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Ecological Appraisal

Lilburn Estates Grouse Butts

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Fairhurst Ltd.



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Summary

OS Ecology Ltd were commissioned by Fairhurst Ltd. in April 2021 to undertake an Ecological Appraisal of Land at Hare Law, where it is proposed to add two grouse butts to an existing line of 10.

Table 1: Summary Table	
Designated Sites	Two Sites of Special Scientific Interest (SSSIs) (the Cheviot and the Allers and Lilburn Valley Junipers) are present within 2km of the site, both greater than 900m. Based on the small scale of works and the nature of the surrounding habitats, no impacts on these sites are anticipated.
Survey Findings	<p>The area within which it is proposed to site the grouse butts is found on an eastward facing slope on Hare Law, above exiting grouse butts. The wider area comprises an active grouse moor with a mosaic of bare ground, acid grassland. The habitats surrounding the location are grass dominated, grazed and have been influenced by grouse moor management, including through the use of burning in the wider area. The following photographs highlight the broader habitat present.</p> <p>The average peat depth at the two locations were 38cm and 34cm, with the average depth at the track being 30cm, with small areas considered to potentially comprise modified bog.</p> <p>Due to the small area of habitat to be impacted and the abundance in the wider area, the proposed development area is considered to be of low habitat value</p>
Birds	<p>The site provides a very small area of habitat suitable for a range of ground nesting species, including in some years potentially scarcer species such as short-eared owl in addition to more regularly recorded species such as red grouse, meadow pipit and skylark.</p> <p>The wider area will support a typical upland assemblage, including a range of priority species and upland waders, that are declining nationally.</p> <p>Due to the size of the site, it is likely to be of only low ornithological value. Should scarcer species be present onsite or adjacent the value would be greater during that particular breeding season.</p>
Reptiles	<p>No evidence of reptiles was recorded, though the site provides suitable habitat and this taxon is likely to be present in the local area.</p> <p>Due to the abundance of suitable habitat in the wider area, the site is considered to be of low value to the species.</p>
Other protected species	<p>Due to the nature of the site, other protected species are considered likely absent.</p> <p>The site is likely to be used on occasion by brown hare, recorded in the wider area, though is unlikely to be of greater than low value to this species.</p>

Potential Impacts as a result of the proposals	<ul style="list-style-type: none">• Loss of and disturbance to small areas of upland mosaic habitats on peat (potentially dry modified bog), with a depth ranging between 25cm and 41cm.• Potential damage to surrounding habitats during construction and increased usage during operation.• Potential harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive).• Potential harm and/or disturbance to reptiles, should they be present on site at the time of works.• Very low risk of harm to mammals such as brown hare that may utilise the site on occasion. Including through becoming trapped in any excavations that remain open overnight.
Recommendations	<ul style="list-style-type: none">• Works will be undertaken to a Construction, Environmental Management Plan (CEMP).• Works will not be undertaken during the nesting bird season (March to August inclusive) unless the site is checked by an appropriately experienced ecologist and nests are confirmed to be absent.• Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°.• The completed butts will be used for a maximum of 12 times per year, with vehicles utilising existing metalled tracks, and Argo Cats moving the guns over the more vulnerable habitats utilising ATV tracks.

1. Introduction

Site Location

- 1.1 The site is located at Hare Law, to the north west of Ingram and west of Wooperton.
- 1.2 The site can be found at central grid reference of NT 98684 19297. The site location is illustrated within figure 1 in the appendices.

Site Description

- 1.3 The proposals are to be sited at Hare Law, in an area dominated by acid grassland.

Objectives of the Study

- 1.4 The objectives of this report are:
 - To identify and describe any potential ecological receptors that may be present on site or within an identified zone of influence.
 - To identify and assess whether proposals may impact on the identified receptors.
 - To identify potential mitigation, compensation or enhancement measures if required.
 - To identify and detail further surveys if required.

Development Proposals

- 1.5 Proposals consist of two sunken grouse butts, approximately 20m apart, to be added to an additional line of 10 butts.
- 1.6 The proposed layout can be found within the appendices.

2. Methodology

Scope of Study

- 2.1 The site was surveyed to identify whether the following were present for legislative and planning purposes:
- Habitats of conservation value
 - Priority Habitats
 - Protected and Priority Species
- 2.2 The ecological characteristics of the site were reviewed to identify the scope of the assessment, with the zone of influence determined through professional judgement.
- 2.3 The survey area comprised the "site" defined within figure 1 (Appendix 2) and where access was available an approximate 50m buffer¹.

Desk Study

- 2.4 Desk study was undertaken to assess the nature of the surrounding habitats and included:
- Assessment of aerial imagery and Ordnance Survey mapping.
 - A search of the MAGIC website² for designated sites and European protected species within 2km of the survey area.

Field Survey

Habitats/Protected Species

- 2.5 The site was subject to a preliminary walk over, during which habitats were assessed in line with the Joint Nature Conservation Committee's Phase 1 Habitat Survey methodology³.
- 2.6 During the preliminary survey the site was checked for evidence of protected species and habitats were assessed for their potential to support such species.
- 2.7 In addition to the Phase 1 walkover, peat depths were taken at each of the proposed grouse butt locations.
- 2.8 Survey was undertaken by Mark Osborne CEcol MCIEEM and Mandy Rackham MCIEEM both experienced surveyors who hold a range of protected licences.

¹ The survey buffer may be increased depending on the species present and their identified core sustenance zones.

² Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

³ Handbook for Phase 1 Habitat Survey, A Technique for Environmental Audit, JNCC, 2010

2.9 The following equipment was utilised during survey:

- Zeiss 8x30 binoculars.
- Digital camera.
- Garmin eTrex 10 GPS
- 120cm peat probe

2.10 The survey was undertaken on the 8th April 2021 in the following weather conditions:

Table 2: PEA Survey Conditions				
Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
8 th April 2021	11°C	90%	None	SW6-7

Limitations to survey

2.11 Due to the time of year that the survey was completed, at the beginning of the core botanical period (April to September), it is considered that there is the potential that some plant species may not have been evident, however based on the nature of the site, this is not considered likely to have been a major constraint.

Assessment Methodology

2.12 Guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) is utilised to provide habitat valuations.

2.13 The level of value of specific ecological receptors is assigned using a geographic frame of reference. For, example international value being most important (SACs, SPAs and pSPAs), then national (SSSIs), regional, county (LWS), district (LNR), local and lastly, within the immediate zone of influence of the site only (low).

2.14 In terms of species, for example breeding birds, should the population within the site constitute greater than 1% of the geographic population, it would be considered significant at that level. In addition, presence of designated sites, scarce species and or quality⁴/diversity of habitats are used to guide that valuation

2.15 Assessment methods for bats have been undertaken with reference to Wray et al. (2007)⁵, which correlates with the geographic frame of reference. Within which they define the relative rarity of each species based on the known distribution⁶ at the time

⁴ Quality can be subjective and vary in different geographic areas. Reasoned professional judgement is therefore used to inform the assessment.

⁵ Wray et al (2007) Valuing Bats in Ecological Impact Assessment. In Practice. Based on a presentation at the Mammal Society – Specific Issues with Bats

⁶ It should be noted that there are regular changes to our understanding of distribution as further studies are undertaken.

and the value of the roost type, assuming that roosts such as feeding perches are of lower value than maternity roosts or sites that have a high level of fidelity.

3. Results

Desk Study

Designated Sites

- 3.1 A search of the Multi Agency Geographic Information for the Countryside Website⁷ indicated that two statutorily designated sites for nature conservation are present within the 2km search area.
- 3.2 The site is found within Northumberland National Park

Table 3: Statutorily Designated Sites within 2km			
Designation	Site Name	Reason for Designation	Distance from Survey Area (Closest point)
SSSI	The Cheviot ⁸	The Cheviot includes a range of upland habitats from valley woodlands, associations of acidic grassland, heathland and blanket bog to montane heath on the summits and including crags and spring features which support rare arctic-alpine plants. This site provides the best example of such a suite of upland habitats in Northumberland and supports a typical upland breeding bird community. Some rock features are also of geomorphological importance.	~1950m to the north west
	The Allers and Lilburn Valley Junipers ⁹	The Allers and Lilburn Valley Junipers is an area of relict juniper woodland and ancient alder woodland on the eastern edge of the Cheviot, Northumberland. Juniper woodland is rare in Northumberland and this site is one of the largest in the county with bushes of varied ages. Alder woodland has a restricted distribution in Northumberland and rarely occurs in extensive stands. Both woodland types are under threat principally from grazing which prevents regeneration.	~900m to the north
SSSI Impact Risk Zone (IRZ)			
The site is found within an identified SSSI impact Risk Zone for designated sites though does not meet the identified criteria for impacts.			

⁷ Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk (Accessed May 2021)

⁸ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1004471.pdf> (Accessed May 2021)

⁹ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000339.pdf> (Accessed May 2021)

Priority Habitats

3.3 A search of the MAGIC website identified that the site supports the following priority habitat:

- Upland Heathland.

General Land use

3.4 A review of aerial imagery and Ordnance Survey mapping highlighted that the general land use in the surrounding area comprises a mosaic of upland pasture, heath and acid grassland with sporadic small conifer plantations. The area is an actively managed grouse moor with a patchwork of vegetation levels present.

3.5 A large area of coniferous plantation has been felled to the west at Threestoneburn Wood.

3.6 The habitats present in the local area are displayed in the figures within the appendices.

Field Survey

Habitats

Table 4: Habitats on site




Overview of habitats

The area within which it is proposed to site the grouse butts is found on an eastward facing slope on Hare Law, above existing grouse butts. The wider area comprises an active grouse moor with a mosaic of bare ground, acid grassland. The habitats surrounding the location are grass dominated, grazed and have been influenced by grouse moor management, including through the use of burning in the wider area. The following photographs highlight the broader habitat present.



Grouse Butt Locations

Peat depths were taken at the location of each proposed grouse butt and habitat types within the area of both proposed locations. Each location is described below, starting with the eastern side.

<p>Grouse Butt 1</p> <p>The area comprises tussocky grassland, dominated by purple moor grass (<i>Molinia caerulea</i>). Heather (<i>Calluna vulgaris</i>) comprises approximately 20% of the sward with sheep's fescue (<i>Festuca ovina</i>) also present. In addition specimens of bilberry (<i>Vaccinium myrtillus</i>) and heath bedstraw (<i>Galium saxatile</i>) were also recorded. Small amounts of moss sp. were present, though the area was noted to be dry.</p> <p>The peat depth at this location was ~38cm.</p>	
<p>Grouse Butt 2</p> <p>The composition of the sward in this location was like that of the first, though with a slightly lower abundance of heather.</p> <p>The peat depth at this location was ~34cm.</p>	
<p>Track</p> <p>The existing grass track has a closely grazed sward, with heath rush (<i>Juncus squarrosus</i>) and sweet vernal grass (<i>Anthoxanthum odoratum</i>) noted to be present.</p> <p>The average peat depth across on the upper part of the track was 30cm</p>	

Protected Species

Birds

- 3.7 The wider area provides abundant nesting opportunities for a typical upland assemblage found in this area of Northumberland, including a range of passerines, waders and potentially raptors/owls.
- 3.8 Due to the small area to be impacted, numbers nesting within these areas are likely to be small but will likely include a different range of species each breeding season.
- 3.9 A total of 8 species were recorded during the survey, these are listed in the following table:

Species	Priority species ¹⁰	Comment
Cuckoo	▮	Calling from the plantation to the east
Curlew	▮	Displaying offsite
Lapwing	▮	Present within pasture to the east
Lesser Black-backed Gull		Overflying
Meadow Pipit		Overflying & disturbed from site
Red Grouse	▮	100s of individuals across the area
Skylark	▮	Overflying
Willow Warbler		Singing from plantation to the east
Notes:		
1. Red list species are of high conservation concern		
2. Amber list species are of medium conservation concern ¹¹		

Reptiles

- 3.10 The local area provides abundant habitat suitable for this taxa with adder, common lizard and potentially slow worm likely to be present in the wider.
- 3.11 No evidence of the taxa was recorded during survey.

Other protected species

- 3.12 No other protected species are anticipated to be present.
- 3.13 Brown hare, a priority species were recorded in the wider area.

¹⁰ National Priority Species are species of principal importance listed in Section 41 of the NERC Act (2006),

¹¹ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708-746.

4. Site Assessment

Assessment of survey findings

Habitats

- 4.1 Habitats on site are typical to this area of upland Northumberland, comprising a mosaic of grazed acid grassland and dry heath.
- 4.2 Peat depths were found to range between 34cm and 38cm in the two locations, and 30cm on the current track. Small areas considered to potentially comprise dry modified bog.
- 4.3 Greater peat depths were recorded at the base of the slope adjacent to the existing grouse butts.
- 4.4 Due to the small area of habitat to be impacted and the abundance in the wider area, the proposed development area is considered to be of low habitat value.

Nesting Birds

- 4.5 The site provides a very small area of habitat suitable for a range of ground nesting species, including in some years potentially scarcer species such as short-eared owl in addition to more regularly recorded species such as red grouse, meadow pipit and skylark.
- 4.6 The wider area will support a typical upland assemblage, including a range of priority species and upland waders, that are declining nationally.
- 4.7 Due to the size of the site, it is likely to be of only low ornithological value. Should scarcer species be present onsite or adjacent the value would be greater during that particular breeding season.

Reptiles

- 4.8 No evidence of reptiles was recorded, though the site provides suitable habitat and this taxon is likely to be present in the local area.
- 4.9 Due to the abundance of suitable habitat in the wider area, the site is considered to be of low value to the species.

Other protected species

- 4.10 Due to the nature of the site, other protected species are considered likely absent.

- 4.11 The site is likely to be used on occasion by brown hare, though is unlikely to be of greater than low value to this species.

Designated sites

- 4.12 The site does not form part of a designated site.
- 4.13 Two SSSIs (the Cheviot and the Allers and Lilburn Valley Junipers) are present within 2km of the site, both greater than 900m, though based on the small scale of works and the nature of the surrounding habitats, no impacts are anticipated.

5. Impacts

- 5.1 The following impacts are based on the survey work to date and the understanding that the Client wishes to add two additional grouse butts to an existing a line of 10 grouse butts and utilise an existing atv access track.
- 5.2 As a result of the assessment completed and the nature of the proposed works, the likely impacts, without appropriate avoidance measures, mitigation and/or compensation scheme, are:
- Loss of and disturbance to small areas of upland mosaic habitats on peat (potentially dry modified bog), with a depth ranging between 34cm and 38cm.
 - Additional use of an area of existing grass track, with an average peat depth of 30cm.
 - Potential damage to surrounding habitats during construction and increased usage during operation.
 - Potential harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive).
 - Potential harm and/or disturbance to reptiles, should they be present on site at the time of works.
 - Very low risk of harm to mammals such as brown hare that may utilise the site on occasion. Including through becoming trapped in any excavations that remain open overnight.

6. Recommendations

Further Survey

6.1 Based on the nature of the site no further surveys are recommended.

Avoidance Measures

6.2 The following measures should be incorporated into the design of the scheme to avoid impacts on wildlife:

- Works will be undertaken to a Construction, Environmental Management Plan (CEMP).
- Works will not be undertaken during the nesting bird season (March to August inclusive) unless the site is checked by an appropriately experienced ecologist and nests are confirmed to be absent.
- Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°.
- The completed butts will be used for a maximum of 12 times per year, with vehicles utilising existing metalled tracks, and Argo Cats moving the guns over the more vulnerable habitats utilising ATV tracks.

Mitigation Strategy

6.3 The following is recommended:

- Works on site will be undertaken in accordance with the construction and environmental management plan. That will include method statements for nesting birds and reptiles

Appendix 1 – Policy and Legislation

Planning Policy

National Planning Policy Framework (NPPF)¹²

The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced. Planning law requires that applications for planning permission be determined in accordance with the development plan. The key paragraphs from the relating to the natural environment are detailed below:

Table 6: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	Statement
170	<p>Planning policies and decisions should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
171	<p>Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework¹³; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.</p>
172	<p>Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads¹⁴. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development¹⁵ other</p>

¹² NPPF February 2019 (<https://www.gov.uk/government/publications/national-planning-policy-framework--2>)

¹³ Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

¹⁴ English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

¹⁵ For the purposes of paragraphs 172 and 173, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

Table 6: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	Statement
	<p>than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy; b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
173	<p>Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.</p>
174	<p>To protect and enhance biodiversity and geodiversity, plans should:</p> <ul style="list-style-type: none"> a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity¹⁶; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation¹⁷; and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
175	<p>When determining planning applications, local planning authorities should apply the following principles:</p> <ul style="list-style-type: none"> a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), b) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; c) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; d) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons¹⁸ and a suitable compensation strategy exists; and development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.
176	<p>The following should be given the same protection as habitats sites:</p> <ul style="list-style-type: none"> a) potential Special Protection Areas and possible Special Areas of Conservation;

¹⁶ Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

¹⁷ Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

¹⁸ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

Table 6: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	Statement
	<i>b)</i> listed or proposed Ramsar sites ¹⁹ ; and sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
177	The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government Circular ODPM 06/2005 Biodiversity and Geological Conservation²⁰ (England only)

This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Part IV - Conservation of Species protected by Law details that the presence of a protected species is a material consideration when considering a development proposal that may result in harm to the species or its habitat and that planning authorities must have regard to species protected under the Habitat Regulations.

It goes on to say that: *it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.*

Natural Environment and Rural Communities (NERC) Act 2006^{21 22}

Section 40 – To conserve biodiversity

Section 40 puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions,

Section 41 – Biodiversity list and Action

Section 41 – Requires the Secretary of State *to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose*

¹⁹ Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

²⁰ ODPM Circular 06/2005 Office of the Deputy Prime Minister Eland House, Bressenden Place, London SW1E 5DU Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System

²¹ <https://www.legislation.gov.uk/ukpga/2006/16/section/40>

²² <https://www.legislation.gov.uk/ukpga/2006/16/section/41>

of conserving biodiversity. They must also take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps.

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

Table 7: UK Priority Habitats (excl. marine habitats)²³

UK BAP broad habitat	UK BAP priority habitat
Rivers and Streams	Rivers
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes
	Ponds
	Mesotrophic Lakes
	Eutrophic Standing Waters
	Aquifer Fed Naturally Fluctuating Water Bodies
Arable and Horticultural Boundary and Linear Features	Arable Field Margins
	Hedgerows
Broadleaved, Mixed and Yew Woodland	Traditional Orchards
	Wood-Pasture and Parkland
	Upland Oakwood
	Lowland Beech and Yew Woodland
	Upland Mixed Ashwoods
	Wet Woodland
	Lowland Mixed Deciduous Woodland
	Upland Birchwoods
Coniferous Woodland	Native Pine Woodlands
Acid Grassland	Lowland Dry Acid Grassland
Calcareous Grassland	Lowland Calcareous Grassland
	Upland Calcareous Grassland
	Lowland Meadows
Neutral Grassland	Upland Hay Meadows
	Coastal and Floodplain Grazing Marsh
Improved Grassland	Lowland Heathland
	Upland Heathland
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps
	Purple Moor Grass and Rush Pastures
	Lowland Fens
	Reedbeds
Bogs	Lowland Raised Bog
	Blanket Bog
Montane Habitats	Mountain Heaths and Willow Scrub

²³ <http://jncc.defra.gov.uk/page-5706>

Inland Rock	Inland Rock Outcrop and Scree Habitats
	Calaminarian Grasslands
	Open Mosaic Habitats on Previously Developed Land
Supralittoral Rock	Limestone Pavements
	Maritime Cliff and Slopes
Supralittoral Sediment	Coastal Vegetated Shingle
	Machair
	Coastal Sand Dunes

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations 2017. This make it an offence to:

- deliberately capture, injure or kill any European Protected Species (EPS)
- deliberately disturb any European Protected Species (EPS);
- damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly²⁴ disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

Table 8: European Protected Species relevant to the UK			
Animals		Plants	
All bat species	Great Crested Newt	Yellow marsh saxifrage	Creeping marshwort
Large blue butterfly	Otter	Shore dock	Slender naiad
Wild cat	Smooth snake	Killarney fern	Fen Orchid
Dolphins, porpoises and whales (all species)	Sturgeon fish	Early gentian	Floating-leaved water plantain
Dormouse	Natterjack toad	Lady's slipper	
Sand lizard	Pool Frog		

²⁴ Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

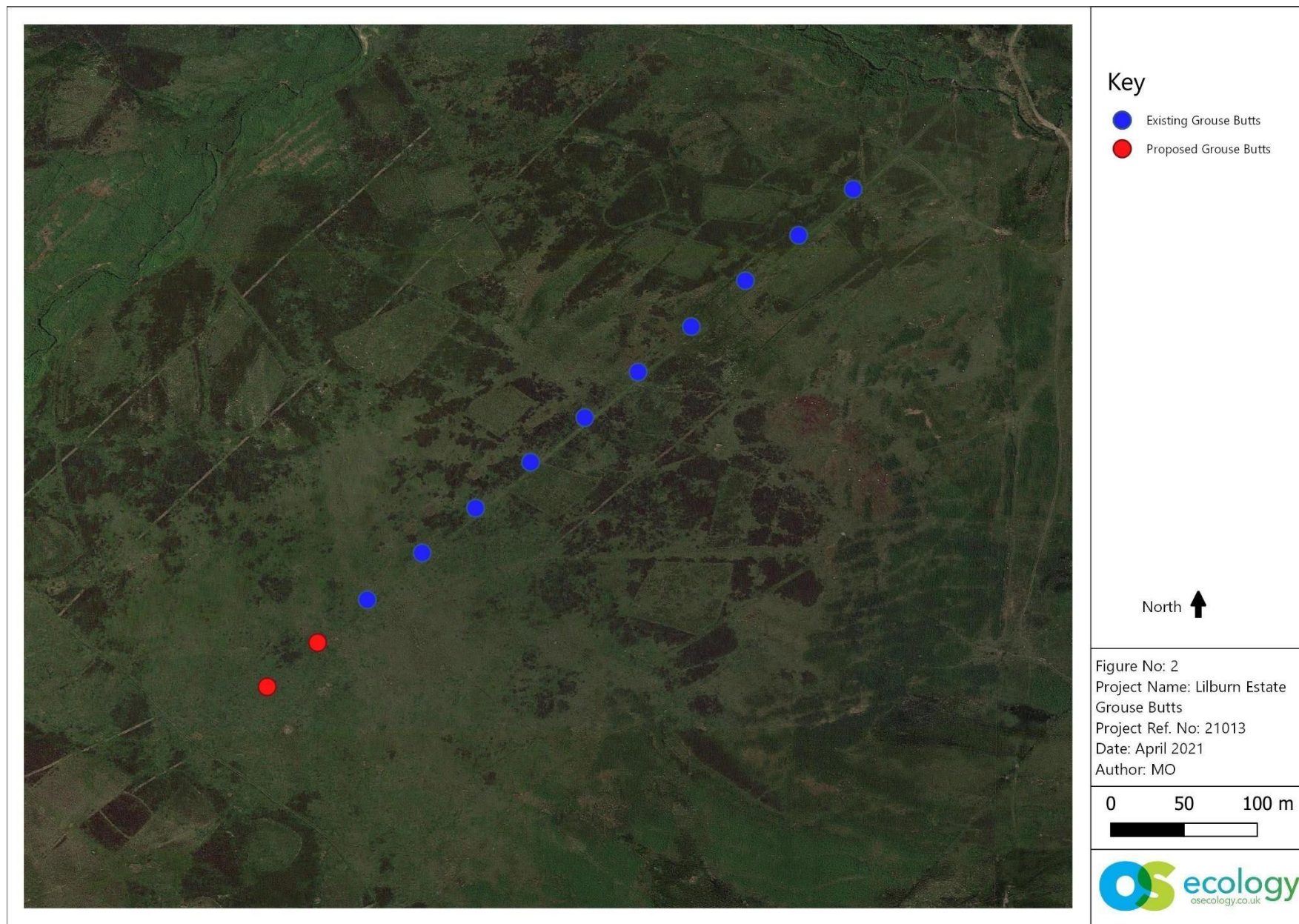
Fisher's Estuarine Moth	Snail, Lesser Whirlpool Ram's-horn
Marine turtles	

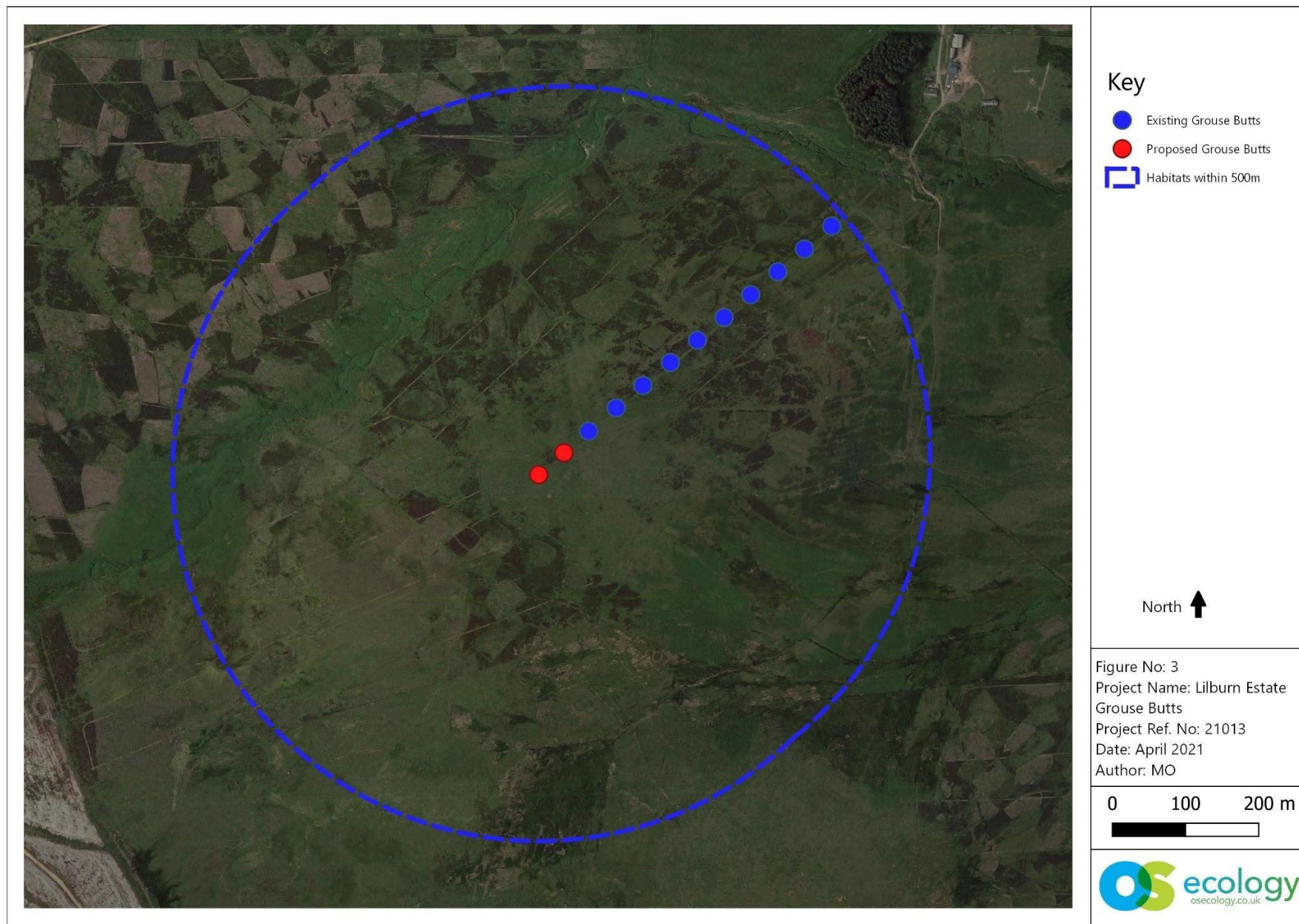
Other Protected Species

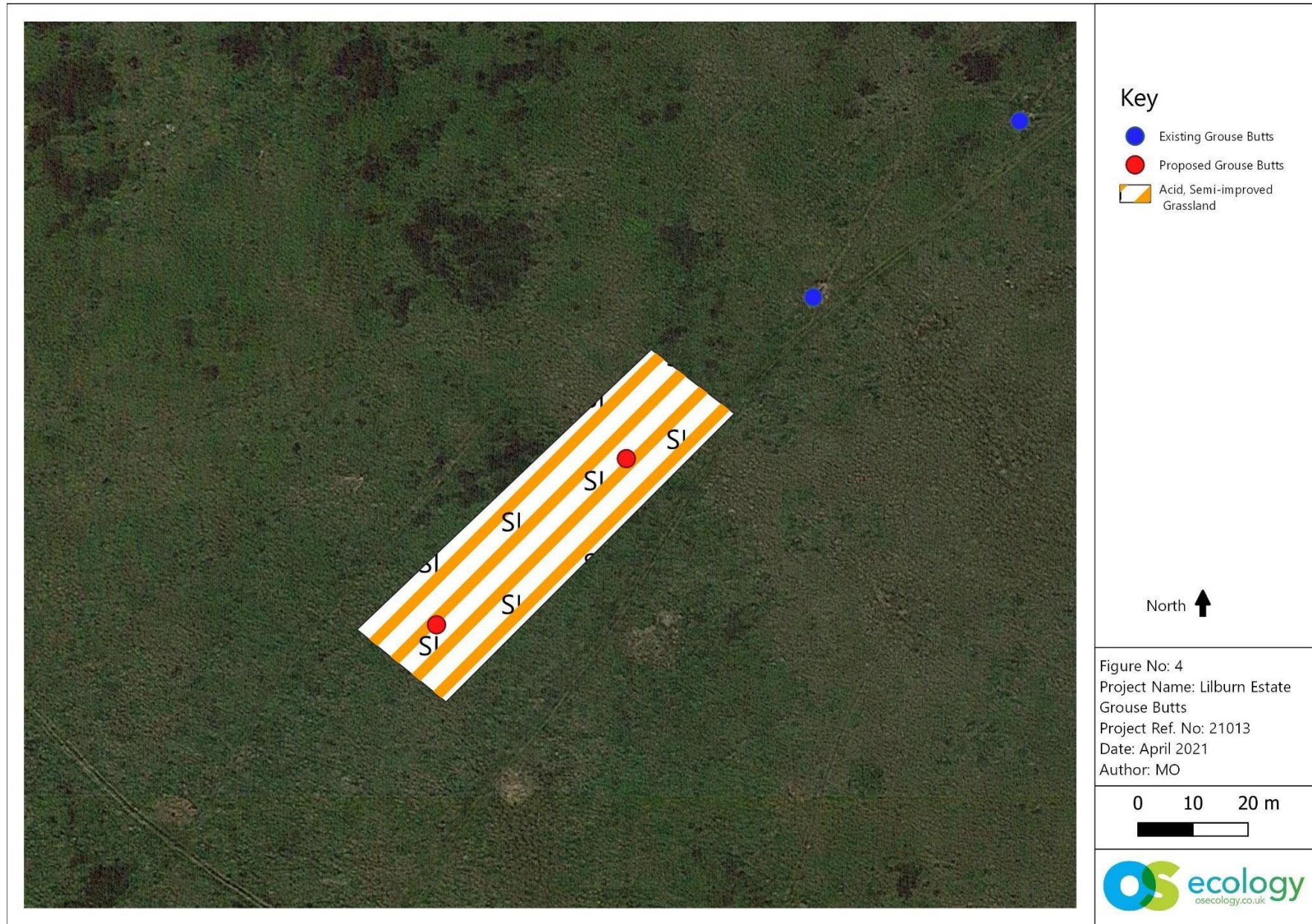
Table 9: Other Protected Species		
Species	Legislation	Level of Protection
Birds	Wildlife and Countryside Act 1981 (as amended)	<p>Under the Wildlife and Countryside Act (1981) it is an offence if any person:</p> <ul style="list-style-type: none"> intentionally kills, injures or takes any wild bird intentionally takes, damages or destroys the nest of any wild bird whilst that nest is in use of being built; intentionally takes, damages or destroys eggs of any wild bird; <p>Wild birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected from:</p> <ul style="list-style-type: none"> intentional or reckless disturbance whilst it is building a nest or is in, on or near a nest containing eggs or young; disturbance of dependent young
Slow-worm Adder Grass Snake Common Lizard	Wildlife and Countryside Act 1981 (as amended)	<p>Under the Wildlife and Countryside Act (1981) it is an offence if any person:</p> <ul style="list-style-type: none"> intentionally kill or injures these slow-worms, adders, grass snakes or common lizards sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead slow-worm, adder, grass snake or common lizard or any part of, or anything derived from, such an animal

Appendix 2 – Figures











Appendix 3 - Construction Environmental Management Plan (CEMP)

Introduction

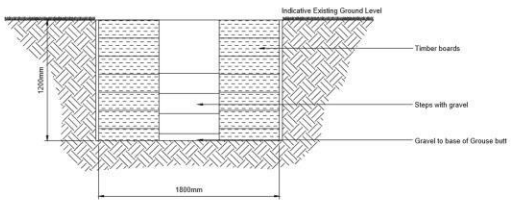
1. OS Ecology Ltd were commissioned to produce a Construction Environmental Management Plan (CEMP) in relation to the proposed construction of two sunken grouse butts, approximately 20m apart, to be added to an existing line of 10 butts at Hare Law, to the north west of Ingram and west of Wooperton.
2. This CEMP aims to ensure that the ecological receptors within and adjacent to the site are protected during the construction process through avoidance and mitigation measures.
3. Within this document, working areas are defined as any areas where permanent or temporary construction, storage or access routes are proposed.

Site Location

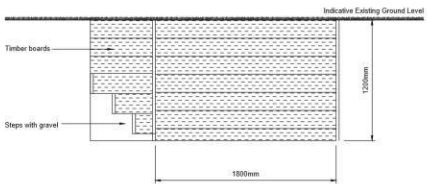
1. The site is located on the Lilburn Estate at Hare Law, to the north west of Ingram and west of Wooperton.
2. The site can be found at central grid reference of NT 98684 19297. The site location is illustrated within figure 1 in the appendices.

Description of the Proposals

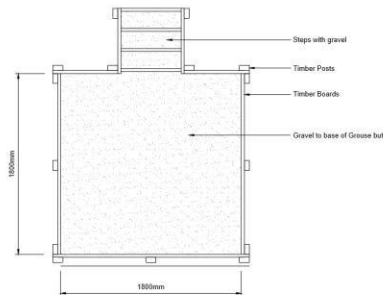
1. Proposals consist of two sunken grouse butts, approximately 20m apart, to be added to an existing line of 10 butts.
2. Site plans are provided below:




Detail 1
Typical cross section through Grouse Butt
Scale: 1:20



Detail 2
Typical long section through Grouse Butt
Scale: 1:20



Detail 3
Plan View of Grouse Butt
Scale: 1:20



Example images of Grouse Butts

Do not scale from this drawing.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION:

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE.

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Rev	Date	Description	Drawn	Checked						
<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">FAIRHURST</td> <td style="text-align: center;">Company</td> </tr> <tr> <td colspan="2">1 Alport Court Newbold-leazar-Trust M1 2BB</td> </tr> <tr> <td colspan="2" style="text-align: center;">LILBURN ESTATES</td> </tr> </table>					FAIRHURST	Company	1 Alport Court Newbold-leazar-Trust M1 2BB		LILBURN ESTATES	
FAIRHURST	Company									
1 Alport Court Newbold-leazar-Trust M1 2BB										
LILBURN ESTATES										
Project File: LILBURN ESTATES – GROUSE BUTTS										
Drawing Title: GROUSE BUTT DETAILS										
Scale of A1: AS SHOWN										
Drawn: EOR		Checked: JM		Approved: JW						
Date: 01/12/20		Date: 02/12/20		Date: 02/12/20						
Drawing No: 141053/8002				Revised: —						

Risk Assessment and Mitigation Strategy

The following table details the identified receptors on site and protection measures.

Ecological Impacts and Management of Ecological Risks			
Receptor	Potential Impact	Action	Responsibility
Habitats	<ul style="list-style-type: none"> Loss of and disturbance to small areas of upland mosaic habitats on peat (potentially dry modified bog), with a depth ranging between 34cm and 38cm. Additional use of an area of existing grass track, with an average peat depth of 30cm. Potential damage to surrounding habitats during construction and increased usage during operation. 	<ul style="list-style-type: none"> Works will be undertaken by hand or with a rubber tracked excavator. Materials will be taken to site utilising a rubber tracked dumper, utilising existing tracks where possible. The top layer of vegetation will be carefully removed and replaced once works are complete covering artificial materials. Hoggin will be used to create soakaways limiting the requirement for drainage. The completed butts will be used for a maximum of 12 times per year, with vehicles utilising existing metalled tracks, and Argo Cats moving the guns over the more vulnerable habitats utilising ATV tracks. Appropriate seeding will be spread along the track where possible to ensure vegetation can grow back were vehicles have been used. 	Site Manager
Breeding Birds	<ul style="list-style-type: none"> Potential harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive). 	<ul style="list-style-type: none"> Works will commence in June/July when the majority of birds will have finished nesting and reptiles are active. Works will not be undertaken during the nesting bird season (March to August inclusive) unless the site is checked by an appropriately experienced ecologist and nests are confirmed to be absent. Vegetation to be visually checked prior to clearance. 	Site Manager
Reptiles	<ul style="list-style-type: none"> Potential harm and/or disturbance to reptiles, should they be present on site at the time of works. 	<ul style="list-style-type: none"> Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°. Vegetation to be visually checked prior to clearance. 	Site Manager
Mammals	<ul style="list-style-type: none"> Very low risk of harm to mammals such as brown hare that may utilise the site on occasion. Including through becoming trapped in any excavations that remain open overnight. 	<ul style="list-style-type: none"> Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°. 	Site Manager

