase 1 Habitat Survey and preliminary protected species survey for a site at Hallrule Farm, Bonchester Bridge.

The survey area is 10.5 ha in size and comprises part of the valley of Hallrule Burn. It is proposed to develop part of the site as several holiday houses. The survey area comprises areas of mixed woodland, broadleaved woodland, scrub, and semi-improved grassland as well as the Hallrule Burn itself.

2.2 Site Details

The site is located at Hallrule Farm, Hallrule, Bonchester Bridge in Roxburghshire, Scottish Borders. The survey site is located at OS grid reference NT 58971 14056.

Figure 1: Location Plan





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

Publically available databases including Scottish Natural Heritage (SNH) Sitelink 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 Phase 1 Habitat Survey

An Extended Phase 1 habitat survey of the survey 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.

The presence of any invasive weeds, such as Japanese Knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) or giant hogweed (*Heracleum mantegazzianum*) was also recorded through the use of target notes.

3.3 Preliminary Protected Species Survey

The site and immediate vicinity was examined for signs of protected species. The presence/potential presence of protected or notable species of conservation concern was recorded using target notes,



following the Institute of Ecological and Environmental Management guidance (IEEM, 2012).

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

3.4 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. Where it is suspected that species of nature conservation importance have the potential to be present, further more detailed surveys have been advised.

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

Table 1: Survey Weather Conditions

SURVEY DATE	TEMPERATURE (°C)	WIND SPEED (MPH)	CLOUD COVER / PRECIPITATION
16/11/17	7.2	Ave 0.0 Max 3.2	100% dry with an occasional breeze



4. Results

4.1 Ellendale Environmental

John McTague and Stewart Parsons undertook the survey.

Stewart Parsons is the Director and Principal Ecologist of Ellendale Environmental, who is a full member of CIEEM. Stewart has over 15 years' professional experience of ecological surveys across the UK.

John McTague is an Ecologist with Ellendale Environmental. John has experience in Ecological Consultancy, including Extended Phase 1 Habitat Surveys, with a particular focus on botanical surveying.

4.2 Desk Study

A 2km data search for designated sites and existing biological records was undertaken from publically available databases. Additionally, a list of Local Wildlife Sites in the Scottish Borders council area was consulted.

The only Local Wildlife Site (LWS) within 2 km of the site boundary is Rubers Law. This is a hill (elevation 424m) and is not considered to be at any risk of impact from this proposal.

The River Tweed Special Area of Conservation (SAC) is approximately 650 metres east of the site boundary. The qualifying interests of the SAC are:

- ☞ Atlantic salmon *Salmo salar*
- ☞ Brook lamprey *Lampetra planeri*
- ☞ Otter *Lutra lutra*
- ☞ River lamprey *Lampetra fluviatilis*
- ☞ Rivers with floating vegetation often dominated by water-crowfoot



☞ Sea lamprey *Petromyzon marinus*

Hallrule Burn flows into the River Tweed and therefore mitigation measures may be required during any future development, to avoid impacts on the SAC.

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

☞ Badger *Meles meles*

☞ Otter *Lutra lutra*

☞ Red squirrel *Sciurus vulgaris*

78 bird species have been recorded within 2km of the site and are shown on the NBN Atlas. None of these records are for birds within the site.

4.3 Extended Phase 1 Survey

The survey site is located to the west of Hallrule, near Bonchester Bridge in the Scottish Borders council area. The site comprises part of the valley of the Hallrule Burn and small areas of adjacent agricultural land, totalling approximately 10.5 ha. To the east of the site is the hamlet of Hallrule, with a farm and several cottages. To the north and south is agricultural land consisting of a mixture of pasture and arable. To the west, upstream of the survey site, the Hallrule Burn continues through grassland and scrub. There is a pond partially within the survey site, at the eastern end. This is in a private garden and was not surveyed. It is believed to be some distance from the proposed development.

The access to the site is from the east, through an arable field from an un-named road off the B6357.



Picture 1: showing access to the site and mature trees on field boundary



At the time of survey, Hallrule Burn was running clear and moderately fast. It has a stony bed, with very little aquatic vegetation. The banks have been modified/ strengthened in places using tyres and wood. There are some areas of exposed soil around the burn in the east of the survey area, suggesting recent small collapses of vegetated areas.

Vegetation on the banks of the burn typically comprises grasses and ruderal species, with low botanical diversity. There are small open areas around the burn in the east of the site with ground flora comprising woodland and nitrophilous species, suggestive of nutrient input (see e.g. picture 4). Species include raspberry *Rubus idaeus*, bramble *Rubus fruticosus* agg., Yorkshire fog *Holcus lanatus*, creeping soft-grass *Holcus mollis*, false oat-grass *Arrhenatherum elatius*, tufted hair grass *Deschampsia cespitosa*, cocksfoot *Dactylis glomerata*, hogweed



Heracleum sphondylium, creeping buttercup *Ranunculus repens*, creeping cinquefoil *Potentilla reptans*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping thistle *Cirsium arvense*, meadowsweet *Filipendula ulmaria*, cow parsley *Anthriscus sylvestris*, common sorrel *Rumex acetosa* and wood avens *Geum urbanum*.

Several small burns flow into Hallrule Burn within the survey site. At the time of survey, these were all dry and more similar to narrow ditches than streams, possibly with seasonal flows.

Picture 2: a general view of Hallrule Burn in the east of the site



There are pheasant rearing pens within and close to the survey area. These are marked on the map in Section 7. Numerous pheasant were seen within the survey site, as well as some red-legged partridge. The survey area appears to be used for pheasant shooting at present. An



informal vehicle track passes through the majority of the site, and it is presumed that this is for shooting access.

Picture 3: showing part of the informal vehicle track on the site



The area to the south of Hallrule Burn is largely covered by broadleaved semi-natural woodland on the steep bank of the burn, although in the east of the survey area, the woodland is mixed, with some mature planted Scot's pine *Pinus sylvestris* and beech *Fagus sylvatica*. The main tree species are oak *Quercus sp.*, ash *Fraxinus excelsior*, wych elm *Ulmus glabra*, hazel *Corylus avellana*, and birch *Betula sp.* Some hazel, elder *Sambucus nigra*, hawthorn *Crataegus monogyna* and grey willow *Salix cinerea* occur as a shrub layer. In the east of the site, the woodland has a quite open structure. The woodland ground flora varies across the site, with large areas of bare ground on steeper slopes. Typical ground flora species are male fern *Dryopteris filix-mas*, broad buckler fern *Dryopteris dilatata*, bramble



Rubus fruticosus agg., opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, wood avens *Geum urbanum*, common nettle *Urtica dioica* and creeping soft-grass *Holcus mollis*.

Picture 4: showing mature (planted) Scot's pine trees on steep bank



The broadleaved woodland shows few signs of recent management, although some coppicing has taken place historically.

Picture 5: showing evidence of historic coppicing



Further west on the south side of Hallrule Burn, there is a mosaic of semi-natural broadleaved woodland and scrub which contains several small defunct quarries. The woody species are oak, ash, alder *Alnus glutinosa*, hazel, hawthorn, blackthorn *Prunus spinosa*, elder, grey willow, gorse *Ulex europaeus* and broom *Cytisus scoparius*.

Picture 6: a view of the woodland-scrub mosaic in the southwest of the site



On the north side of Hallrule Burn, the predominant habitats are scrub and poor semi-improved grassland. There is a large area of dense scrub with hazel, hawthorn, broom, wych elm and roses *Rosa* spp. This grades into a mosaic of a large open area of poor semi-improved grassland with bracken *Pteridium aquilinum* on the steeper bank and scattered scrub (blackthorn, hawthorn, gorse). The grassland contains abundant Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata*, annual meadow grass *Poa annua* and false oat-grass *Arrhenatherum elatius* as well as common nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius*, dandelion *Taraxacum officinale* agg. and field forget-me-not *Myosotis arvensis*.

Picture 7: an area of poor semi-improved grassland and adjacent scrub



There is a broad band of poor semi-improved grassland along the valley bottom, adjacent to the north bank of the burn. An informal vehicle track runs through this area. The main grasses are cocksfoot, Yorkshire fog and false oat-grass, with common nettle and cow parsley also present.

The scrub to the north of the burn grades into a small area of ash woodland, with some mature trees, before becoming a mosaic of broad-leaved woodland and scrub. The woody species are oak, ash, alder, hazel, hawthorn, blackthorn, elder, grey willow, gorse and broom.

Picture 8: a mature ash tree



To the west of this area, the site supports a mosaic of poor semi-improved grassland with patches of scrub and bracken. The grassland contains Yorkshire fog, cocksfoot, false oat-grass, creeping buttercup *Ranunculus repens*, common sorrel *Rumex acetosa*, common nettle and chickweed *Stellaria media*.



Picture 9: an area of poor semi-improved grassland, scrub and bracken in the western part of the site



4.4 Preliminary Protected Species Survey

The survey area contains semi-natural broadleaved woodland (with some mature planted Scot's pine and beech trees), scrub, poor semi-improved grassland and a stream, Hallrule Burn. It is surrounded by agricultural land, both pasture and arable.

Signs of otter were found in several places along Hallrule Burn and two potential otter resting places were identified. No holts were identified. It is likely that otters use the Hallrule Burn for commuting between watercourses that provide better foraging habitat. No evidence of water vole *Arvicola amphibius* was found during the survey. No evidence of badger was found during the walkover. No evidence of red squirrel was found during the survey. Both red and grey squirrel occur in the surrounding area, and it cannot be ruled out



that red squirrel occurs on the site. However, the woodland is of low suitability for the species, and it is understood that the proposed works do not affect the woodland on site.

The woodland and scrub within the site provide habitat for nesting birds.

The woodland and scrub provides suitable foraging habitat for several bat species. Several mature ash and beech trees in the have some limited potential to support bat roosts (e.g. picture 8). It is understood that no trees are to be affected by the proposal, but if this is not the case then full bat roost potential assessments of any impacted trees should be arranged.

Picture 10: a potential otter resting site





5. Conclusions

5.1 Conclusion

The survey area contains broadleaved woodland and scrub, with areas of poor semi-improved grassland. The Hallrule Burn flows through the survey area. Boundaries are a combination of drystone walls and wire fences.

The survey area contains several pheasant rearing pens and is used for game shooting – both pheasant and red-legged partridge were noted throughout the area. An informal vehicle track passes through the site, presumably to provide shooting access.

The woodland on the site is mostly broadleaved semi-natural woodland with some mature planted trees (Scot's pine and beech). The scrub varies from dense to sparse in different parts of the site. The open areas support poor semi-improved grassland with low botanical diversity.

The site was found to provide low to moderate suitability to support protected species, in the scrub, woodland and aquatic habitats.

The habitat within the site is good foraging habitat for bats, but with limited roosting potential identified. Several mature ash and beech trees have some potential to support bat roosts. It is understood that these trees are unaffected by the proposed development. If any felling or pruning of mature trees is proposed, a specific bat survey of affected trees should be undertaken.

No evidence of badger, water vole or red squirrel was found during the survey.



Evidence of otter was found in several places along Hallrule Burn. It is likely that otters use the burn as a commuting route between watercourses that provide more suitable foraging habitat.

5.2 Main Recommendations

The following recommendations are made;

- ☛ Bird nesting boxes, both small hole and open fronted, could be placed within the developed site if possible to create nesting opportunities for small bird species.
- ☛ Bat boxes could be placed within the developed site as well as around the site boundaries where practicable to create roosting opportunities for bat species.
- ☛ Any scrub or tree removal should be undertaken outside of the main bird nesting season (1 March – 31 August). If within this period, a suitably qualified ecologist/ornithologist should be consulted in advance.
- ☛ No mature trees should be felled or pruned without a specific bat survey being undertaken of these.
- ☛ Any scrub or other wood that is cut as part of development could be stacked and left on site to provide habitat for invertebrates and small mammals. Dead wood could be left in-situ when possible.
- ☛ Suitable silt fencing should be used to prevent run off from any construction activity into Hallrule Burn.
- ☛ Artificial light should be kept to a minimum. Any installed lighting should aim to minimise the spread of artificial light into woodland/scrub areas and the Hallrule Burn, to limit potential impacts on bats and otters.



6. Target Notes

6.1 Botanical Target Notes (TN)

TN1 – Pond in private garden, not surveyed.

TN2 – Mixed woodland on a steep bank above Hallrule Burn. Mature oak *Quercus* sp., beech *Fagus sylvatica*, Scot's pine *Pinus sylvestris*, ash *Fraxinus excelsior*, wych elm *Ulmus glabra*, hazel *Corylus avellana*, and birch *Betula* sp. Some hazel, elder *Sambucus nigra*, hawthorn *Crataegus monogyna* and grey willow *Salix cinerea* as shrub layer. Quite open structure to woodland. Ground flora of male fern *Dryopteris filix-mas*, bramble *Rubus fruticosus* agg., creeping soft-grass *Holcus mollis*. Lots of bare ground on steeper slopes.

TN3 – Open area around the burn is quite disturbed. Ground flora comprises woodland and nitrophilous species, suggestive of nutrient input. Species include raspberry *Rubus idaeus*, bramble *Rubus fruticosus* agg., Yorkshire fog *Holcus lanatus*, creeping soft-grass *Holcus mollis*, false oat-grass *Arrhenatherum elatius*, tufted hair grass *Deschampsia cespitosa*, cocksfoot *Dactylis glomerata*, hogweed *Heracleum sphondylium*, creeping buttercup *Ranunculus repens*, creeping cinquefoil *Potentilla reptans*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping thistle *Cirsium arvense*, meadowsweet *Filipendula ulmaria*, cow parsley *Anthriscus sylvestris*, common sorrel *Rumex acetosa* and wood avens *Geum urbanum*.

TN4 – Dense scrub with hazel, hawthorn, broom *Cytisus scoparius*, wych elm and roses *Rosa* spp.



TN5 – Mosaic of open area of poor semi-improved grassland with bracken *Pteridium aquilinum* on bank and scattered scrub (blackthorn *Prunus spinosa*, hawthorn, gorse *Ulex europaeus*). Grassland contains abundant Yorkshire fog *Holcus lanatus*, cocksfoot, annual meadow grass *Poa annua* and false oat-grass *Arrhenatherum elatius* as well as common nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius*, dandelion *Taraxacum officinale* agg. and field forget-me-not *Myosotis arvensis*.

TN6 – Mature broad-leaved woodland with numerous old standard trees on steep bank. Tree species are oak, ash, beech, hazel, wych elm and blackthorn. Ground flora with abundant opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, as well as male fern, broad buckler fern *Dryopteris dilatata*, bramble, common nettle, wood avens, and creeping soft-grass *Holcus mollis*.

TN7 – Mosaic of poor semi-improved grassland and scrub. Hawthorn and broom are the most abundant scrub species. The grassland is dominated by Yorkshire fog, with abundant creeping buttercup, common nettle and some bracken.

TN8 – Dense scrub on bank comprises hawthorn, blackthorn, elder, gorse and broom.

TN9 – Strip of poor semi-improved grassland along valley base, adjacent to burn. An informal vehicle track runs through this area. The main grasses are cocksfoot, Yorkshire fog and false oatgrass, with common nettle and cow parsley also present.

TN10 – Scrub grades into a small area of ash woodland, with some mature standard trees.



TN11 – Mosaic of broad-leaved woodland and scrub. The woody species are oak, ash, alder *Alnus glutinosa*, hazel, hawthorn, blackthorn, elder, grey willow *Salix cinerea*, gorse and broom.

TN12 – Mosaic of open areas of poor semi-improved grassland with patches of scrub and bracken. Grassland contains Yorkshire fog, cocksfoot, false oat-grass, creeping buttercup, common sorrel *Rumex acetosa* common nettle and common chickweed *Stellaria media*.

TN13 - Hallrule Burn. Water running clear and moderately fast at the time of the survey. Stony bed, very little vegetation in burn. Banks have been modified/ strengthened in places using tyres and wood. Some areas of exposed soil around burn suggesting recent small collapses of vegetated areas. Vegetation on banks typically of grasses and ruderal species.

6.2 Animal Target Notes (AN)

AN1 – Several otter spraints in this area, although individual spraints rather than accumulations.

AN2 – Pheasant rearing pen.

AN3 – Single otter spraint on rock in burn.

AN4 – Possible otter resting place / shelter under rock and fallen tree. No spraint visible.

AN5 – Single otter spraint and potential resting place / shelter.

AN6 – Pheasant rearing pen

AN7 – The scrub across the site provides suitable nesting habitat for passerine bird species.

AN8 – The woodland across the site provides suitable nesting habitat for passerine bird species.



7. Extended Phase 1 Map