# Egg Production Facility, Stranraer 784-B067657

**Preliminary Ecological Appraisal** 

**Mark Buchanan** 

**December 2024** 

Document prepared on behalf of Tetra Tech Limited. Registered in England number: 01959704

TE TETRA TECH

Tetra Tech Edinburgh, Part 4th Floor, The Cube, 45 Leith Street, Edinburgh, United Kingdom, EH1 3AT

Tetra Tech Limited. Registered in England number: 01959704 Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS14ER

# DOCUMENT CONTROL

Document:	Preliminary Ecological Appraisal
Project:	Egg Production Facility, Stranraer
Client:	Mark Buchanan
Project Number:	784-B067657
File Origin:	\\lds-dc-vm-101\data\Projects\784-B067657_Egg_Prod_Facility_Stranraer\60 Project Output\61 Work in Progress\Ecology

Version:	1	Prepared by:	Rob Gavan MSc BSc ACIEEM Senior Ecologist
Date:	20/12/2024	Checked by:	Doug Blease BSc (Hons) Associate Director MCIEEM
Status:	Issue	Approved By:	Victoria Gibson BSc (Hons) MSc MCIEEM Principal Ecologist
Description of Revision:			

#### **TABLE OF CONTENTS**

EXECU	TIVE SUMMARY1	
1.0	INTRODUCTION1	
1.1	Background1	
1.2	Site Description1	
1.3	Development Proposals1	
1.4	Purpose of Report2	
1.5	Quality2	
1.6	Validity2	
2.0	METHODOLOGY	
2.1	Historic Surveys	
2.2	Desk Study3	
2.3	Field Surveys	
	2.3.1 Habitats	
	2.3.2 Protected and Notable Species4	
3.0	RESULTS & EVALUATION	
3.1	Protected Sites	
3.2	Habitats8	
3.3	Protected and Notable Species13	
4.0	RECOMMENDATIONS19	
4.1	Mitigation and Further Survey19	
5.0	CONCLUSIONS	
REFERENCES		
FIGUR	ES	
APPEN	IDICES	

#### **APPENDICES**

APPENDIX A: REPORT CONDITIONS APPENDIX B: LANDSCAPE MASTERPLAN APPENDIX C: TARGET NOTES APPENDIX D: KEY LEGISLATION APPENDIX E: HSI CALCULATIONS

## EXECUTIVE SUMMARY

Contents	Summary
Site Location	The 33 hectare (ha) site is located West Dhuloch in Dumfries and Galloway and is centred at Ordnance Survey National Grid Reference NW 98910 65912 (Figure 1). The main site component was several cow-grazed grasslands, with an area of waterlogged land to the north, which supported a rush pasture of varying diversity. The topography was undulating, with bedrock outcrops scattered across the site. To the north of the western field this had created raised areas and more depressed regions, where either gorse scrub <i>Ulex europaeas</i> or rush pasture dominated in a complex mosaic. There were several abandoned buildings in the eastern field, which were in a state of disrepair, with two large dew ponds in the eastern field, and a smaller pond to the west. Unmanaged and gappy hedgerows were present as boundary markers to the east, whilst a ditch was present along the central access track, that lead to farm buildings beyond the site boundary. There were two boundary features associated with this assessment. The purple line boundary comprises the development extents, whilst the blue line boundary illustrates the wider survey effort. Both features, are present in Figure 1.
Proposals	Tetra Tech understand the proposals involve the development of two large hen houses, together with a dung store, plus turning areas for each of the buildings. The brief provided by the client indicate the buildings would each be served by a lane, which would connect to an existing informal drive off the main road, which connects to the B738. It is understood that the footprint of each of the proposed buildings would be approximately 6,400 sqm, plus the dung store of approximately 288 sqm. Each building would accommodate 64,000 birds. The total footprint of the combined development is likely to be around 1.5 hectares.
Scope of this Survey(s)	<ul> <li>The purpose of this report is to:</li> <li>Undertake a desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected / notable species within the site and its zone of influence</li> <li>Present the results of an extended Habitat Classification Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and evidence of protected fauna or habitats capable of supporting such species</li> <li>Evaluate potential ecological receptors on site and within the zone of influence; identify any constraints to the site's development and make any recommendations for further surveys, mitigation or enhancement.</li> <li>This report should be read in conjunction with the accompanying Biodiversity Net Gain report (ref 784-B067657_Egg Production Facility_BNG).</li> </ul>
Results and Evaluation	The site falls within the Galloway and Southern Ayrshire Biosphere Reserve. This places an additional conservation priority of several habitats including wetland, of which rush pasture is included. As there will be no impact on this habitat no further assessment is required. Additionally, the rush pasture immediately north of the development site supports suitable habitat for hen harrier, both nesting and foraging. This species is a designating

	feature of the Glen App and Galloway Moors SPA /SSSI located 8 km to the east. As such a Stage 1 (Screening) report to inform Habitats Regulations Assessment (HRA) is required to establish whether the development proposals have the potential to affect the integrity of the designated site(s) or its qualifying species. If possible pathways are identified a Stage 2 (Appropriate Assessment) may be required. No further internationally or nationally designated sites are anticipated to be impacted by the proposed development due to large distances between the works areas and an absence of suitable pathways from source to receptor. The site was predominantly comprised of a species-poor cow grazed grassland of limited ecological value. However, the complex of rush pasture and ditches to the south, scattered dew ponds, pockets of scrubland, and proximity to a large expanse of diverse rush pasture to the north, provides suitability to several protected and notable species, including foraging and commuting bats, amphibians, including GCN, and transient otter, reptiles and brown hare.
Recommendations	<ul> <li>Eurther survey <ul> <li>Undertake bat activity surveys, comprising one night-time bat walkover per season (spring, summer and autumn) as well as static monitoring between April and October.</li> <li>Undertake presence / likely absence GCN surveys (environmental DNA survey) of waterbodies within 250 m of the site.</li> <li>Undertake a breeding bird assessment, which comprises six surveys to be undertaken between March and early July by suitably experienced ecologists</li> <li>A report to inform a HRA will be required to establish whether the development proposals have the potential to affect the integrity of the designated site(s) or its qualifying species.</li> </ul> </li> <li>Mitigation recommendations <ul> <li>Works should be undertaken outside the nesting bird season (usually considered to be March to September inclusive) to avoid disturbing active nests;</li> <li>If works are undertaken within the nesting season, these should be preceded by a nesting bird check; if nesting birds are found, active nests must remain undisturbed in situ;</li> <li>Good practice measures (such as covering excavations or providing means of escape) are recommended to prevent entrapment of wildlife;</li> <li>Site staff are to be vigilant for invasive species and report any findings immediately;</li> <li>The site should demonstrate biodiversity enhancements in line with NPPF4; and, A Construction Environmental Management Plan is recommended with the aim of minimising indirect impacts such as dust, runoff, noise and lighting to erologically important features</li> </ul> </li> </ul>
Conclusion	Provided the measures within this report for further survey and mitigation can be adopted, it is anticipated that a design could be brought forward for this site that would be compliant with current local and national biodiversity planning policy.

## **1.0 INTRODUCTION**

## **1.1 BACKGROUND**

Tetra Tech Limited (Tetra Tech) was commissioned by Mark Buchanan in September 2024 to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land located between Dogstone Hill and Mains of Dhuloch, hereafter referred to as "the site".

This report has been prepared by Senior Ecologist, Rob Gavan, MSc BSc, ACIEEM and the conditions pertinent to it are in Appendix A.

## **1.2 SITE DESCRIPTION**

The 33 hectare (ha) site is located West Dhuloch in Dumfries and Galloway and is centred at Ordnance Survey National Grid Reference NW 98910 65912 (Figure 1). The main site component was several cowgrazed fields, with an area of waterlogged land to the south, which supported a rush pasture of varying diversity. The topography was undulating, with bedrock outcrops scattered across the site. To the northwest of the site boundary this had created raised areas and more depressed regions, where either gorse scrub *Ulex europaeus* or rush pasture dominated in a complex mosaic. There were several abandoned buildings, which were in a state of disrepair, with two dew ponds in the eastern field, and a smaller pond to the west. Unmanaged and gappy hedgerows were present as boundary markers to the east, whilst a ditch was present along the central access track, that led to farm buildings beyond the site boundary.

There were three boundary features associated with this assessment. The red line boundary comprises the planning application extent, the purple line boundary comprises the development extents, whilst the blue line boundary illustrates the wider survey effort. Each of these features are present in Figure 1.

## **1.3 DEVELOPMENT PROPOSALS**

Tetra Tech understands the proposals involve the development of two large hen houses, together with a dung store, plus turning areas for each of the buildings. The brief provided by the client indicate the buildings would each be served by a lane, which would connect to an existing informal drive off the main road, which connects to the B738. It is understood that the footprint of each of the proposed buildings would be approximately 6,400 sqm, plus the dung store of approximately 288 sqm. Each building would accommodate 64,000 birds. The total footprint of the combined development is likely to be around 1.5 hectares.

There has been several iterations of the application boundary, with a finalised plan provided after the ecology survey was undertaken. Consequently, the ecological assessment refers to three different boundary features as follows:

- The red line boundary is the finalised application boundary which encompasses further areas to the northeast and northwest, which were not surveyed. It is proposed that two drainage swales will be formed, one to the east, and a second to the west, which will connect to existing channels

(see the Landscape Master Plan in Appendix B). As these swales will be grassy depressions, there is no perceived impact, and the lack of ecological data is not considered a constraint.

- The blue line boundary demonstrates the ecological assessment survey extents.
- The purple line boundary provides the original application boundary and encompasses the extents of the proposed development.

## **1.4 PURPOSE OF REPORT**

The purpose of this report is to:

- Undertake a desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected / notable species within the site and its zone of influence
- Present the results of an extended Habitat Classification Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and; evidence of protected fauna or habitats capable of supporting such species
- Evaluate potential ecological receptors on site and within the zone of influence; identify any constraints to the site's development and make any recommendations for further surveys, mitigation or enhancement.

Scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading (Stace, 2018).

This report should be read in conjunction with the accompanying Biodiversity Net Gain report (ref 784-B067657\_Egg Production Facility\_BNG).

## 1.5 QUALITY

Our ecologists follow CIEEM's Code of Professional Conduct (CIEEM, Code of Professional Conduct, 2022), with all surveys completed in accordance with Tetra Tech's Biosecurity Policy (Tetra Tech, 2023).

All staff have completed Health and Safety training. Risk Assessment Method Statements have been completed and verified prior to the site visit, with Dynamic Risk Assessments completed by all site staff upon arrival at site

## **1.6 VALIDITY**

This report will remain valid for 18 months, until June 2026, in accordance with (CIEEM, Advice note on the lifespan of ecological reports & surveys, 2019). After this time, it may be appropriate to consult an ecologist to confirm if an update assessment is required. The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the habitats present, purple line boundary or development proposals upon which this report was based.

## 2.0 METHODOLOGY

## 2.1 HISTORIC SURVEYS

There are no previous reports and(or) completed surveys for the site, and the Dumfries and Galloway planning portal did not return any historic records or this site.

## 2.2 DESK STUDY

The desk study undertaken in October 2024 involved a review of information available in the public domain with regards to designated and notable areas of biological interest, and a data search obtained from the South West Scotland Environmental Information Centre (SWSEIC).

The desk study used the following online databases:

- NBN Atlas (NBN Atlas, 2024);
- NatureScot Sitelink (NatureScot, 2024);
- Native Woodland Survey of Scotland (NWSS) data (Scottish Forestry, 2024);
- Ancient Woodland Inventory (AWI) (Scottish Government, 2024); and
- Buglife B-Lines<sup>1</sup>.

The geographical extent of the search area was related to the significance of sites and species and potential zones of influence. For this site the following search areas were considered appropriate:

- 10 km for sites of International Importance (e.g. Marine Protected Areas (MPA), Special Areas of Conservation (SAC), Special Protection Area (SPA), Ramsar sites);
- 2 km for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI), protected or otherwise notable species and non-statutory designated sites of County Importance (e.g. Local Wildlife Sites (LWS));
- 2 km for biological records; and
- 1 km search for ancient woodland on the AWI and NWSS.

The data search did not cover Tree Preservation Orders (TPOs); or Conservation Areas designated for their special architectural and historic interest.

Further information on relevant species / environmental legislation and planning policy can be found in Appendix D.

## 2.3 FIELD SURVEYS

The following methodologies have been used to identify the ecological receptors present on or near the site and which are relevant to the proposed development.

<sup>&</sup>lt;sup>1</sup> B-Lines have been mapped by Buglife to address the problem of the loss of flowers and pollinators. The B-Lines are a series of 'insect pathways' running through our countryside and towns, along which Buglife are restoring and creating a series of wildflower-rich habitat stepping-stones.https://www.buglife.org.uk/our-work/b-lines/b-lines-scotland/ Accessed October 2024.

## **Biosecurity**

All surveys were conducted in accordance with Tetra Tech Biosecurity Policy (Tetra Tech, 2023).

## 2.3.1 Habitats

An extended Habitat Classification Survey was undertaken on the site on 22<sup>nd</sup> November 2024 by Tetra Tech Senior Ecologist, Rob Gavan, MSc BSc, ACIEEM.

The habitats present on site were mapped in accordance with the UK Habitat Classification Professional Edition – Version 2.0 (UK Hab Ltd., 2023), hereafter referred to as 'UKHab'. The habitats have been classified to a minimum of 'Level 3' (in accordance with UKHab), to identify the presence of any Habitats of Principal Importance (HPIs) listed on the Scottish Biodiversity List (NatureScot, 2020). Where habitats occur in multiple areas of the site or are of different condition, additional polygons of the same habitat have been mapped so that their condition may be assessed independently.

The minimum recording unit for habitat is 25m<sup>2</sup> or 5m length for linear habitats (such as hedgerows or watercourses). Dominant plant species were recorded for each habitat present using standard nomenclature, with the scientific names for vascular (flowering) plant species follow those in the New Flora of the British Isles (Stace, 2019). Relative plant species abundance was estimated using the DAFOR<sup>2</sup> scale.

## 2.3.2 Protected and Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), Schedule 5 of the Wildlife and Countryside Act (W&CA) 1981 (as amended), those given extra protection under Section 2 of the Nature Conservation (Scotland) Act (NCA) 2004, and species included in the Dumfries and Galloway Local Biodiversity Action Plan (LBAP).

The presence of some species was determined using standard best practice guidance and are listed below.

### Badger

The site was surveyed for evidence of badger *Meles meles* setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell, & Jefferies, 1989).

### Otter

The site was assessed for its suitability to support otter *Lutra lutra* using industry standard survey advice (Chanin, 2003).

### Water Vole

Waterbodies within or adjacent to the site were assessed for their suitability to support water vole *Arvicola amphibius* using the industry standard survey advice (Dean, 2016).

### Bats

<sup>&</sup>lt;sup>2</sup> The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D), Abundant (A), Frequent (F), Occasional (O), Rare (R), The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type

#### **Roosting Bats - Buildings / Structures / Trees**

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT Good Practice Guidelines (Collins, Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition), 2023), hereafter referred to as the 'BCT Guidelines'.

#### **Categorisation of Buildings**

A preliminary assessment of buildings/structures on site was undertaken from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT Guidelines, and outlined in Table 1 below.

Suitability	Typical Roosting Features
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, condition (for example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.) and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation - the categorization described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by large numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity, or classic cool/stable hibernation site but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation - the categorization described in this table is made irrespective of species conservation status, which is established after presence is confirmed).

#### Table 1: Categories of Bat Roost Suitability (BCT Guidelines)

#### **Categorisation of Trees**

A preliminary assessment of trees was undertaken, and trees were categorised to highlight whether additional assessment is required referring to the categories in Table 2 below. Professional judgement was used to identify trees where features could be obscured by foliage or other branches. If a feature was identified on the tree the tree was categorised as PRF as the tree had at least 1 potential roost feature (PRF) present.

#### Table 2: Categorisation of Trees

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any.
FAR	Further assessment required (FAR) to establish if PRFs are present in the tree.
PRF	A tree with at least one potential roost feature (PRF) present.

#### **Birds**

Bird species identified at the time of survey were noted and nesting birds recorded as seen. An assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

#### **Great Crested Newt & Common Amphibians**

The site was appraised for its suitability to support great crested newt (GCN) *Triturus cristatus* based on guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Beckett, & Foster, 2001). This appraisal also considered waterbodies within 500 m of the site and their potential to be used for breeding newts. Each pond was assessed using the Habitat Suitability Index (HSI) (Oldham, Keeble, Swan, & Jeffcote, 2000) which assigns a value to the pond calculated from 10 pre-identified features. The HSI value gives a correlation of likely use by GCN and below 0.46 the waterbody is considered to have less likelihood of GCN presence however this metric is a guide and should be assessed on a site-by-site basis as waterbodies with low HSI have been known to support GCN.

Habitat suitability and evidence of other common amphibians was recorded on site where relevant.

#### Reptiles

The site was appraised for its suitability to support reptiles using guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003).

#### Invertebrates

The site's habitats were appraised for suitability to support assemblages of invertebrates and commented on in the report as appropriate.

#### **Other Species**

The site was also appraised for its suitability to support other protected or notable fauna with regard to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and BS42020:2013 Biodiversity – Code of Practice for Planning and Development (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

#### **Invasive Non-Native Species**

Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended by the Wildlife and Natural Environment (Scotland) Act 2012.), were recorded as seen.

#### **Scoped Out**

There was a lack of suitable connected woodland habitat for red squirrel *Sciurus vulgaris*, and pine marten *Martes martes*.

#### Limitations

Any absence of desk study records cannot be relied upon to infer absence of a species/habitat as the absence of records may be a result of under-recording within the given search area.

The optimal period to undertake an extended UKHab survey is April-September, inclusive. The survey was undertaken in November, which is outside the optimal survey window, however the dominant species of the respective vegetation types were visible and identifiable at the time of the survey. Therefore, this is not considered to be a limitation to the identification of habitats, but for specific species groups, primarily invertebrates, there was an absence of field signs. A precautionary approach has been adopted when assessing the importance of habitats and species presence in these instances.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. This survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation, from only a single visit. This report cannot, therefore, be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

## 3.0 **RESULTS & EVALUATION**

## **3.1 PROTECTED SITES**

European and National designated sites identified within 10 km of the proposed development are presented in Table 3. with the designation, qualifying features and proximity from the development site also indicated. There are no local non-designated sites within 2 km of the site.

Site Name	Designation	Distance and Direction from Site	Reasons for Designation
Galloway and Southern Ayrshire	Biosphere Reserve	Within the site	The Galloway and Southern Ayrshire Biosphere Reserve in southwest Scotland covers a range of diverse habitats, including uplands, forests, wetlands, and coastal areas. It supports a wide range of species, such as golden eagle Aquila chrysaetos, migratory birds, and native fish. Conservation efforts focus on habitat restoration and sustainable land management to maintain ecological integrity and support local communities.
Glen App and Galloway Moors	SPA / SSSI	8 km east	Glen App and Galloway Moors Special Protection Area (SPA) comprises a large upland area which extends north from Castle Kennedy, in Dumfries & Galloway, to Ballantrae, in South Ayrshire. The area is mainly covered by heather moorland and rough grassland. Its qualifying designated feature is hen harrier <i>Curcus cyaneus</i> , of which it supports ten breeding females annually, on average (1992 – 1998). This constitutes 2% of the British population.
Clyde Sea Sill	MPA	6 km north	The Clyde Sea Sill Marine Protected Area (MPA) extends from the Mull of Kintyre to Corsewall Point on the Rhins of Galloway. In this region, the seabed features a prominent sill where the North Channel transitions into the Firth of Clyde. This sill causes a significant mixing of the cooler, more saline waters of the North Channel with the warmer, less saline waters of the Clyde, resulting in the formation of a hydrographic front.

Table 3 Statutor	v and non-Statutor	V Designated Sites	Identified During	the Deck Study
Table 5. Statutor	y anu non-Statutor	y Designated Sites	identined During	g lile Desk Sluuy

### **Ancient Woodland and Priority Habitats**

No areas of ancient woodland or priority habitats have been identified within 1 km of the site.

#### **B-Lines**

The site is located within a Buglife B-Line (Figure 2).

## **3.2 HABITATS**

The following habitats, as outlined in Table 4, have been identified through the field assessment. A UKHab map can be found in Figure 3, with detailed Target Notes (TN) and Photographic Plates included in

Appendix C, as appropriate. For further details on the condition of identified habitats, and their associated biodiversity value, please review the BNG report (ref. 784-B067657\_Egg Production Facility\_BNG)

#### Table 4. Habitats

Habitat UKHab Code Reference ID	Result	Importance Assessment
Modified grassland g4 g4.1 / g4.2 / g4.3	The two fields within the site boundary (purple line boundary) and single field beyond to the west (within the blue line boundary), each comprised a cow-grazed, shortly cropped and species-poor grassland sward. There were minor variations of this habitat across the site, dictated by the elevation and corresponding moisture regime. In wetter regions the sward contained a greater abundance of Yorkshire fog <i>Holcus lanatus</i> , soft rush <i>Juncus effusus</i> and creeping buttercup <i>Ranunculus repens</i> , with drier regions dominated by perennial ryegrass <i>Lolium perenne</i> and broadleaved dock <i>Rumex obtusifolius</i> . The grassland was herb deficient, with those identified indicative of improvement, including daisy <i>Bellis perennis</i> , spear thistle <i>Cirsium vulgaris</i> and dock, as mentioned above.	This habitat is widespread and common and would be considered of <b>Negligible</b> ecological importance.
Other lowland acid grassland g1d g1d.1	This habitat was confined the bedrock outcrops located in the eastern field (g4.1). They were sparsely populated with bare stone abundant, but in vegetated areas, creeping bent <i>Agrostis stolonifera</i> was dominant, with sheep sorrel <i>Rumex</i> <i>acetosella</i> , sheep fescue <i>Festuca ovina</i> , and crested dog'stail <i>Cynosurus cristatus</i> locally occasional. Signs of improvement were frequent with common mouse-ear chickweed, perennial ryegrass and white clover <i>Trifolium</i> <i>repens</i> encroaching from the peripheries.	This habitat is limited to small and isolated areas. As such this would be considered of <b>Negligible</b> ecological importance.
Lowland dry acid grassland g1a g1a.1/g1a.2	In specific two areas, where the bedrock outcrop is more substantial, a more established acid grassland is present with species, in addition to those listed above, including heath bedstraw <i>Galium saxatile</i> , rough hawkbit <i>Leontodon</i> <i>hispidus</i> , heath-grass <i>Danthonia decumbens</i> and carpets of both mosses and lichens. This was situated along the face and banks of an historic quarry (g1a.1) and a large rock outcrop to the west (g1a.2).	This habitat is limited to two locations but is more established than the habitat described above. This would indicate opportunities for enhancement and would be considered of <b>Local</b> ecological importance.
Purple moor grass and rush pasture f2b f2b.1 / f2b.2 / f2b.3	There were three observably different varieties of this habitat across the site. To the west of the farm track entrance was a diverse area dominated by tufted hairgrass <i>Deschampsia cespitosa</i> and soft rush (f2b.1). Surface water was frequent, but diminished to the west, away from the ditch. The species richness, followed the same pattern, with violets <i>Viola</i> sp., willowherb <i>Epilobium</i> , toad rush <i>Juncus</i> <i>bufonius</i> , water forget-me-not <i>Myosotis scorpioides</i> in proximity to the ditch line, whilst in drier regions foxglove <i>Digitalis purpurea</i> and bramble <i>Rubus fruticosus</i> agg. is more frequent.	Purple moor grass and rush pasture is listed under Section 2 of the NCA (2004). It is also listed in the LBAP. As a collective, this habitat is considered of <b>Regional</b> ecological Importance

Habitat UKHab Code Reference ID	Result	Importance Assessment
	To the northwest of the site is a large expanse of rush pasture, which forms a mosaic of species-poor rush dominated areas (f2b.2) and more diverse areas of greater saturation (f2b.3). These latter areas contained Sphagnum sp. alongside species such as jointed rush Juncus articulates, tormentil Potentilla erecta, water plantain Alisma plantago-aquatica, marsh horsetail Equisetum palustre, water forget-me-not and bog stitchwort Stellaria alsine. There was an observable trend of more depressed areas, holding more saturated communities, which in turn were more diverse. This northern area formed a mosaic with gorse scrub, with only a small amount present within the purple line boundary.	
Mixed scrub h3h h3h.1	A small area of hawthorn <i>Crataegus monogyna</i> , gorse and bramble scrub was present between the western fields. This appears to have been an historic hedgerow which has developed into a band of scrub.	This habitat is limited to small and isolated areas. As such this would be considered of <b>Negligible</b> ecological importance.
Gorse scrub h3e	Gorse scrub was present across the site, particularly to the northwest where it created a mosaic with rush pasture. These areas varied in density, but comprised greater than 95% scrub, with rare occurrences in highly saturated areas of willow <i>Salix</i> sp.	This habitat is widespread and common and would be considered of <b>Negligible</b> ecological importance.
Bramble scrub h3d br.1	A small pocket of bramble dominated scrub was present on the western slope in the central field (g4.2). It was an isolated and dense pocket.	This habitat is limited to small and isolated areas. As such this would be considered of <b>Negligible</b> ecological importance.
Standing water r1a Po.1 – Po.5	Five dew ponds were present across the site during the walkover. These were shallow-sloped and highly poached. They varied in size and are likely to be ephemeral. The fringes were primarily grassy, but contained soft rush, brooklime <i>Veronica beccabunga</i> and lesser spearwort <i>Ranunculus flammula</i> . Waterfowl were present in the larger of the ponds to the east (Po.1).	Ponds are listed within 'Farm Ponds' in the LBAP. This habitat is limited to two locations but is more established than the habitat described above. This would indicate opportunities for enhancement and would be considered of <b>Local</b> ecological importance.
Trees	To the south in around the rush pasture (f2b.1) was a cluster of 55 trees. Of which, 43 trees were semi-mature sycamore <i>Acer pseudoplatanus</i> , and 12 were standing dead stumps. The sycamore were all in poor condition, with fungal bodies present.	This habitat is widespread and common and would be considered of <b>Negligible</b> ecological importance.

Habitat UKHab Code Reference ID	Result	Importance Assessment
Sparsely vegetated urban land u1f Target Note 5	A derelict farm building was located along the farm track to the west. The structure had partial walls, no roof and had been sparsely colonised by shrubs.	The structure did not support ecological features and would be considered of <b>Negligible</b> ecological importance.
Building u1b5 B.1	A brick rectangular tower was present to the north of the eastern field (g4.1). This had a number of large and exposed cavities, with a hollow central column.	The structure did not support ecological features and would be considered of <b>Negligible</b> ecological importance.
Linear Features		
Hedgerows h2a6 H1 / H2	Two defunct, but native hedgerows were present to the west of the site, one within the purple line boundary and one beyond, and marking the extents of the survey boundary (blue line boundary). They were both comprised of hawthorn, but large gaps between shrubs, however, the one within the site boundary had been colonised by gorse and bramble in areas, forming small sections of scrub (as discussed above).	Hedgerows are listed under Section 2 of the NCA (2004). However, as these hedgerows are defunct and species poor, they would be considered of <b>Local</b> ecological importance as a connectivity feature.
Stone wall Built linear feature u1e	A stone wall aced as the boundary feature to the north of the eastern field. It was partially collapsed in places, and averaged a height of 1.2 m.	The structure could support minor ecological niches and would be considered of <b>Negligible</b> ecological importance.
Ditches / Other rivers and streams r2b D1 / D2 / D3	Three ditches were present to the west. One of which, was wholly within the site boundary, a second was partially within and third was present to the Norwest of the survey boundary. The first ditch (D1) was present to the west of the farm track. It was well established, with grassy banks and a strong flow northwards, at the time of survey. It was ca 1 m deep and 1 m wide with species including large bittercress <i>Cardamine hirsuta</i> , floating sweetgrass <i>Glyceria flutans</i> , round-leaved crowfoot <i>Ranunculus omiophyllus</i> . The second ditch, was more indicative of an established surface water channel, with no obvious banks. It was formed along the base of a mound to the west of the site, with species indicative of the adjacent grassland field. It flowed into a pool (Po.5) at the southern extent of the rush pastureland. The third ditch acts as the outflow for the rush pastureland, it develops steep banks to the porth and contained species	Collectively, the ditch network offers several connectivity features, with D1, supporting a good assemblage of aquatic plants. As a group they would be considered of <b>Local</b> ecological importance.

Habitat UKHab Code Reference ID	Result	Importance Assessment
	associated with the surrounding habitat. It flowed into a ditch that runs along the northern extent of the field, which is beyond the survey extents.	

## **3.3 PROTECTED AND NOTABLE SPECIES**

Data purchased from the South Uplands Partnership confirmed the presence of several protected and notable species within 2 km of the site. Protected and notable species identified as a receptor for the site are detailed in 5 below. Further information on relevant species / environmental legislation and planning policy can be found in Appendix D.

#### **Table 5. Species**

Species	Legal Protection	Result	Importance Assessment
Badger	Protection of Badgers Act 1992; Wildlife and Countryside Act 1981 (as amended) Schedule 6.	Desk Study The desk study did not return any records within 2 km of the site. Field Survey No evidence of badger was identified on site. The mounds present across the grazed fields, were formed due to bedrock outcrops, which would indicate a shallow layer of earth not suitable for sett creation. The site did support habitats of optimal suitability for badger foraging. Within the survey boundary, the gorse scrub may shelter hidden sett entrances, but this is considered unlikely given the apparent level of the water table, which was at or near the surface across the area, and would flood chambers dug too deep.	The site is not considered suitable for sett creation, but does offer a suitable foraging resource. It would be considered of <b>Local</b> level importance to badger.
Otter	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended); Wildlife and Countryside Act 1981 (as amended) Schedules 5 and 6.	Desk Study The desk study did not return any records within 2 km of the site. Field Survey No sign of otter was identified during the walkover. The ditch network would offer suitable commuting pathways, but did not contain fish, or any other foraging resource. The closest main watercourse is the Glengyro Burn ca. 320 m to the east. The site does not support natal den creation, and it is reasonable to assume that otter would be only transitory on site.	The site is not considered a suitable foraging resource or resting location for otter. It could be used for transitory individuals moving through the ditch system, but the site is considered of <b>Negligible</b> level importance to otter.
Water vole	Wildlife and Countryside Act 1981 (as amended) Schedule 5.	<b>Desk Study</b> The desk study did not return any records within 2 km of the site. <b>Field Survey</b>	The site is not considered suitable for water voles. It contained suitable foraging and commuting resources but

Species	Legal Protection	Result	Importance Assessment
		The ditch network present on site were not of a character or structural composition that would be associated with suitable water vole habitat. They contained a shallow flow of water, with the channels highly vegetated. In addition, extensive poaching from cattle is a substantial restriction to burrow creation. It has been recorded in Scotland that water vole are not always found in freshwater systems. While they generally prefer habitats with the three key features of dry areas for nesting, herbaceous vegetation, and water for escape from predators, there are exceptions for 'terrestrial water voles' (Dean, 2016). These populations inhabit areas with friable soils, grass tussocks, and tall plants that provide food and cover. Although these attributes were available on site, the active disturbance and extensive poaching from cattle across all elements of both the site and survey area, are a significant constraint to water voles.	was subject to significant constraints. As such the site is considered of <b>Negligible</b> level importance to water vole.
Other protected or notable terrestrial mammal species	Wildlife and Countryside Act 1981 (as amended).	<ul> <li>Desk Study</li> <li>The desk study did not return any records within 2 km of the site.</li> <li>Field Survey</li> <li>A single brown hare was observed to the northwest of the site (Target Note 1). The site supports open grassland and rush pasture, which is favoured by this species for foraging purposes and in the creation of forms. Brown hare are highly transient, moving to new locations in search for suitable feeding and resting spots. There is suitable habitat in the surrounding landscape and brown hare are not considered dependant on the site.</li> <li>The site is not considered suitable for hedgehog <i>Erinaceus europaeus</i>, lacking brash piles and leaf debris for hibernacula creation. It is also outside the native range for mountain hare <i>Lepus timidus</i>, which in habitats the uplands, predominantly in The Highlands.</li> </ul>	The site is considered suitable for brown hare foraging and resting. These resources are readily available in the wider landscape and the site, as an individual component, would be considered of <b>Local</b> level importance to brown hare.
Bats	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), Wildlife and Countryside Act 1981 (as amended) Schedules 5 & 6.	<b>Desk Study</b> The NBN desk study returned 7206 records for soprano pipistrelle and 782 records for common pipistrelle, all records were from the same date and same location. The grid reference provided by NBN was truncated providing a general location located on the coastline 2 km west of the site.	The site does not contain suitable roosting potential for bats. It did, however, offer moderate foraging and commuting suitability and <b>further assessment is</b> <b>required</b> to determine the

Species	Legal Protection	Result	Importance Assessment
		The desk study returned 27 records for six bat species (Daubenton's bat <i>Myotis daubentonii</i> , natterer's bat <i>Myotis nattereri</i> , leisler's bat <i>Nyctalus leisleri</i> , common pipistrelle <i>Pipistrellus pipistrellus</i> , soprano pipistrelle <i>Pipistrellus pygmaeus</i> , and brown long-eared bat <i>Plecotus auritus</i> ) within 2km of the site, the closest record was for brown long-eared bat located 860 m southwest of the site.	site's level of importance to bats.
		Field Survey	
		<u>Roosting potential</u> : The site did not have any features of suitability to roosting bats. The two structures identified on site, were both in a state of disrepair, one of which was predominantly rubble (TN.5) and the second was a hollow structure, which was exposed on each aspect (B1). The individuals within the grove of trees were all in poor health with abundant deadwood, however, the limbs were of a small diameter and lacking cavities. The standing deadwood was also not conducive to roosting bats, with only superficial cavities which were exposed to rainfall and wind.	
		<u>Foraging and commuting potential:</u> The site contained several linear features in the form of hedgerows, ditches and built features. In addition, the isolated area of rush pasture (f2b.1) and larger expanse in the wider survey area (f2b.2 and f2b.3), offer excellent foraging habitat. As a consequence, the site is assessed as having <b>Moderate</b> commuting and foraging potential and further survey is recommended to determine the importance level.	
Birds	Wildlife and Countryside Act 1981 (as amended).	<ul> <li>Desk Study</li> <li>NBN returned a single record for barn owl located 540 m east of the site, and a single records for woodcock 1.3 km northwest of the site.</li> <li>The desk study returned three records for whooper swan within 2 km of the site, the closest records was located 1.8 km northeast from the site. Additionally, the Glen App and Galloway Moors SPA /SSSI, which is located 8 km to the east, supports known breeding pairs of hen harrier, a species listed under Annex 1 of the Birds Directive<sup>3</sup>.</li> <li>Field Survey</li> </ul>	Within the site boundary the habitats offer limited potential for nesting and foraging. However, given the presence of a small area of rush pasture (f2b.1) and the scattered dew ponds, the site would be considered of <b>Local</b> importance to birds.

<sup>&</sup>lt;sup>3</sup> Annex I of the Birds Directive (Directive 2009/147/EC) lists 197 bird species and subspecies that are considered to be in need of special conservation measures.

Species	Legal Protection	Result	Importance Assessment
		<ul> <li>During the site walkover the following species (all Amber listed<sup>4</sup>) were identified:</li> <li>Wigeon Anas Penelope – wading in the large dew pond to the east (Po.1)</li> <li>Snipe Gallinago gallinago – a pair flushed along the eastern field boundary and then a second pair within the rush pasture to the north of the survey area.</li> <li>Rook Corvus frugilegus – flew over the site along the farm track.</li> <li>Sparrowhawk Accipiter nisus – a single individual perched in a hawthorn shrub along the western perimeter of the survey area.</li> <li>Pipit Anthus sp. – a flock of individuals present to the south of B1.</li> <li>The site offered potential for shrub and tree nesting birds, however this was limited to isolated areas across the site. Additionally, there was limited potential for ground nesting birds, with the predominant habitat a closely cropped grassland of little structural variation. Of note however, is the area of rush pasture to the south (f2b.1) which supported a tussocky structure, favoured by species such as snipe, lapwing Vanellus vanellus, curlew Numenius Arquata and skylark Alauda arvensis for ground nesting. Within the wider survey area, the abundance of rush pasture and gorse scrub provide excellent foraging and nesting habitat, whilst the frequent pools and dew ponds offer suitability to waterfowl.</li> <li>The rush pasture immediately north of the site is also suitable for foraging and nesting hen harrier. As detailed above this is a species listed a designating feature of the Glen App and Galloway Moors SPA /SSSI.</li> </ul>	
GCN and Common Amphibians	<i>GCN</i> : Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). <i>Other amphibians:</i> Wildlife and Countryside Act 1981 (as amended).	<b>Desk Study</b> The desk study did not return any records within 2 km of the site. In review of aerial and OS imagery, there are two ponds and eight ditches present within 500 m of the site (purple line boundary). However, the rush pasture within the survey area contains a series of ephemeral pools and channels, which are not visible on aerial or OS maps. As this habitat is apparent in the wider landscape, it must be assumed that additional waterbodies are present within 500 m. <b>Field Survey</b>	The site contains features that support the lifecycle stages of amphibians (including GCN). <b>Further assessment is</b> <b>required</b> to determine the site's level of importance to amphibians.

<sup>&</sup>lt;sup>4</sup> As included in the Birds of Conservation Concern 5. For further details see Appendix D.

Species	Legal Protection	Result	Importance Assessment
		Of the five ponds present within the survey area, four provided a HSI score of 'below average' (Po1, Po.2, Po.3 and Po.5), and one pond (Po.4) provided a HSI score of 'average' (refer to Appendix E for full assessment details). The ponds present within the site boundary (Po.1, Po.2 and Po.3) were dew ponds, present within grazed grassland fields. The banks were heavily poached, and the water was turbid at the time of survey. The additional two ponds in the survey area, were located at the southern and northern extents of the rush pasture, which provides excellent terrestrial habitat, with the rough grassland and rushes offering suitable dispersal and foraging resources. Landscape connectivity, joining the site with ponds present in the wider area, is available through both the hedgerow and ditch networks, which were identified on site, and are visible beyond the survey extents from aerial imagery. As all the ponds are in proximity of one another, they have been assessed as a collective, and as such each of the ponds is considered a viable breeding resource for amphibians, including GCN.	
Reptiles	Wildlife and Countryside Act 1981 (as amended).	Desk StudyThe desk study did not return any records within 2 km of the site.Field SurveyThe primary site habitat offers negligible suitability for reptiles, with the closely cropped grassland sward providing limited opportunities for foraging, basking and dispersal. However, the rush pasture habitats, gorse scrub, hedgerows, stone walls and ditch network, provide the structural variation and connectivity to support dispersal and establishment of species group, primarily grass snake Natrix natrix, slow worm Anguis fragilis and to a lesser extent common lizard Zootoca vivipara.The dense and tussocky character of rush pasture offers cover and hunting opportunities, whilst the moist environment supports rich invertebrate populations, that serve as a viable prey source (English Nature, 2004).Additionally, there is suitable connectivity via a ditch network, between the rush pasture to the south (f2b.1) (within the site boundary) and the larger expanse to	The rush pasture within the site supports suitable foraging, commuting and shelter resource in support of species such as grass snake, common lizard and slow worm. As this area is fragmented from the larger component to the north, the site is considered to be of <b>Local</b> importance to reptile.

Species	Legal Protection	Result	Importance Assessment
		the northwest (within the survey extents). It is reasonable to assume that the site supports moderate suitability for reptiles in this isolated area of rush pasture.	
Invertebrates	Some invertebrates are protected under Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and Wildlife and Countryside Act 1981 (as amended). Many invertebrates are also listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006).	<ul> <li>Desk Study</li> <li>The desk study did not return any records within 2 km of the site, however, the site is present within a B-line (Figure 2).</li> <li>Field Survey</li> <li>As discussed above for reptiles, the predominant habitat component is a grazed field of limited suitability to invertebrates due to a lack of vegetation structure and a deficiency of nectar sources. Likewise, it is the rush pasture which offers the variation in both moisture regime and vegetation structure, which offers an abundance of micro-niches in the support of invertebrate assemblages. This habitat is abundant to the north of the site within the survey area, but given the fragmented nature of the component on site, and its small size, it is reasonable to assume the site does not support invertebrate assemblages of significance.</li> </ul>	The rush pasture within the site supports a diverse array of micro-niches in support of invertebrate assemblages. However, as this area is fragmented from the larger component to the north, the site is considered to be of <b>Negligible</b> importance to invertebrates.
Invasive non- native species	Wildlife and Countryside Act 1981 (as amended) Section 14; Environmental Protection Act 1990.	<b>Desk Study</b> The desk study did not return any records within 2km of the site. <b>Field Survey</b> No invasive species were identified during the site walkover.	The site is not considered to support invasive species and no importance level is provided.

## 4.0 **RECOMMENDATIONS**

## 4.1 MITIGATION AND FURTHER SURVEY

All the works outlined below in Table 6 should be assumed as likely requirements for to inform a planning application, unless otherwise stated.

Where species such as bats and great crested newts may potentially be impacted, further surveys are likely to be required to fully inform the proposals, mitigation, and, if necessary, a European Protected Species Licence (EPSL) to allow actions that would otherwise be illegal.

#### Table 6. Mitigation and Further Survey / Assessment

Ecological Receptor	Further Survey / Assessment	Mitigation Required
Designated sites	The site falls within the Galloway and Southern Ayrshire Biosphere Reserve. This places an additional conservation priority of several habitats including wetland, of which rush pasture is including. As there will be no impact on this habitat no further assessment is required. Additionally, the rush pasture immediately north of the development site supports suitable habitat for hen harrier, both nesting and foraging. This species is a designating feature of the Glen App and Galloway Moors SPA /SSSI located 8 km to the east. As such a Stage 1 (Screening) report to inform Habitats Regulations Assessment (HRA) is required to establish whether the development proposals have the potential to affect the integrity of the designated site(s) or its qualifying species. If possible pathways are identified a Stage 2 (Appropriate Assessment) may be required. No further internationally or nationally designated sites are anticipated to be impacted by the proposed development due to large distances between the works areas and an absence of suitable pathways from source to receptor.	Any mitigation requirement will be detailed in the Appropriate Assessment (AA) as part of a Habitats Regulations Assessment (HRA). Standard measures to reduce noise, dust, etc to be included within a Construction Environmental Management Plan (CEMP) in accordance with British Standard BS42020:2013.
Habitats	It is recommended that the development is assessed through a biodiversity metric to provide a standardised measure of biodiversity enhancements at a site in line with National Planning Policy Framework 4.	It is recommended that all mature trees hedgerows are retained where possible together with suitable buffers /

Ecological Receptor	Further Survey / Assessment	Mitigation Required
	Given the proximity of the development to the purple moor grass and rush pasture to the north, there is potential risk of de-watering the habitat. Rush pastures rely heavily on high water tables or surface water to maintain soft, wet soils. De-watering can dry out these areas, making them less hospitable for the rushes and associated species. The Scottish Environment Protection Agency's (SEPA) guidance on de-watering is governed by the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). These regulations require sufficient information to assess the impact on groundwater-dependent terrestrial ecosystems (GWDTE), with some rush pasture communities indicated as high risk. In order to provide sufficient information to assess the impacts on this habitat, further design details, particularly pertaining to the site drainage strategy is required, and a National Vegetation Classification (NVC) survey is recommended to determine the rush pasture communities in more detail. This would entail a single site visit between the months of May to September.	root protection zones (to be guided by BS5837 measurements or an arboricultural assessment). Loss of habitats on site will be mitigated for and compensated for as detailed in the associated Biodiversity Net Gain Net Gain assessment (ref 784- B067657_Egg Production Facility_BNG) Further imbedded mitigation may be required dependent upon possible dewatering effects on the rush pasture to the north of the site.
Badger	The site is considered unsuitable for badger sett creation but could be used by commuting or foraging badger.	No mitigation currently required however, should a badger sett be identified during works, further mitigation and protected species licence may be required. In addition, best practise should be adopted which would include ensuring any chemicals within the site are stored correctly in containers.
Otter	The site is considered suitable for transient otters only.	It is recommended that Heras fencing, or similar, is installed around the perimeter of the site to reduce the risk of any otters potentially present from accessing the site during the construction phase. Lighting installed as part of both the construction phase and operational-phase must be directed away from the ditch networks to avoid potential disturbance and / or deterrence of otters from suitable commuting habitat.

Ecological Receptor	Further Survey / Assessment	Mitigation Required
Water vole	The extend and severity of poaching on site has resulted in unsuitable conditions for water vole, which are believed absent from site.	No mitigation required.
Other protected or notable terrestrial mammal species	The site is considered suitable for transient brown hare.	It is recommended that Heras fencing, or similar, is installed around the perimeter of the site to reduce the risk of any notable mammals (including brown hare) potentially present from accessing the site during the construction phase.
Bats	<ul> <li>Bats are fully protected under the Conservation (Natural Habitats, &amp;c.) Regulations 1994 (as amended and the Wildlife and Countryside Act 1981 (as amended). Further assessment is required to inform the proposals and any licensing requirements.</li> <li><b>Roosting:</b> no further survey is required as no features were present on site which supported roosting features.</li> <li><b>Foraging And Commuting</b> The site was assessed as offering moderate foraging suitability, so bat activity surveys are required to fully inform the proposals. This will comprise one night-time bat walkover per season (spring, summer and autumn) as well as static monitoring between April and October.</li> </ul>	Foraging and Commuting Mitigation for foraging and commuting bats is to be recommended following results of the activity surveys but is likely to include retention of the hedgerows and trees where possible, avoidance of lighting upon the hedgerows, trees and any other retained habitats, and avoidance of night works. A sensitive lighting scheme should be devised for the development, that avoids lighting sensitive receptors (mature trees and vegetated corridors). Technology such as cowls and hoods that limit light spill, timers and sensors should be used to minimise disturbance where lighting cannot be avoided, this should be design in conjunction with (ILP, 2023).
Birds	Breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended), while Schedule 1 species are further protected meaning it is an offence to disturb individuals of these species when they are 'at or near' an active nest. Based on the current project proposals, the habitat losses will be confined to the species-poor grazed grassland of negligible importance to birds. Given the proximity of the development area to the rush pasture, which offers excellent foraging a nesting potential, particularly to hen harrier, further surveys for breeding birds are recommended. This will supplement the report to inform HRA and help to fully inform the proposals.	The rush pasture, hedgerows, scrub, and scattered trees are to be retained within the development, wherever possible. It is recommended that all ground clearance works are undertaken outside of the nesting bird season (generally accepted as March to September inclusive). If this is not possible, a nesting bird check undertaken by a suitably qualified ecologist will be required to take place 24 hours prior to clearance works.

Ecological Receptor	Further Survey / Assessment	Mitigation Required
	This will comprise six breeding bird surveys to be undertaken between March and early July by suitably experienced ecologists.	
GCN and Common Amphibians	GCN are fully protected under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). The site has five suitable waterbodies within 500 m which could support GCN, and includes habitats on site including rush pasture, hedgerows, scrubland and derelict buildings that could support GCN during their terrestrial phase. Further assessment of these waterbodies (environmental DNA survey) is required to determine the presence of likely absence of GCN, and to determine whether an EPSL is required to allow works to proceed legally.	Mitigation measures and any licensing requirements to be determined following further assessments. Measures recommended include timing works to minimise any potential impacts pre- and during construction; site clearance (such as removal of brash piles or vegetation) should ideally be undertaken between April and October when GCN are active (bearing in mind that a nesting bird check will be required); any further vegetation clearance is recommended to be undertaken under the supervision of an experienced ecologist (under a ECoW) who will give a detailed Toolbox Talk prior to the start of each working day. The methods of vegetation removal include a directional two-stage cut (working towards retained habitats on and beyond the site boundaries to maintain connectivity) where a fingertip search by the ecologist will be conducted prior to both cuts. The first cut should be to a height of approximately 15 cm with the second cut to take down to ground level. Any existing soil / brash / log piles acting as potential hibernacula should be removed under supervision of the ecologist. Precautionary measures should be captured within the site's CEMP. In the unlikely event a GCN is identified at any point during the works, all activities should cease, and a suitably licenced ecologist contacted for further advice.
Reptiles	Reptiles are protected from killing and injuring under the Wildlife and Countryside Act 1981 (as amended), and listed in the NERC Act, 2006. No reptiles were identified during the site walkover. As impacts will be limited to the cow-grazed grassland, which offers unfavourable foraging	In the unlikely event reptiles are found during the works period, they should be allowed to escape unharmed, and an ecologist contacted for advice.

Ecological Receptor	Further Survey / Assessment	Mitigation Required
	<ul> <li>and commuting conditions for reptiles no further reptile surveys are required.</li> <li>As per birds, however, if the footprint of the scheme is altered to including impacts to rush pasture habitat it is recommended that reptile surveys are to be undertaken on site. This will confirm the presence or likely absence of reptiles on site through seven survey visits (between April to May and September to October) using artificial refugia mats.</li> </ul>	
Invertebrates	No further survey recommended.	Any CEMP or Ecological Method Statements to stipulate prevention measures to reduce impacts to offsite habitats e.g., through runoff, dust deposition, etc.
Invasive species	No additional survey recommended.	General precautionary measures to prevent the introduction and spread of INNS should be undertaken (such as clean, check, dry policy for tools, PPE and machinery before entering site). In the event that an invasive species is identified at any point during the works, findings should be reported to a suitably licenced Ecologist.

## 5.0 CONCLUSIONS

The site was predominantly comprised of a species-poor cow grazed grassland of limited ecological value. However, the complex of rush pasture and ditches to the south, scattered dew ponds, pockets of scrubland, and proximity to a large expanse of diverse rush pasture to the north, provides suitability to several protected and notable species, including foraging and commuting bats, amphibians, including GCN, and transient otter, reptiles and brown hare.

The key recommendations of the report are:

#### Further survey

- Undertake bat activity surveys, comprising one night-time bat walkover per season (spring, summer and autumn) as well as static monitoring between April and October.
- Undertake presence / likely absence GCN surveys (environmental DNA survey) of waterbodies within 250 m of the site.
- Undertake a breeding bird assessment, which comprises six surveys to be undertaken between March and early July by suitably experienced ecologists
- A report to inform a HRA will be required to establish whether the development proposals have the potential to affect the integrity of the designated site(s) or its qualifying species.
- a National Vegetation Classification (NVC) survey is recommended to determine the rush pasture communities in more detail. This would entail a single site visit between the months of May to September.

#### Mitigation recommendations

- Works should be undertaken outside the nesting bird season (usually considered to be March to September inclusive) to avoid disturbing active nests;
- If works are undertaken within the nesting season, these should be preceded by a nesting bird check; if nesting birds are found, active nests must remain undisturbed in situ;
- Good practice measures (such as covering excavations or providing means of escape) are recommended to prevent entrapment of wildlife;
- Site staff are to be vigilant for invasive species and report any findings immediately;
- The site should demonstrate biodiversity enhancements in line with NPPF4; and,
- A Construction Environmental Management Plan is recommended with the aim of minimising indirect impacts such as dust, runoff, noise and lighting to ecologically important features.

Provided the measures within this report for further survey and mitigation can be adopted, it is anticipated that a design could be brought forward for this site that would be compliant with current local and national biodiversity planning policy.

## REFERENCES

- Bright, Morris, & Mitchell-Jones. (2006). *The dormouse conservation handbook* (2nd ed.). Peterborough: English Nature.
- BSI. (2013). *BS 42020 a code of practice for biodiversity in planning and development.* London: BSI Group. Retrieved from https://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf
- Chanin. (2003). *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10.* Peterborough: English Nature.
- CIEEM. (2017). Guidelines for Preliminary Ecological Appraisal (2nd ed.). Winchester: CIEEM.
- CIEEM. (2019). Advice note on the lifespan of ecological reports & surveys. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM. (2022). Code of Professional Conduct. Chartered Institute of Ecology and Environmental Management, Ampfield.
- Collins. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed.). London: The Bat Conservation Trust.
- Collins. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*. London: The Bat Conservation Trust.
- Dean, M. S. (2016). The Water Vole Mitigation Handbook . *The Mammal Society Mitigation Guidance Series*, p. Eds Fiona Mathews and Paul Chanin.
- English Nature. (2004). Purple Moor Grass and Rush Pasture. English Nature, Peterborough
- Gent, & Gibson. (2003). Herpetofauna Workers' Manual. Peterborough: JNCC.
- Harris, Cresswell, & Jefferies. (1989). *Surveying badgers. An occasional publication of the mammal society – No. 9.* London: Mammal Society.
- ILP. (2023). Guidance Note 08/23. Bats and Artifical Lighting at Night. Institution of Lighting Professionals and Bat Conservation Trust.
- Langton, Beckett, & Foster. (2001). Great Crested Newt Conservation Handbook. Halesworth: Froglife.
- Natural England. (2020). Great Crested Newt Method Statement for EPS licence application.
- Oldham, Keeble, Swan, & Jeffcote. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (Triturus cristatus). *Herpetological Journal*, 10 (4), 143-155.
- Stace. (2019). New Flora of the British Isles (4th ed.). Suffolk: C&M Floristics Middlewood Green.
- Stanbury, A. E. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds*, 114: 723-747.

Tetra Tech. (2023). Biosecurity Policy.

UK Hab Ltd. (2023). Uk Habitat Classification Version 2.0. Retrieved from Https://www.ukhab.org

## FIGURES

- Figure 1 Site Location Plan
- Figure 2 Designated Sites Plan
- Figure 3 UK Habs Map







## **Site Location Plan**

Egg Production Facility, Stranraar

#### Mark Buchanan

### Legend

- Planning application boundary
- Survey area boundary
- Site boundary (for purpose of ecological assessment)











Notes:

## **Baseline Plan**

Egg Production Facility, Stranraar

#### Mark Buchanan

## Legend Planning application boundary Survey area boundary Site boundary (for purpose of ecological assessment) g1a - Lowland dry acid grassland g1d - Other lowland acid grassland g4 - Modified grassland h3d - Bramble scrub h3e - Gorse scrub •••• h3h - Mixed scrub r1a - Eutrophic standing water u1e - Built linear features u1f - Sparsely vegetated urban land f2b - Purple moor grass and rush pastures h2a - Native hedgerow r2b - Other rivers and streams u1e - Built linear feature Rural Tree Target notes Ο

Symbology defined by UK Habs. https://ukhab.org/ ukhab-documentation/







6

## APPENDICES

## **APPENDIX A: REPORT CONDITIONS**

This Report has been prepared using reasonable skill and care for the sole benefit of Mark Buchanan ("the Client") for the proposed uses stated in the report by Tetra Tech Limited ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

Tetra Tech reserves the right to share this Report and any related materials, surveys, drawings and/or documents at any time with the relevant Local Ecological Records Centre (LERC), any relevant statutory body or any equivalent organisation as Tetra Tech may reasonably require from time-to-time.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

**APPENDIX B: LANDSCAPE MASTERPLAN** 





## Aitken Turnbull Architects

# Proposed Egg Production Facility Mains of Dhuloch

#### Landscape Proposals L-1000

# LEGEND Planning application boundary



Native tree and shrub planting Species composition: Trees at 30% 10% *Alnus glutinosa* Alder 15% *Betula pubescens* Downy birch 5% *Quercus petraea* Sessile oak

Shrubs at 70% 10% *llex aquifolium* Holly 30% *Salix caprea* Goat willow 30% Salix cinerea Grey willow



Scrub planting Species composition: 100% Ulex europaeus Gorse

Grassland (e.g. Diverse Poultry Pasture mix from GSS or similar suitable poultry pasture mix) Sowing rate of 20g/m². Species composition: 32% NUSPRINT certified Annual Ryegrass 20% REVERENT certified Strong Fescue 20% BORNITO certified Sheeps/Hard Fescue 15% HUMBOLDT certified Chewings Fescue 2% AURORA certified Alsike Clover 2% LEO certified Birdsfoot Trefoil 2% HUIA certified Medium White Clover 2% GARANT certified Red Clover 5% \* MIXED FORAGE HERBS

All native tree, shrub and scrub planting will be planted in the dormant planting season as 40-60cm transplant size bare root stock (or in a 3L container if pot grown). Tree and shrub group stock will be planted at 2m spacing within the paddocks to allow the birds to roam between plants and at 1.75m spacing in groups situated outside the paddocks to strengthen the visual screening function of the planting feature. Stock will be planted in single species groups of 5 -25 no. within tree and shrub groups. Each planting group will include a minimum 5m depth shrub edge to provide a woodland edge and encourage birds to explore. Gorse scrub will be planted at 1.0m spacing. All plants will be protected by a no less than 0.75m high shelter supported by a softwood stake during the five year establishment period.

## Landscape Proposals:

Tree and shrub planting is proposed in groups to provide visual screening or softening of views of the proposed development from viewpoints to the north including residents in properties along B738, from residents to the south at Glengyre and from residents at Little Glengyre to the north east. By Dunholm directly opposite the site the planting is positioned to allow for retention of the longer views to the hills to the north east whilst providing screening/softening of the Unit A shed within the view. The groups are included within the paddocks to provide habitat and shelter for the birds and positioned to avoid the rocky outcrops on site. The planting is proposed at a scale and pattern consistent with the wider landscape structure. In addition, lines of gorse scrub is proposed to tie the tree and shrub groups and paddock fencing into existing boundaries and areas of scrub to reflect the local landscape character and further strengthen integration of the proposals into the landscape. N

) 25	50	75	100	125 m				
	SCALE	1:2500	)				l	Д
TE Proj No <b>067657</b>	Drwn By NR	Date 02.12.24	Ch'ked by <b>SP</b>	Date 02.12.24	Appr'd by <b>MC</b>	Date 02.12.24	Scale @ A1 <b>1:2500</b>	Suitabili <b>S3</b>

pe/Code Role Number Revision
DR L 1000 P01 00 XX

## **Tetra Tech Leicester**

TT

Client Proj No

--

4th Floor No1, Great Central Square, Vaughan Way, Leicester LE1 4JS **Tel:** +44 (0)116 234 8000 www.tetratecheurope.com

© Crown copyright and database rights 2024 Ordnance Survey 0100031673.

© Tetra Tech Limited 2024. Registered in England number: 1959704

APPENDIX C: TARGET NOTES					
Habitat	Photograph				
TN1. Area of more diverse purple moor grassland and rush pasture, containing sphagnum and open pools.	Egg Plant More diverse areas of pasture 2024.11:22 11:14 34.95135, 55.14945 Innamed Road, Strannaer, UK				



Habitat	Photograph
TN2. Complex of gorse scrub and rush pasture on bedrock undulations. Areas of higher elevation were colonized by scrub, whilst depression contained rush pasture.	Egg Plant Rush and gorse scrub mosais 2024:11 22 11:50 34 50136 124 27 Kirkcolim, Stranraer, UK
TN.3 - Modified grassland (g4) subject to cow grazing.	Egg Plant.         911         2024 11-22 09-580;         54:94759, -5.14315;         Unnamed Road, Strannaer, UK

Habitat	Photograph
TN.4 – Indicative photograph of a dew pond, with highly poached banks.	
TN5. Derelict farm building without roof, which is predominantly rubble with some ruderal.	Egg Plant Dew pond.1 2024.11.22 09:10 54.946895.14096 Unnamed Road, Stranraer, UK
	Egg Plan         Rubble         202411.22 0842;         Zuns of Dhuloch Cottages, Kirkcolm, Stranrae, Uk

Habitat	Photograph
TN6. Historic quarry with exposed rock and vegetation composition indicative of lowland dry acid grassland.	Egg Plant Hollow 2024 11.22 09-42 34.94893 5- 14138 2 Mains of Dhuloeh Cottages, Kirkcolm, Stranzer, UK
TN7. Surface flow along the base of a mound which inflows into a pool at the base of the rush pasture habitat.	Egg Plant Overground flow 2024.11.22.10.46 34.94952.5.15163 Unnamed Road, Stranraer, UK

## **APPENDIX D: KEY LEGISLATION**

#### Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation (Natural Habitats, &c) Regulations 1994 (as amended) in Scotland, the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

#### **Birds Directive**

The EC Directive on the Conservation of Wild Birds (791409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

#### The Conservation (Natural Habitats etc.) Regulations 1994

Within Scotland, the primary legislation in relation to Habitats Regulations remains the 1994 statutory instrument.

All species protected under this legislation are European Protected Species and licensing is required for the undertaking of certain activities affecting these species. The protection is applied to all stages of the animals' life.

Under Regulations 39 of the Habitats Regulations it is unlawful to deliberately or recklessly:

- capture, injure or kill such an animal;
- harass an animal or group of animals;
- disturb an animal while it is occupying a structure or place used for shelter or protection;
- disturb an animal while it is rearing or otherwise caring for its young;
- obstruct access to a breeding site or resting place, or otherwise deny an animal use of a breeding site or resting place;
- disturb an animal in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species;
- disturb an animal in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- disturb an animal while it is migrating or hibernating;
- take or destroy its eggs (in Scotland, this is relevant only to the great crested newt and natterjack toad); and
- disturb any cetacean (dolphin, porpoise, or whale).

If impacts to protected species are considered unavoidable then the works may need to be carried out under a site-specific licence from NatureScot. Certain displacement operations may be carried out under a Class licence by a registered person or a site-specific licence.

Species listed on Annex II of the Habitats Regulations are attributed further protection which means that Special Areas of Conservation (SAC) may be designated to internationally important sites for these species.

Wildlife & Countryside Act 1981 (as amended) via:

- Nature Conservation (Scotland) Act 2004
- Wildlife and Natural Environment (Scotland) Act 2011

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times. The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to: intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant; unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow any plant in the wild outwith its native range.

It is recommended that plant material of invasive non-native species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

#### **Environment Protection Act 1990**

The Act imposes a classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed *Reynoutria japonica*, with the result that waste containing this species must be disposed of in accordance with the duty of care set out in section 34 of the Act.

#### Protection of Badgers Act 1992 (as amended by the Wildlife and Natural Environment (Scotland) Act 2011

The main legislation protecting badgers in Scotland, England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger".

#### Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2021 (Eaton *et al*, 2021) and identified 70 red list species, 103 amber species, and 72 green species. The criteria are complex, but generally:

**Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.

Amber list species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.

Green list species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed.

#### Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

#### Local Biodiversity Action Plan (LBAP)

The Dumfries and Galloway Local Biodiversity Action Plan (LBAP) is the key policy document for biodiversity in the region. The LBAP aims to conserve, enhance, and restore biodiversity across Dumfries and Galloway. It includes specific action plans for various habitats and species, addressing key issues and setting out objectives and actions to protect and improve biodiversity

The LBAP is supported by the Dumfries and Galloway Biodiversity Partnership, which includes local authorities, conservation organizations, and community groups. The plan covers a wide range of habitats, including peatlands, grasslands, woodlands, and coastal areas, and emphasizes the importance of maintaining and enhancing biodiversity at both landscape and seascape scales.

#### Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

Its application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

#### National Planning Framework

National Planning Framework 4 (NPF4) is the top tier of planning policy. The Framework provides guidance to local authorities and other agencies on planning policy and the operation of the planning system.

"Policy 1 gives significant weight to the nature crisis to ensure that it is recognised as a priority in all plans and decisions. Policy 4 protects and enhances natural heritage, and this is further supported by Policy 5 on soils and Policy 6 on forests, woodland and trees. Policy 20 also promotes the expansion and connectivity of blue and green infrastructure, whilst Policy 10 recognises the particular sensitivities of coastal areas.

Protection of the natural features of brownfield land is also highlighted in Policy 9, and protection of the green belt in Policy 8 will ensure that biodiversity in these locations is conserved and accessible to communities, bringing nature into the design and layout of our cities, towns, streets and spaces in Policy 14.

Most significantly, Policy 3 plays a critical role in ensuring that development will secure positive effects for biodiversity. It rebalances the planning system in favour of conserving, restoring and enhancing biodiversity and promotes investment in nature-based solutions, benefiting people and nature. The policy ensures that Local Development Plans (LDPs) protect, conserve, restore and enhance biodiversity and promote nature recovery and nature restoration. Proposals will be required to contribute to the enhancement of biodiversity, including by restoring degraded habitats and building and strengthening nature networks. Adverse impacts, including cumulative impacts, of development proposals on the natural environment will be minimised through careful planning and design, taking into account the need to reverse biodiversity loss. Development proposals for national, major or Environmental Impact Assessment (EIA) development will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity."

See here for full details: https://www.gov.scot/publications/national-planning-framework-4/

Dumfries and Galloway Local Development Plan						
Policy LD2P	Dumfries and Galloway have specific planning policies associated with biodiversity, primarily outlined in their Local Development Plan 2 (LDP2). This plan sets out the vision for development in the region, including how biodiversity should be protected and enhanced during the planning process. The LDP2 includes policies that ensure new developments consider the impact on local biodiversity and incorporate measures to protect and enhance natural habitats. Additionally, the plan is supported by supplementary guidance and technical papers that provide detailed information on how to implement these policies effectively.					

	P0.1						
Description	Results	HSI Score	Photograph				
Geographic location	В	0.50					
Pond surface area	300m <sup>2</sup>	0.6					
Pond drying out	Sometimes dries	0.50					
Water quality	Poor	0.33					
Shading	0%	1.00					
No. of waterfowl	Minor	0.67					
Fish	Absent	1.00					
No. of ponds within 1km	Assumed 10+	1.00					
Terrestrial habitat	Poor	0.33	Egg Plant Dew pond.1				
Macrophyte cover	20%	0.50	54.94689, -5.14096 Unnamed Road, Stranraer, UK				
	Score:	0.59	Below Average				

## **APPENDIX E: HSI CALCULATIONS**

			Po.2
Description	Results	HSI Score	Photograph
Geographic location	В	0.50	
Pond surface area	90m <sup>2</sup>	0.2	
Pond drying out	Sometimes dries	0.50	
Water quality	Poor	0.33	
Shading	0%	1.00	
No. of waterfowl	Minor	0.67	
Fish	Absent	1.00	
No. of ponds within 1km	Assumed 10+	1.00	Fig. Plant
Terrestrial habitat	Poor	0.33	Dew pond.2 2024.11.22 09:56
Macrophyte cover	5%	0.33	54.94677, -5.14417 2 Mains of Dhuloch Cottages, Kirkcolm, Stranraer, UK S
	Score:	0.51	Below Average

			Po.3
Description	Results	HSI Score	Photograph
Geographic location	В	0.50	
Pond surface area	150m <sup>2</sup>	0.30	
Pond drying out	Sometimes dries	0.50	
Water quality	Poor	0.33	
Shading	0%	1.00	
No. of waterfowl	Minor	0.67	
Fish	Absent	1.00	
No. of ponds within 1km	Assumed 10+	1.00	Eng Plant
Terrestrial habitat	Poor	0.33	Dew pond.1 2024.11.22 09:13
Macrophyte cover	15%	0.33	S4.9468, -5. 14062 Unnamed Road, Stranraer, UK
	Score:	0.51	Below Average

			Po.4
Description	Results	HSI Score	Photograph
Geographic location	В	0.50	
Pond surface area	60m <sup>2</sup>	0.15	
Pond drying out	Sometimes dries	0.50	
Water quality	Poor	0.33	APPendent Contraction of the Con
Shading	0%	1.00	
No. of waterfowl	Minor	0.67	South the there is a second to be a
Fish	Absent	1.00	
No. of ponds within 1km	Assumed 10+	1.00	
Terrestrial habitat	Good	1.00	Egg Plant Outflow 2024.11.22 11:27
Macrophyte cover	60%	0.90	54.95298, -5.14901 Stranraer, UK
	Score:	0.61	Average



			Po.5
Description	Results	HSI Score	Photograph
Geographic location	В	0.50	Construction of the second
Pond surface area	40m <sup>2</sup>	0.10	
Pond drying out	Sometimes dries	0.50	
Water quality	Poor	0.33	
Shading	0%	1.00	
No. of waterfowl	Minor	0.67	
Fish	Absent	1.00	
No. of ponds within 1km	Assumed 10+	1.00	
Terrestrial habitat	Good	1.00	Pooling area 2024.11.22 10:47
Macrophyte cover	60%	0.90	54.94987, -5.15178 Unnamed Road, Stranraer, UK
	Score:	0.59	Below average