

PRELIMINARY ECOLOGICAL APPRAISAL

LAND AT INGRAM



AUGUST
2015

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REPORT VERSION	STATUS	DATE	CHANGES	AUTHOR	PROOF READ	APPROVED
R01	Draft	22.6.15		MEM	MW	MO
R02	Final	30.7.15	Client approved	MEM		GM

UNLESS REQUESTED OTHERWISE, THE INFORMATION BELOW, RELATING TO THE LOCAL AREA, WILL BE PROVIDED TO THE ENVIRONMENTAL RECORDS CENTRE FOR THE NORTH EAST (ERIC)

SPECIES	RECORDER	DATE	LOCATION (4 FIG. NGR)	ABUNDANCE	COMMENT
Brown hare	E3	May 15	NU02 16	2	Adult and leveret

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A. SUMMARY

E3 Ecology Ltd was commissioned by the Northumberland Estates to undertake a preliminary ecological assessment of land in Ingram in May 2015.

The proposed development comprises 8-10 shepherd hut holiday units. The huts themselves are on wheels therefore raised above ground level; a small deck will be provided for each hut. A hardcore parking area for all huts will be provided by the entrance to the site with mown grass pedestrian tracks to the huts. Some basic services will be provided.

Consultation with the local records centre indicates that the River Breamish, which lies approximately 40m to the north at its nearest point, is part of the River Tweed catchment Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). The site lies just outside the boundary of Northumberland National Park.

The site is a semi-improved field with moderate species diversity and a species poor unmanaged hedge boundary to the south. This is considered of low to local value, supporting a species mix that would be readily replicated in the area, with the hedgerow of local value; the hedgerow will be retained and unaffected by the proposals.

There are two buildings on site, both are single storey or less and of timber construction; both are considered to be of negligible risk of supporting bat roosts. There are no mature trees on site. The area will provide some moderate to good bat foraging habitat but lacks any roosting opportunities.

The site will provide a range of nesting habitat for farmland and upland birds typical to the area. The majority of the nesting activity is likely to be focussed away from the shorter grassland. The following species were recorded during the initial survey: partridge sp., woodpigeon, blackbird, chaffinch and a range of warbler species, all of which were recorded within or around the site boundary. In addition a pair of lapwing flew over the site. A breeding bird risk assessment was undertaken in June 2015. During both surveys a total of 28 species were recorded, the majority of which were located adjacent to the site and are unlikely to breed within the development area. A further 12 species were identified through the risk assessment. Being small in size and with limited structural diversity the field is considered to be of low value to nesting birds. The scrub outwith the site is considered to be of greater ornithological value, supporting a range of species.

Approximately 50m to the north of the site boundary is a waterbody, which appears to have been formed through the re-alignment of the river. This is not visible on Google imagery (2006) or Ordnance survey. Flood alleviation was created following a flood in 2007, and this waterbody was potentially created at this stage; it lies between the flood alleviation measures and the river. Although a Habitat Suitability Index Assessment of the pond shows it is of average suitability (0.67) for great crested newts, given its position it is likely to be affected during periods of river spate. There are no records of great crested newts within 2km. The site does provide some suitable terrestrial habitat for the species, should they be present, but within the main body of the field this is generally of low quality. Given the small area of habitat to be directly affected and the low risk of the waterbody actually supporting a great crested newt population, it is considered that it would be appropriate to work to a precautionary method statement.

Hedge banks bordering the site and dense scrub to the north will provide habitat suitable for badger sett creation and the field will provide some habitat for foraging however no setts or mammal trails were recorded within the site.

The river is likely to support otter but the development site lacks potential laying up or holt creation habitat. The scrub area between the site and the river provides better habitat for this species and they may occasionally forage within the site. The river banks are stony in this location and unsuitable for water vole.

The site will provide some limited suitable habitat for reptiles such as common lizard, with some areas of bare ground, stone and wood piles present. The scrub area to the north, outside the site, provides better habitat, however, the majority of the site will remain unaffected by the works and will be retained in the long term.

Brown hare including a leveret were recorded within the site and toad tadpoles were recorded within the pond off-site.

No invasive species were recorded on site.

Proposals will lead to the loss of/impacts on a very small area of habitat of up to local value. It may also lead to increased recreational use of the river banks of the SSSI, however, as the site lies adjacent to the Ingram Visitor Centre and cycle/walking trail, and the development is for only 8-10 small huts, such impacts are likely to be low to negligible.

Potential impacts of the development in order of conservation significance are:

- Disturbance of bat foraging habitat through increased lighting.
- Low risk of harm to amphibians and reptiles during the installation of the huts and their associated services.
- Risk of harm to mammals should any trenches be created and left open overnight during service installation.
- Loss of a small area of nesting habitat and disturbance to a small number of nesting birds of low value.
- Loss of a small area of habitat of low to local value.
- Low to negligible impacts on the adjacent SSSI.
- Increased lighting affecting mammal foraging habitat.
- Low risk of pollution of the River Breamish during any earthworks.

Key mitigation measures include:

- Lighting levels will be kept to a minimum and be low level and low lux.
- Habitat loss will be kept to a minimum.
- Any vegetation removal or earthworks will be undertaken outside the bird nesting period (March to August).
- All works will be undertaken to a precautionary amphibian and reptile method statement.
- All lighting will be kept low level and low lumen.
- Any trenches left open overnight will have the means of escape for any mammals that may fall in.
- Dense scrub will be maintained around the northern boundary and visitors will be directed to existing public access routes and footpaths, to minimise disturbance to the SSSI.
- All construction works will follow the Environmental Agency's Pollution Prevention guidelines PPG5.

The local planning authority is likely to require the means of delivery of the mitigation to be identified. It is recommended that mitigation and enhancement proposals be incorporated into the master-planning documents.

If you are assessing this report for a local planning authority and have any difficulties interpreting plans and figures from a scanned version of the report, E3 Ecology Ltd would be happy to email a PDF copy to you. Please contact us on 01434 230982.

B. INTRODUCTION

E3 Ecology Ltd was commissioned by the Northumberland Estates to undertake a preliminary ecological assessment of land to the east of Ingram.

B.1 BACKGROUND TO DEVELOPMENT

The site is located on the eastern edge of Ingram village at an approximate central grid reference of NU021 163. The site location is illustrated below in Figure 1. The site is owned by the Northumberland Estates.



FIGURE 1 – SITE LOCATION
(Reproduced from Google Earth pro under licence)

B.2 CURRENT DEVELOPMENT INFORMATION

The proposed development comprises 8-10 shepherd hut holiday units. The huts themselves are on wheels therefore raised above ground level; a small deck will be provided for each hut. A hardcore parking area for all huts will be provided by the entrance to the site with mown grass pedestrian tracks to the huts. Some basic services will be provided.

B.3 PLANNING POLICY AND LEGISLATIVE CONTEXT

B.3.1 PLANNING POLICY

The National Planning Policy Framework (NPPF) states the following:

- Plan policies and planning decisions should be based upon up-to-date information about the natural environment (Paragraph 158 and 165).
- Plan policies should promote the preservation, restoration and recreation of priority habitats, ecological networks and the recovery of priority species (Paragraph 117).
- Local planning authorities should set out a strategic approach in their Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure. (Paragraph 114).
- When determining planning applications in accordance with the Local Plan and the presumption in favour of sustainable development local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles, including if significant harm resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. (Paragraph 118).

B.3.2 PROTECTED SPECIES LEGISLATION

The following protected species may be present on a site such as this:

TABLE 1 – SUMMARISED SPECIES LEGISLATION		
SPECIES	RELEVANT LEGISLATION	LEVEL OF PROTECTION
Bats (All species)	<ul style="list-style-type: none"> • Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as European protected species under Conservation of Habitats and Species Regulations 2010 • Bats are also protected by the Wild Mammals (Protection) Act 1996 	<p>The WCA (1981) and Habitat Regulations (2010) make it an offence to:</p> <ul style="list-style-type: none"> • Intentionally kill, injure, or take any species of bat • Intentionally or recklessly disturb bats • Intentionally or recklessly damage destroy or obstruct access to bat roosts
Otter	<ul style="list-style-type: none"> • Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as European protected species under Conservation of Habitats and Species Regulations 2010 • Otters are also protected by the Wild Mammals (Protection) Act 1996 	<p>The WCA (1981) and Habitat Regulations (2010) make it an offence to:</p> <ul style="list-style-type: none"> • intentionally kill, injure, or take otters • intentionally or recklessly disturb otters • intentionally or damage destroy or obstruct access to otter holts or any place used by the animal for shelter or protection
Great Crested Newt	<ul style="list-style-type: none"> • Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended • Classified as European protected species under Conservation of Habitats and Species Regulations 2010 	<p>The WCA (1981) and Habitat Regulations (2010) make it an offence to:</p> <ul style="list-style-type: none"> • intentionally kill, injure, or take great crested newts • intentionally or recklessly disturb great crested newts • intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection

TABLE 1 – SUMMARISED SPECIES LEGISLATION		
SPECIES	RELEVANT LEGISLATION	LEVEL OF PROTECTION
Birds	<ul style="list-style-type: none"> Protection under the Wildlife and Countryside Act (1981) as amended with the exception of some species listed in Schedule 2 of the Act 	The WCA (1981) makes it an offence to (with exceptions for certain species): <ul style="list-style-type: none"> Intentionally kill, injure or take any wild bird Intentionally take, damage or destroy nests in use or being built (including ground nesting birds) Intentionally take, damage or destroy eggs Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests
Badger	<ul style="list-style-type: none"> Protection of Badgers Act 1992 Badgers are also protected by the Wild Mammals (Protection) Act 1996 	The Protection of Badgers Act (1992) makes it an offence to intentionally or recklessly: <ul style="list-style-type: none"> Damage a badger sett or any part of it Destroy a badger sett Obstruct access to, or any entrance of a badger sett Disturb a badger whilst it is occupying a badger sett
Common reptiles (Slow-worm, Adder, Grass Snake, Common Lizard)	<ul style="list-style-type: none"> Partially protected by the Wildlife and Countryside Act 	The WCA (1981) makes it an offence to: <ul style="list-style-type: none"> intentionally kill or injure these animals Sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals
<p><i>Under the Countryside and Rights of Way Act 2000 (CROW Act) the offence in section 9(4) of the Wildlife and Countryside Act 1981 of damaging a place of shelter or disturbing those species given full protection under the act is extended to cover reckless damage or disturbance.</i></p>		

Although not afforded any legal protection, priority species (English or Local) are a material consideration in the planning process and as such have been assessed accordingly within this report.

B.3.3 INVASIVE SPECIES LEGISLATION

The following invasive species may be present on a site such as this:

TABLE 2 – SUMMARISED INVASIVE SPECIES LEGISLATION		
SPECIES	RELEVANT LEGISLATION	DESCRIPTION OF OFFENCE
Giant hogweed Himalayan Balsam	<ul style="list-style-type: none"> Listed on Part II of Schedule 9 of the Wildlife and Countryside Act (1981 as amended) 	Section 14 of the WCA (1981) states: <ul style="list-style-type: none"> if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.

B.3.4 PROTECTED SITE LEGISLATION

Details of the legislation surrounding protected sites are provided in the appendices.

B.4 PERSONNEL

Survey work and reporting was undertaken by:

NE Bat Licence No. **NE GCN Licence No.**

- Mary Martin BSc MCIEEM 2015 9386 CLS CLS -

C. SURVEY AREA AND METHODOLOGY

C.1 SURVEY AREA

Figure 2 illustrates the site boundary whilst Figure 3 illustrates the broad habitats present on site and within an approximate 500m buffer zone to provide context.



FIGURE 2 – AERIAL PHOTOGRAPH OF THE SITE ILLUSTRATING ITS EXTENT WITH A RED LINE BOUNDARY
(Reproduced under licence from Google Earth Pro.)



FIGURE 3 – AERIAL PHOTOGRAPH CENTRED ON THE SITE WITH A 500M RADIUS ILLUSTRATING THE SETTING AND THE HABITATS IT SUPPORTS
(Reproduced under licence from Google Earth Pro.)

C.2 DESKTOP STUDY METHODOLOGY

Initially, the site was assessed from aerial photographs and 1:25000 OS plans. Following this, a data request was sent to the Local Records Centre, and the Multi Agency Geographic Information for the Countryside (MAGIC) website was checked for any notable sites.

C.3 PRELIMINARY FIELD STUDY METHODOLOGY

C.3.1 PHASE 1 HABITAT SURVEY

C.3.1.1 SURVEY METHODS

The field survey of the proposed site was conducted using the methodology of the Joint Nature Conservation Committee's Phase 1 Habitat Survey, as outlined in their habitat-mapping manual¹. Each parcel of land was assessed by a trained surveyor and classified as one of approximately ninety habitat types. These were then mapped and the habitat information supplemented by dominant and indicator species codes and target notes where appropriate. Habitats identified as being of particular interest, of Parish Conservation value or above, were then studied in more detail. Plant species lists were recorded for such areas. Where areas within the study area do not fall into the Phase 1 Habitat Survey classification, alternative methods of recording have been used.

C.3.1.2 SURVEY EQUIPMENT

- Digital camera
- Opticron binoculars
- Collins complete guide to British flowers
- Harraps wild flowers

C.3.2 PRELIMINARY PROTECTED AND PRIORITY SPECIES ASSESSMENT

C.3.2.1 SURVEY METHODS

Where there is a risk of protected species or species listed as priority species (listed on the now superseded UK Biodiversity Action Plan), an initial assessment was completed to inform the proposals. This appraisal included the following key elements:

- Structures and trees were assessed for the risk of supporting roosting bats.
- Wetlands, where present, were reviewed for their potential use by great crested newt, otter and water voles, with particular attention paid to possible otter sprainting sites and resting areas.
- If present, any trackways regularly used by badger were noted and any badger sett usage assessed by the presence of freshly dug earth or bedding at the entrance.
- The risk of reptiles using the site was assessed based on the habitats present.
- Likely use of the site by birds was assessed from the species seen during the survey, and the habitats present.
- A risk assessment was based on the broad habitat types used by species of principal importance in England and local BAP species, recent records and their geographical distribution. Where specific habitat requirements for priority species in England and local BAP species have been recorded on site these have been noted, and used as

¹ Handbook for Phase 1 habitat survey, A Technique For Environmental Audit, JNCC, 2010

part of this assessment. The species groups assessed are limited to birds, freshwater fish, amphibians, reptiles, terrestrial mammals, butterflies and dragonflies.

Where it is considered likely that there is a significant risk of protected, priority species in England or local BAP species being affected or where habitats are of particularly high value and/or where statutory sites are present in the vicinity that may be affected by development proposals, additional specialist survey work has been recommended.

Survey was undertaken by Mary Martin BSc MCIEEM on 29th May 2015.

C.3.3 PRELIMINARY ECOLOGICAL APPRAISAL ENVIRONMENTAL CONDITIONS

TABLE 3 – SURVEY CONDITIONS				
DATE	TEMPERATURE	CLOUD COVER	PRECIPITATION	WIND CONDITIONS
29.5.15	13 °C	50-80% (mixed)	Dry	Still-bf1

C.3.4 SURVEY CONSTRAINTS

The quality of field data will be affected by the season of the survey, with some plant species only being evident or identifiable at certain seasons, however, this is not considered to have affected the assessment of the site.

C.4 DETAILED FIELD STUDY METHODOLOGY

C.4.1 BIRD RISK ASSESSMENT

C.4.1.1 SURVEY METHODS

The site was surveyed by an experienced ornithologist who is able to identify all commonly occurring UK bird species by sight and call. Initially, the habitats were studied and assessed for their likely bird use. The surveyor moved slowly around the site, stopping to scan for birds using high quality binoculars.

Birds seen or heard were recorded as accurately as possible on a plan of the site.

Survey techniques used good field craft to minimise disturbance to birds, wearing dull clothes, avoiding being silhouetted against the skyline, moving slowly and then spending time in one location to allow birds to become active again. Where sensitive species are present, such as nesting raptors, priority has been given to protecting the birds rather than gathering very detailed information, generally by quiet observation from a distance.

Following the survey a risk assessment was undertaken to determine the potential for other species to be present. This was based on the habitats present, the nature of the size and the geographical location of the site.

C.4.1.2 SURVEY EQUIPMENT

- RSPB HD 10x42 Binoculars

C.4.1.3 SURVEY DATES

Survey was undertaken by Mark Osborne BTEch CEcol MCIEEM on 20th June 2015.

TABLE 4 – SURVEY CONDITIONS				
DATE	TEMPERATURE	CLOUD COVER	PRECIPITATION	WIND CONDITIONS
20.6.15	18°C	90%	Light Shower	SW1-2

D. RESULTS

D.1 DESKTOP STUDY

D.1.1 PRE-EXISTING INFORMATION

ORDNANCE SURVEY MAPS AND AERIAL PHOTOGRAPHS

Figures 1 (A1) and 3 (C1) show that the general land use in the surrounding area is pasture land with some woodland and scrub along the river which lies to the north of the site. The village of Ingram lies immediately to the west.

The most recent aerial photograph of the site (Figure 2, C1, 2006) indicates that habitats on site are dominated by pasture with some scrub habitat boundary. However, a flood in 2007 caused some changes to the habitat to the north of the site, with areas of marshy grassland and a greater level of scattered scrub habitat now present. In addition, aerial photography does not show a waterbody and flood alleviation measures created as a result of the 2007 flood.

MAGIC WEBSITE

The following protected areas lie within 2km of the site:

Tweed Catchment Rivers SSSI

Reasons for Notification:

As part of the whole River Tweed system, the Till Catchment Rivers are clean rivers of high conservation and ecological value. The vegetation types show a natural succession from mineral-poor upland streams through to communities that are typical of mineral-rich lowland rivers. Floating beds of water crowfoot, *Ranunculus*, are of international significance and the blooming of a diatom *Didymosphenia* in the headwaters draining the Cheviot is unique in England. The fish fauna is particularly significant, the area supports one of the most important game fisheries in England, with large migrations of salmon and also supports the three British species of Lamprey. The Till catchment also contains important habitat for otters.

River Tweed SAC: Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitriche-Batrachion vegetation. It is also listed for Atlantic salmon and secondary listing for sea, river and brook lamprey.

The following Priority habitats also lie within 2km:

Blanket bog, deciduous woodland

National inventory of woodland coniferous and broadleaf.

The website also had records of the following bird species within 2km of the site: curlew, grey partridge, redshank, lapwing, snipe, and tree sparrow.

REPTILE/AMPHIBIAN ATLAS

The 10 km square NU01 lies just within the distribution for adder, but there are no reptile records within this square.

LOCAL KNOWLEDGE

The Northumberland Estates report that the area to the north was flooded in 2007, with flood alleviation works for the village undertaken after this time.

D.1.2 CONSULTATION

LOCAL RECORDS CENTRE

In addition to the sites listed above, the following sites lie just within the 2km boundary:

Reavley Greens/Roddam Quarry Local Wildlife Site (LWS)
Harestone, Threestone, Lilburn Burns LWS

The following notable/protected species records were also provided and represent the closest and most recent records:

TABLE 5 – CONSULTATION RECORDS			
Taxon	Species	Distance (m)	Year
Birds (red list)	Lapwing	1500	94 plus within 10km sq in 2014)
	Yellowhammer	224	2008
	Skylark	224	2008
	Herring Gull	Within 10km square	2014
	Linnet	Within 10km square	2014
Reptiles	Adder	688	2009
Terrestrial Mammal	Otter	510	1993
	Daubenton's bat	200	1991
	Whiskered/Brandt's bat	265	2013
	Natterer's bat	Roost in church	2014
	Common & soprano pipistrelle	176	2013
	Brown long eared bat	Within 10km square	2010
	Red Squirrel	100	2007 (plus records within 10km sq 2012)
Brown Hare	224	2013	

The proposed development may cause a slight increase in disturbance to the section of SSSI immediately adjacent to the site, however, the site lies immediately adjacent to the Ingram visitors centre and routed walks and cycle routes, so any impacts are considered likely to be low to negligible.

D.2 FIELD SURVEY

D.2.1 HABITATS

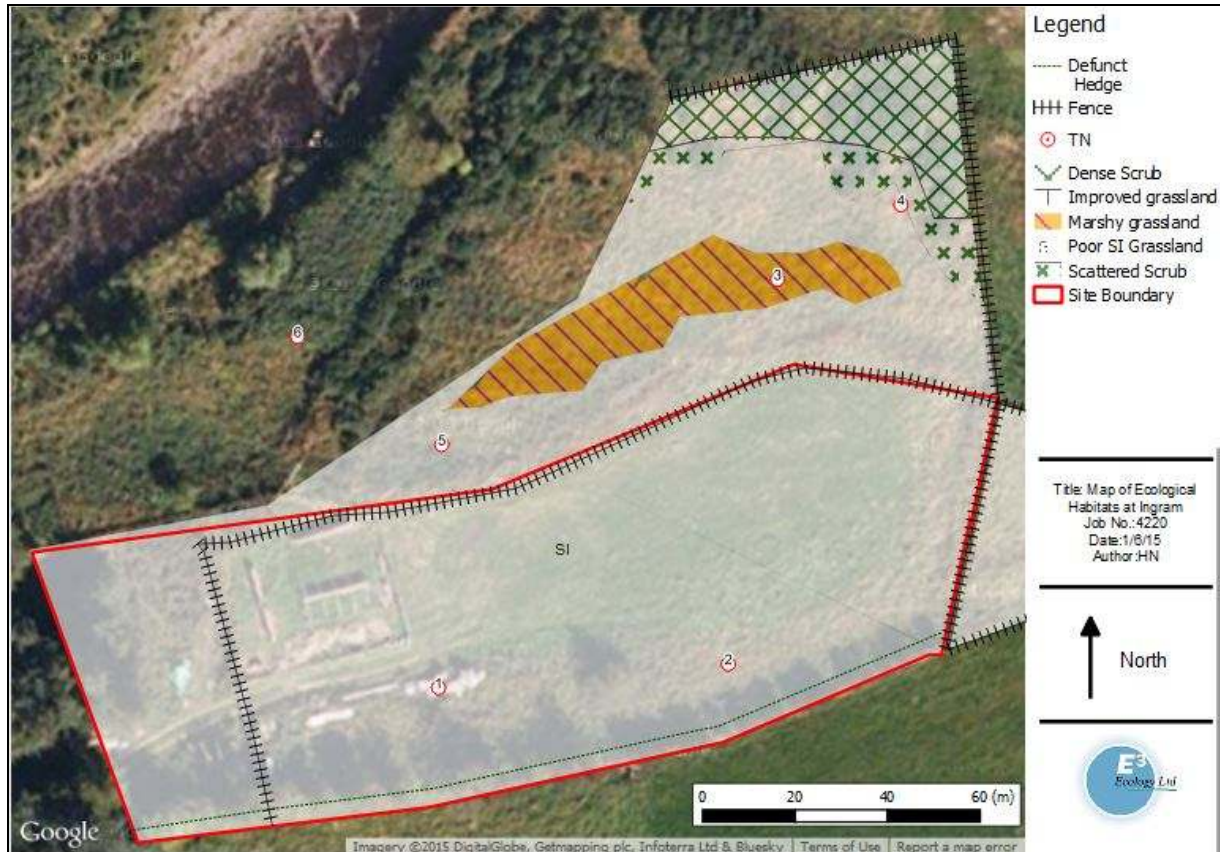


FIGURE 4 – HABITAT MAP

Semi Improved Grassland

The main body of the site is a semi-improved field that has been used by the National Park for stone wall building training. There are short sections of stone wall and piles of stone from this, plus stored timber and other materials. The field has moderate species diversity with approximately 40% forbs. Species recorded include tufted hair grass *Deschampsia cespitosa*, perennial ryegrass *Lolium perenne*, meadow fescue *Festuca pratensis*, cock's foot *Dactylis glomerata*, meadow foxtail *Alopecurus pratensis*, Yorkshire fog *Holcus lanatus*, sweet vernal grass *Anthoxanthum odoratum*, common bent *Agrostis capillaris*. Forb species include hogweed *Heracleum sphondylium*, creeping thistle *Cirsium arvense*, crosswort *Cruciata laevipes*, yarrow *Achillea millefolium*, common nettle *Urtica dioica*, rosebay willowherb *Chamerion angustifolium*, germander speedwell *Veronica chamaedrys*, creeping buttercup *Ranunculus*



repens, red clover *Trifolium pratense*, ribwort plantain *Plantago lanceolata*, broadleaf dock *Rumex obtusifolius*, chickweed *Stellaria media*, common sorrel *Rumex acetosa*, cow parsley *Anthriscus sylvestris*, broad leaf willowherb *Chamerion latifolium*, and occasional meadow buttercup *Ranunculus acris*, hard rush *Juncus inflexus*, tufted forget me knot *Myosotis laxa*, pignut *Conopodium majus*, stitchwort *Stellaria sp.*, lady's bedstraw *Galium verum* and red campion *Silene dioica*.

Hedgerow

The hedgerow boundary is mature hawthorn *Crataegus monogyna*, approximately 2m high and intact at the eastern end and more individual hawthorn trees 3-4m high at the west, with some bramble *Rubus fruticosus* understorey.



Outwith the site

Area immediately to the north.

The area is a mix of scrub and marshy grassland. The second area is mixed dense scrub, marshy grassland and semi-improved grassland with approximately 60% scrub, 20% marshy grassland and 20% unimproved grassland.



Scrub

There is a bund that runs around the north of the site, with dense gorse *Ulex sp.* and common broom *Cytisus scoparius*, with some willow *Salix sp.* and occasional elder *Sambucus nigra*. There is also some scattered scrub within the body of the site.

Marshy grassland

Through the centre of the site is an area of marshy grassland dominated by *Juncus sp.*

Semi-improved grassland

Grassland species mix is similar to the area of semi-improved grassland within the site, though with a slightly higher forb percentage and greater density of species such as stichwort that were only found occasionally in the main field. Other species recorded include wild raspberry *Rubus idaeus*, false oat grass *Arrhenatherum elatius*, white dead nettle *Lamium album*, cleavers *Galium aparine*, herb Robert *Geranium robertianum*, common vetch *Vicia sativa*, ground ivy *Glechoma hederacea* and occasional bittercress *Cardamine* sp.



To the north of the bund lies an area of willow carr and flood alleviation measures, which includes some grey willow *Salix cinerea*, common osier *Salix viminalis* and young alder *Alnus glutinosa*.

D.2.2 TARGET NOTES

Target Note 1:

Two small timber storage units used by the Park, of negligible risk of supporting bats.



Target Note 2:
Short stretches of wall and stone piles used by the Park for dry stone wall building training.



Target Notes 3 & 5 (outside the site):
Areas of river stone and brushwood potentially left from previous flooding, lying at the base of the scrub bund



Target Note 4 (outside the site):
Sunken wet area, approximately 2m x 2m, likely to be largely ephemeral in nature. Approximately 20cm at its deepest at the time of survey, fully covered with emergent grass but including a small amount of common starwort. Considered of negligible risk of supporting great crested newts.



Target Note 6 (outside the site):
Pond approximately 20m long x 3m wide; likely to have been formed through changes to the river flow and potentially flooded when the river was in spate. This has an H.S.I score of 0.67 but should the river flood through this area, this would reduce the risk of great crested newt being present. This waterbody, and the adjacent timber flooding control, is not visible on Google aerial imagery (most recent 2007) but is shown on other, most likely more recent, aerial imagery, indicating some changes to river management since 2007. There is one small pond shown on Ordnance survey maps, approximately 500m to the east, around Ingram Mill.



D.2.3 SPECIES

BATS

There are two buildings on site, both are single storey or less and of timber construction. One has a pitched felt roof, the other is lower and has a flat corrugated roof, both considered of

negligible risk of supporting bat roosts. There are no mature trees on site. The area will provide some moderate to good bat foraging habitat but lacks any roosting opportunities.

OTTER AND WATER VOLE

The river is likely to support otter and the dense scrub to the north could provide areas for lying up or holt creation. The development site itself lacks suitable habitat although it may be used on occasion by foraging otter. The river banks are stony in this location and unsuitable for water vole.

GREAT CRESTED NEWT

Approximately 50m to the north of the site boundary is a waterbody, which appears to have been formed through the re-alignment of the river. This is not visible on Google imagery (2006) or Ordnance survey mapping. Flood alleviation measures were created following a flood in 2007, and this waterbody was potentially created at this stage; it lies between the flood alleviation measures and the river. Although an Habitat Suitability Index Assessment of the pond shows it is of average suitability (0.68) for great crested newts, given its position it is likely to be affected during periods of river spate. There are no records of great crested newts within 2km. The site does provide some suitable terrestrial habitat for the species, should they be present. However, given the small area of habitat to be directly affected, the risk of harm to great crested newts during the installation of the shepherd huts and associated services will be low.

Factor	Units	Pond 1	
		Score	HSI value
Location	Measured as map location (Zones:A=1, B=2 C=3)	1	1
Pond area	m ²	100	0.2
Pond permanence	Years (0-10)	0	0.9
Water quality	Subjective scale (1 - low to 4 - high)	4	1
Shade	%	10%	1
Fowl	Count/ 1000m ²	0	1
Fish	Subjective scale (1 - major to 4 -absent)	2	0.33
Pond density	Count within 1km	1	0.38
Terrestrial	Habitat area (ha)	6	0.98
	Barriers (subjective scale 1 - major to 5 - no barrier)	3	
Macrophyte	%	60%	0.9
TOTAL			0.68

BADGER

Hedge banks within the site, and scrub to the north, will provide habitat suitable for sett creation and badger foraging, although no setts or mammal trails were recorded within the site.

REPTILES

The site will provide some limited suitable habitat for reptiles such as common lizard, with some areas of bare ground, stone and wood piles although scrub habitat to the north provides better quality habitat for this taxa. There was only a single reptile record provided by ERIC, of an adder over 600m away. No evidence of the species was recorded during the preliminary assessment or bird risk assessment.

RED SQUIRREL

There are records of the species within 100m of the site, but no trees within the site and it does not provide connectivity to other suitable habitat.

INVERTEBRATES

A single wall butterfly was recorded within in the scrub outside the site to the north.

PRIORITY AND LOCAL BAP SPECIES

Two brown hare, including a maturing leveret were recorded within the field. Toad tadpoles were recorded within the pond off-site.

D.2.4 BIRD RISK ASSESSMENT AND SURVEY RESULTS

Table 4 below illustrates the 28 bird species recorded during the survey in the proposed development site and scrub immediately to the north, and a further 12 that may use the site as identified through a risk assessment. Of these only two, meadow pipit and grey partridge, are likely to nest within the development field itself. Others may utilise the surrounding hedgerow, though these will be unaffected.

Table 4 –Risk Assessment Table Site at Ingram					
Species	BTO Code	UK Priority List Species	Survey	Risk Assessment	Notes
Blackbird	B.		✓		Breeding species singing from scrub to the north
Blackcap	BC		✓		Breeding species singing from scrub to the north
Black-headed Gull	BH		✓		Overflying site
Blue Tit	BT			✓	Breeding species calling from scrub to the north and woodland
Buzzard	BZ		✓		Overflying site
Carrion Crow	C.		✓		Calling from trees, foraging within site
Chaffinch	CH		✓		Breeding species calling from woodland
Chiffchaff	CC		✓		Breeding species calling from scrub to the north and woodland
Common Sandpiper	CS		✓		Breeding species on adjacent river
Dipper	DI			✓	Likely breeding species on adjacent river
Dunnock	D.	✓	✓		Breeding species, singing from hedge lines and scrub
Garden Warbler	GW		✓		Breeding species singing from scrub to the north
Goldcrest	GC		✓		Breeding species calling from woodland
Goldfinch	GO		✓		Overflying site – likely breeding species
Grasshopper Warbler	GH	✓		✓	Potential breeding species in <i>Juncus</i> to east of site
Great Tit	GT		✓		Breeding species calling from scrub to the north and woodland
Grey Heron	H.		✓		Foraging on river
Grey Partridge	P.	✓		✓	Potential breeding species
Grey Wagtail	GL		✓		Overflying site and breeding on adjacent river
House Sparrow	HS	✓		✓	Potential breeding species
Jackdaw	JD		✓		Overflying and foraging on site
Kestrel	K.			✓	Foraging within the site
Lapwing	L.	✓	✓		Overflying site
Linnet	LI			✓	Potential breeding species within scrub
Long-tailed Tit	LT		✓		Breeding species – young recorded in scrub
Meadow Pipit	MP		✓		Breeding species within <i>Juncus</i> area to the east.
Pied Wagtail	PW		✓		Overflying site
Reed Bunting	RB	✓	✓		Breeding within scrub on site
Robin	R.		✓		Breeding species – Singing in woodland

Snipe	SN			✓	Potential breeding species in <i>Juncus</i> to east of site
Starling	SG	✓	✓		Breeding species in wider area
Swallow	SL		✓		
Swift	SI		✓		Overflying site
Tawny Owl	TO			✓	Potential breeding species in woodland (owl box)
Whinchat	WC			✓	Potential breeding species in scrub area
Whitethroat	WH			✓	Potential breeding species in hedgerow and scrub
Willow Warbler	WW		✓		Breeding species singing from scrub to the north
Woodpigeon	WP		✓		Overflying site
Wren	WR		✓		Breeding species singing from scrub to the north and woodland
Yellowhammer	Y.	✓		✓	Potential breeding species in hedgerow and scrub

Notes:

Red List Species are listed by the RSPB as species of high national conservation concern.

Amber listed species are listed by the RSPB as species of medium national conservation concern²

² Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296–341.

E. ASSESSMENT

The value and significance of the habitats and species found was assessed against the following criteria developed from the Guidelines for Ecological Impact Assessment produced by the Chartered Institute of Ecology and Environmental Management³.

TABLE 5 - ECOLOGICAL IMPACT ASSESSMENT VALUATION	
LEVEL OF VALUE	EXAMPLES
International	<ul style="list-style-type: none"> • An internationally designated site or candidate site. • A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. • Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. • Any regularly occurring, nationally significant population/number of any internationally important species.
National	<ul style="list-style-type: none"> • A nationally designated site. • A viable area of a priority habitat or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. • Any regularly occurring population of a nationally important species, which is threatened or rare in the region or county. • A regularly occurring regionally or county significant population/number of any nationally important species. • A feature identified as of critical importance on the former UK BAP.
Regional	<ul style="list-style-type: none"> • Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. • A regularly occurring, locally significant number of a regionally important species.
County	<ul style="list-style-type: none"> • County designated sites. • A viable area of a habitat type identified in the County BAP. • Any regularly occurring, locally significant population of a species which is listed in a County "red data book" or BAP on account of its regional rarity or localisation. • A regularly occurring, locally significant number of a species important in a County context.
District	<ul style="list-style-type: none"> • Areas of habitat identified in a District level BAP. • Sites designated at a District level. • Sites/features that are scarce within the District or which appreciably enrich the District habitat resource. • A population of a species that is listed in a District BAP because of its rarity in the locality.
Parish	<ul style="list-style-type: none"> • Area of habitat considered to appreciably enrich the habitat resource within the context of the Parish. • Local Nature Reserves.
Local	<ul style="list-style-type: none"> • Habitats and species that contribute to local biodiversity, could only be replicated in the medium term, but are common in the local area. • Loss of such habitats would ideally be mitigated if local biodiversity is to be conserved and enhanced.
Low	<ul style="list-style-type: none"> • Habitats of poor to moderate diversity such as established conifer plantations, species poor hedgerows and un-intensively managed grassland that may support a range of Local BAP species but which are unexceptional, common to the local area and whose loss can generally be readily mitigated.

³ Institute for Ecology and Environmental Management (2006) Guidelines for Ecological Impact Assessment in the United Kingdom (Version 7 July 2006). <http://www.ieem.org.uk/ecia/index.html>.

E.1 HABITATS

The site is considered of low to local value, supporting a species mix that would be readily replicated in the area, with the hedgerow of local value.

E.2 NOTABLE SPECIES

There are no potential bat roost sites within the site, with the buildings considered of negligible risk of supporting bats but it will provide a small area of foraging habitat for bat species. This foraging resource will largely remain unchanged following the proposed low scale development, although any lighting proposed may impact on this resource.

Site survey recorded 28 bird species as present on or adjacent to the site, with at least a further 12 species identified through a risk assessment based on the habitats present. Of the 40 identified species, 21 are recognised as being of conservation concern, with 7 red listed species (grasshopper warbler, grey partridge, house sparrow, lapwing, linnet, starling and yellowhammer) and 14 amber listed species present (black-headed gull, chiffchaff, common sandpiper, dunnock, grey wagtail, kestrel, meadow pipit, reed bunting, snipe, swallow, swift, whinchat, whitethroat and willow warbler). The development field is considered of low value to nesting birds being small in size and having very limited structural diversity. The area immediately to the north, outside the site boundary, is considered to likely be of up to parish value for nesting birds, providing a range of nesting opportunities associated with the varied habitats. This area was of particular value to a range of warbler species, associated with the dense willow and gorse scrub.

Otter and badger are both likely to be in the wider area, although there were no badger records and only a single otter record from 1993 was provided through consultation. No holts, lying up areas or setts were recorded within the areas to be developed and the site will provide only a small area of foraging habitat for the species. This resource may be reduced or lost during the summer period through disturbance of visitors, but remain available over winter.

Although there is a pond within 50m of the site there are no records of great crested newts within the area. The pond is between the flood alleviation measures and the river and is likely to flood during periods of river spate. The land take for the proposed development is small and the risk of this species being present is considered low. It is considered appropriate to undertake works to a precautionary method statement. This approach has been agreed with the Northumberland County Council ecologist.

Although the site provides some limited suitable habitat for reptiles, the majority of this habitat will remain largely unchanged and have the potential to continue to be used should these taxa be present.

E.3 LIMITATIONS

Full access was available to the site. The quality of field data will be affected by the season of the survey, with some plant species only being evident or identifiable at certain seasons, however, given the timing of the survey it is considered that a fair assessment of the site has been made.

F. IMPACTS

Potential impacts of the development in order of conservation significance are:

- Disturbance of bat foraging habitat through increased lighting.
- Low risk of harm to amphibians and reptiles during the installation of the huts and their associated services.
- Risk of harm to mammals should any trenches be created and left open overnight during service installation.
- Loss of a small area of nesting habitat and disturbance to a small number of nesting birds of low value.
- Loss of a small area of habitat of low to local value.
- Low to negligible impacts on the adjacent SSSI.
- Increased lighting affecting mammal foraging habitat.
- Low risk of pollution of the River Breamish during any earthworks.

G. RECOMMENDATIONS

G.1 FURTHER SURVEY

No further survey is proposed.

G.2 AVOIDANCE AND MITIGATION STRATEGY

Key mitigation measures include:

- Habitat loss will be kept to a minimum.
- Any vegetation removal or earthworks will be undertaken outside the bird nesting period (March to August).
- All works will be undertaken to a precautionary amphibian and reptile method statement.
- All lighting will be kept to a minimum and be low level and low lumen and directed away from the boundary features.
- Any trenches left open overnight will have the means of escape.
- Dense scrub will be maintained around the northern boundary and visitors will be directed to existing public access routes and footpaths, to minimise disturbance to the SSSI.
- All construction works will follow the Environmental Agency's Pollution Prevention guidelines PPG5.

APPENDIX 1. STATUTORILY AND NON- STATUTORILY DESIGNATED SITES

A1.i Statutorily Designated Sites

Ramsar Sites

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention recognizes wetlands as important ecosystems and includes a range of wetland types from marsh to both fresh and salt water habitats. The wetlands can also include additional areas adjacent to the main water-bodies such as river banks or coastal areas where appropriate.

Special Protection Areas (SPAs)

SPAs are classified by the UK Government under the EC Birds Directive and comprise areas which are important for both rare and migratory birds.

Special Areas of Conservation

SACs are designated under the EC Habitats Directive and are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the Conservation of Habitats and Species Regulations 2010 (as amended) unless they are offshore.

Sites of Special Scientific Interest

SSSIs are designated as sites which are examples of important flora, fauna, or geological or physiographical features. They are notified under the Wildlife and Countryside Act 1981 with improved provisions introduced by the Countryside and Rights of Way Act 2000.

National Nature Reserves (NNRs)

NNRs are designated by Natural England under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 and support important ecosystems which are managed for conservation. They may also provide important opportunities for recreation and scientific study.

Country Parks

Country Parks are statutorily designated and managed by local authorities in England and Wales under the Countryside Act 1968. They do not necessarily have any nature conservation importance, but provide opportunities for recreation and leisure near urban areas.

A1.ii Non-Statutorily Designated Sites

Local Nature Reserves (LNRs)

LNRs are designated under the National Parks and Access to the Countryside Act 1949 by local authorities in consultation with Natural England. They are managed for nature conservation and used as a recreational and educational resource.

Non-Governmental Organisation Property

These are sites of biodiversity importance which are managed as reserves by a range of NGOs. Examples include sites owned by the RSPB, the Woodland Trust and the Wildlife Trusts.

Local Wildlife Sites (LWSs)

These are sites defined within the local plans under the Town and Country Planning system and are material considerations of any planning application determination. They are designated by the local authority although criteria can vary between authorities.

APPENDIX 2.

REPTILE AND AMPHIBIAN METHOD STATEMENT

THIS STATEMENT MUST BE COPIED TO THE SITE OWNER, DESIGNER, CLERK OF WORKS, AND TO THOSE CONTRACTORS WHOSE WORK MAY AFFECT REPTILES OR NEWT, INCLUDING THOSE INVOLVED IN ALL ELEMENTS OF THE WORK DETAILED ABOVE. A SIGNED COPY SHOULD BE KEPT AT THE SITE OFFICES.

This method statement contains information regarding:

- Species identification ecology
- Working methods

	Print Name	Signature	Date
Supervisor:			
Operative:			
Operative:			
Operative:			
Operative:			

Reptiles

Relevant Legislation

All native reptiles, adder, grass snake, smooth snake, common lizard, sand lizard and slow worm, are protected in Britain under the Wildlife and Countryside Act 1981 and its subsequent amendments and listed on Schedule 5. It is an offence to:

- Intentionally kill, injure or sell (or advertise to sell) any of the 6 native species.

There is no licensing process for works that may result in reptiles being killed, but Natural England would generally look to developers to adopt approaches that minimise the risk of protected species being killed and which help to maintain their conservation status in the local area.

Ecology

The favoured habitats for most reptile species are heathland, scrub, rough grassland, coastal dunes and moorland. Typically, snakes have a large home range, sometimes covering several kilometres in a year, while lizards will only range over 10's of metres giving a home range of below 1000 square metres.

Particularly high-risk areas of habitat within this site are:

- Areas of dense scrub and adjacent coarse grassland
- Hedgelines and banks
- Rubble

Between October and March, reptiles hibernate below ground, often in large mammal burrows or other refuges both natural and man-made. Most species emerge from hibernation from early March and remain active through until September, during which period reptiles are most commonly seen basking in the open when temperatures are between 8 and 16°C. Most species will avoid extremes of temperature by taking refuge under ground, both at night and when temperatures become too high during the day. Young are born/hatch between July and September.



Adder



Common lizard



Slow worm

Great Crested Newts

Relevant Legislation

Great crested newts are protected under the Wildlife and Countryside Act 1981 (as amended), and the Habitat Regulations (2010). As a result it is illegal to kill, injure or disturb a great crested newt or damage, destroy or obstruct access to its place of rest or shelter. **Prosecution could result in imprisonment, fines of £5000 per animal affected and confiscation of vehicles and equipment used.**

Ecology

Adult great crested newts are present in ponds during the spring period, generally February to June, where they lay their eggs. Larvae hatch out and emerge as small newts in the summer. Most of the year is spent on the land, generally in areas that provide good cover and an invertebrate food source such as woodland, hedges, marshy grassland and coarse grassland. The majority of newts will stay within 150m of the breeding pond, but some may be present up to 500m from a pond and can certainly move over greater distances than this. Great crested newts are up to 170mm long, larger than smooth or palmate newts, which are rarely longer than 100mm and have a coarse, dark (almost black) granular skin with very fine white spots on the lower flank and a brightly coloured orange-yellow belly, with dark spots. Smooth newts are delicate and often yellow-brown in colour (see photographs below).

Newts are mainly active at night, particularly in warm and wet conditions, and are most likely to be found under stones and logs, discarded rubbish or within piles of rock, bricks and the like.



The top two images show the much larger and darker great crested newt. The below left and central images shows the smaller smooth newt and the image below right shows the similarity of the smooth and palmate newts. The palmate, on the left, has a pearlescence to the skin and lacks chin spots

A2.i Toads

The Common Toad is a UK Biodiversity Action Plan priority species.

The Common Toad is a widespread amphibian found throughout Britain although absent from Ireland. The Common Toad can be found in almost any habitat and is common in gardens. It prefers larger water bodies in which to breed and, because toxins are also present in the skin of the tadpoles, they are able to breed in ponds and lakes containing fish which learn to avoid the distasteful tadpoles. Common Toads congregate at breeding ponds in early April but for the rest of the year will wander well away from water as they are far more tolerant of dry conditions than the Common Frog.

Common Toads feed on any moving prey small enough for them to swallow. They are most active at night when they will wander about in search of food. If they find a good source of food they can become quite sedentary. Their life cycle is similar to that of the Common Frog, spawn is laid in strings (see picture) and the tadpoles are black and often move about in shoals. The toadlets emerge in August usually after heavy rain and in huge numbers. At this stage of their lives they are extremely small and speckled with gold.

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Left: common toad Right: frog

Working Methods

Standard working methods, to minimise the risk of harming or killing reptiles or great crested newts should include the following:

- Any areas of rocks, brick rubble, rubbish or fallen timber that have been present within the area to be cleared for over 3 months are to be searched by hand before the start of works in that area
- Vegetation should be cleared progressively using hand tools to provide animals with an opportunity to move out of the area. Areas of tall grassland should be strimmed, and scrub cut down to ground level and removed.
- Following vegetation clearance the area should be left for several days to allow any animals to move out of the area before any excavation commences.
- Areas of standing water will not be allowed to persist for more than a week during the construction period.
- If reptiles are found during the clearance operations they should be moved to adjacent areas of suitable habitat that are not affected by development.
- If great crested newts are found at any time during the works, works will stop in that area immediately and the ecological consultant for this project (E3 Ecology Ltd. 01434 230982) will be contacted. If newts are likely to be harmed without immediate action handle them with care, place in a cool, humid and shaded receptacle and release them

in tall grassland/scrub outwith the construction area in a location that will not be disturbed in the future.

- The use of insecticides/herbicides in areas where reptiles or great crested newts may be present should be minimised.

In case of queries please contact the project ecologists E3 Ecology Ltd 01434 230982.