RES Ltd

PRELIMINARY ECOLOGICAL APPRAISAL

Port of Tyne

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22th August 2016



EXECUTIVE SUMMARY

A Preliminary Ecological Appraisal was undertaken at Port of Tyne, South Tyneside, on 29th June 2016 by Elliott Environmental Surveyors Ltd. The survey work and subsequent reporting has been carried out on the instruction of RES Ltd in the context of the preparation of a planning application to develop an energy storage facility on site. This report will accompany a planning application to South Tyneside Council.

The site is located within Port of Tyne, a large industrial area south of the River Tyne and north of the A185 in South Shields. The site is brownfield and in current use as coal storage, with a hardstanding base and small blocks of vegetated areas, within and adjacent to the site. The River Don is present 250m to the west of the site, which is assumed to be linked up to the ditch which is present adjacent to the site to the west, which is culverted at both ends. The site is relatively fragmented away from greener areas around it, the area being intensively developed for industry.

It is proposed to develop this site as an Energy Storage Facility which will use batteries housed within containers, which are then connected to the grid (along with other ancillary components) to assist with maintaining normal grid operating parameters.

Consultation was undertaken with the Environmental Records Information Centre (ERIC) for the North East in June. ERIC do not hold records of statutory or nonstatutory sites within the proposed development boundary or of habitats immediately adjacent. Records of protected and priority species within 2km included species such as great crested newt, otter, bat species, badger, water vole, hedgehog, dingy skipper butterfly, and common toad as well as a number of bird species, although none were recorded within or adjacent to the site.

The survey found that the site is largely hardstanding, with small amounts of vegetation around the site's perimeter. The habitats on site are considered to be of negligible to local value, supporting a small range of locally common species, with the majority of the site and the areas to be affected by the proposal considered to be of negligible ecological value. The habitats of local value represent more value to protected species such as bats, amphibians, badger, reptiles and a small range of priority species, although it is understood that the majority of the habitats on site would be left unaffected by the proposal and only the hardstanding and a small amount of scrub and grassland removed to allow for a cable route.

The proposal has the potential to have short term and long term impacts upon the site, including the loss of habitats of negligible and local value, the potential harm and disturbance of breeding birds during vegetation removal, the disturbance to any nocturnal species such as badger, bats or otter through overnight construction or security lighting and the harm to mammals travelling through the site during construction. Long term impacts may include the permanent loss of areas of negligible or local value, and the disturbance of local value habitats through very occasional increased lighting within the site.

Recommended mitigation measures which address ecological considerations are presented within section 7 of this report.



1 INTRODUCTION

1.1 Instruction Details

A Preliminary Ecological Appraisal was undertaken of a site at Port of Tyne, South Tyneside on the 29th June 2016. The survey work and subsequent reporting has been carried out on the instruction of TNEI in the context of the preparation of a planning application to develop an energy storage facility on site.

1.2 Development Proposal

The Proposed Development will consist of installing an Energy Storage Facility within the site boundary, which is then connected to the electricity grid via a cable expected to exit the site to the south east before entering the highway. The ESF will comprise multiple electrical components, principal among these will be standard shipping containers which will contain battery cells, mounted upon concrete foundations. These components will be connected together with underground cables and ultimately to a substation building before exiting toward the grid.

The onsite lighting is expected to be motion sensitive lighting at door ways with minimised splays, with compound lighting for in rare occasions where maintenance needs to be carried out in darkness.

The area of scrubland to the south east is planned to be cleared to permit the installation of the export cable connecting the ESF to the grid.

Around the components the site will maximise the use of the existing hard standing or use crushed stone where necessary to provide the required ground stability.

1.3 Objectives of the Survey and Subsequent Reporting

The objectives of the survey were:

- 1. To survey and determine the ecological value of the site according to the JNCC, (2010), Handbook for Phase 1 habitat survey a technique for environmental audit and CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal in order to inform an impact assessment and mitigation strategy.
- 2. To identify the use or potential use of the site by protected species in order to inform an impact assessment and mitigation strategy.
- 3. To identify how protected species are / may be using the site in order to assess its functionality to the local populations.
- 4. To recommend survey work at an appropriate level and to revise these recommendations as data collected at the site is analysed and interpreted.
- 5. To consider impacts to all habitats immediately adjacent to the site.
- 6. To consider potential impacts to local statutory and non-statutory sites either within 2km or for European level designations, a buffer deemed as appropriate by the relevant Planning Authority.
- 7. To assess the presence of ponds within 500m and advise the client of any access requirements which they must attempt to secure.
- 8. To ensure that mitigation, where necessary, is designed to ensure that no protected species or important ecological habitat are harmed during site works and the local conservation status of any species is not significantly affected post-development.



9. To provide mitigation measures which are deliverable, agreed with the client and that are proportionate to the conclusions of the survey work undertaken at the site.

1.4 Site Description

The Port of Tyne site is located in South Tyneside, adjacent (to the north) of the A185 and approximately 0.7km south of the banks of the River Tyne. The development area is located at an approximate central grid reference of NZ 349 648.

The site is in current use as a storage area for coal, with large mounds present across the site. The site is fenced or walled on all sides, with the A185 road to the south of the site, a large drain to the west of the site and the Port of Tyne facility to the north, reaching from the site to the banks of the River Tyne. The land use within the surrounding area is largely industrial and is not open to the public.

No buildings are present within the red line boundary, however, three small industrial buildings are present to the south of the site. A pylon is present to the east of the site.



2 LEGISLATION AND POLICY GUIDANCE

2.1 Planning Policy

The Government's National Planning Policy Framework (NPPF) requires Local Planning Authorities to consider the presence of protected species and / or habitats as a material consideration when assessing a development proposal. It is the primary overarching document which defines the basis for LPA reaching planning decisions with due regard for ecology.

NPPF indicates that when determining a planning application, the following principles should be applied:

- Planning policies and decisions should be based on up-to-date information about the natural environment.
- If significant harm resulting from a development cannot be avoided, adequately mitigated or compensated for (in that order) then planning permission should be refused.
- Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats including ancient woodland, aged or veteran trees.
- Proposed development likely to have adverse effect on a SSSI should not normally be permitted.
- Opportunities to incorporate biodiversity in and around developments should be encouraged.
- A variety of other environmental assessments may be required within local plans; such assessments should be proportionate.
- Planning conditions should only be imposed where they are necessary, relevant to the planning and the development being permitted, enforceable, precise and reasonable in all other respects.

2.2 Habitats

In England, Natural England is the statutory body responsible for advice and any enforcement action for any offences to SSSI sites and those of higher value. Sites of lower value are generally protected by enforcement powers of Local Authorities.

2.3 Species

The details of legislation concerning protected species are summarised below. It should be noted that the granting of planning permission does not override protected species law. Consented developments must adhere to protected species and habitat regulations.

2.3.1 European Protected Species

For the purpose of this report 'European Protected Species' is taken to mean great crested newts, bats and otter.

Legal protection for all three species arises primarily from two pieces of legislation; Regulation 41 of the Conservation of Habitats and Species Regulations 2010 and Section 9, Schedule 5 of the Wildlife and Countryside Act 1981.

In summary, the above legislation makes it an offence to:



- Intentionally capture, injure, kill or disturb bat species, great crested newts and otter, this includes adults, young and in the case of great crested newts, their eggs;
- Intentionally or recklessly damage, destroy, disturb or obstruct access to a place of rest, shelter, protection or used for breeding by such species (including both aquatic and terrestrial habitats used by otter and great crested newts); and
- Have in one's possession or control, any live or dead bats, great crested newts or otter or, anything derived from such an animal.

2.3.2 UK Protected Species

The following species, other than badger, receive protection under the Wildlife and Countryside Act 1981, Section 9, Schedule 5.

Birds

All bird species receive protection from killing, injury or taking from the wild any bird or their eggs. Birds' nests are protected while being built and when in use.

A number of bird species are also listed on Schedule 1 of the WCA (1981) and receive the above protection as well as extended protection which includes intentional or reckless disturbance of Schedule 1 listed species which are nesting or rearing young.

Water Vole

In England and Wales the species received full protection which makes it illegal to:

- Intentionally kill, injure or take wild water voles / red squirrel;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or for protection by such animals or to disturb wild water voles or red squirrel while occupying such a place a structure or place;
- Have in one's possession or control, any live or dead water vole or red squirrel or, anything derived from such an animal.

Reptiles

Four species: slow worm, common lizard, adder and grass snake receive partial protection which makes it illegal to:

• Intentionally kill or injure reptiles or to sell, offer, expose or advertise for sale, or transport any of the above listed species, their parts or derivatives whether alive or dead.

Both sand lizard and smooth snake receive extended European level protection. They are absent from central and northern England and all of Scotland and are not considered further.



Badger

Badgers are protected under a separate Act which relates to the persecution of this species rather than its conservation status. The Protection of Badgers Act 1992 makes it illegal to:

• Wilfully capture, kill or injure badgers; intentionally or accidentally damage, destroy or block access to setts; disturb badgers while they are occupying a sett; or to sell offer, expose or advertise for sale, or transport a badger, its parts or derivatives whether alive or dead.

2.3.3 UKBAP Species

The NERC Act 2006 provides a list of habitats and species for which conservation action is considered a priority in England (Section 41). This list supersedes the UKBAP though the term is still widely used in the context of priority species and habitats. Priority species include mammals, birds, reptiles, amphibians, plants, fungi, marine species and invertebrates. These species do not receive legal protection but must be considered at the outset as part of the planning process.



3 METHODS

Achieving the objectives outlined in section 1.3 comprise a desktop study followed by a site visit and appropriate survey effort. A summary of the methods used is provided below.

3.1 Desktop Study

The desk study was undertaken by referring to the following data sources:

- Aerial mapping, including historic mapping where available;
- Ordnance Survey maps;
- The Multi-Agency Geographic Information for the Countryside website; inhouse knowledge and;
- The Local Records Centre (Environmental Records Information Centre for the North East).

3.2 Habitat Survey

The site was surveyed using standard Phase 1 Habitat Survey methodology in order to classify the habitats present on site into defined habitat types (JNCC 2010). Target notes are added for features which do not readily fit to phase 1 categories. Assessment includes immediately adjacent habitat.

If habitats are of: higher value; undetermined value due to the timing of survey works or are potential UKBAP habitats then further phase 2 survey work at an appropriate time of year may be required.

3.3 Protected and UKBAP Species

The extended survey includes an assessment of the likelihood of the presence of protected or notable species based on sightings, field signs and risk assessment by an experienced surveyor. Target notes for any records of species of conservation interest or habitat suitable for use by such species were made.

Bats - Survey methodology is devised from guidance within Collins (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition, Bat Conservation Trust.

Habitats were assessed for the presence of mature hedgerows, mature broadleaf tree cover, species-rich grassland, watercourses, adjacent suitable habitat, connections to wider habitat and potential roosting locations.

Mature trees were assessed from ground level for roosting potential as well as features indicative of roosting bats being present.

All buildings on site were assessed externally.

Great Crested Newt - Ponds where accessible within 500m were assessed for suitability to support great crested newts using the Oldham et al (2000) Habitat Suitability Index (HSI) model. Although it has recognised limitations, it can provide a useful start point when assessing the likelihood of a pond being used by great crested newts. HSI scores are interpreted as follows:



٠	< 0. 5	= poor suitability
•	0. 5-0. 59	= below average suitability
•	0. 6-0. 69	= average suitability
•	0. 7-0. 79	= good suitability
•	> 0. 8	= excellent suitability

The experience of the ecologist is used to inform whether the HSI score is considered to be appropriate and to reflect the true potential value of the pond subject to assessment.

The annual cycle of an adult amphibian generally comprises only a short period during the breeding season spent in aquatic habitats. The remainder of the year is spend in terrestrial habitat. Therefore, where ponds are present in the wider area, the site was assessed for its suitability to support amphibians in their terrestrial phase.

Otter - Survey work is based on methods used with the Otter Surveys of England and Wales and Chanin P (2003). Monitoring the Otter *Lutra lutra* and Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

The entirety of the drain/ditch adjacent to the site was surveyed.

Birds - Trees and buildings were inspected for signs of use by nesting birds. A general assessment of species likely to breed or overwinter on site according to habitats present on site and in the surrounding area was produced.

Water Vole - Survey methodology is devised from recommendations within Water Vole Conservation Handbook 3rd Ed (2011).

Survey work comprised a surveyor walking both banks of the drain/ditch to the west of the site inspecting for field signs suggestive of this species.

Reptiles - In the absence of a more recent consensus on survey methods, all survey works were undertaken following the Froglife Advice Sheet 10 in order to assess the sites suitability to support reptile species.

Badger – Survey methods were adapted from recommendations of the Inverness Badger Survey 2003, Scottish Natural Heritage Commissioned Report No. 096 and The Mammal Society, Publication 9 – Surveying Badgers.

Prior to the site visit, an assessment was made of suitable habitat on site and in the surrounding area as well as identifying connectivity between the site and wider suitable habitat. Once on site this assessment was revised according to the presence, or otherwise, of setts or field signs.

UKBAP Species - During Preliminary Ecological Appraisal habitats of value to UKBAP priority species are identified and any further survey work is recommended. Familiar UKBAP species include common toad, hedgehog, brown hare and dingy skipper butterfly.

3.4 Survey Timing and Weather Conditions

The survey was completed on the morning of the 29th June, 2016. The weather conditions were dry, with low wind and temperatures of around 14°c.



3.5 Personnel

Survey and reporting was undertaken by: Hannah Haggon BSc MSc MCIEEM (Senior Ecologist).

Mapping was undertaken by: David White BSc GradCIEEM (Ecologist).

Quality control and checking was completed by: Tim Elliott CEnv FRICS (Director).

Details of qualifications and experience can be obtained by contacting the EES office if required.

3.6 Survey Equipment

During survey work the surveyor used: Aerial and Ordnance Survey maps, Weather writer and Olympus tough camera.



4 RESULTS

4.1 Desktop Study

The results from the desk study using data sources in section 3.1 indicated that the site is located within an area heavily developed for industry. The areas directly surrounding the site are developed for industry, with the Port of Tyne extending from the site to the River Tyne to the north. A busy road, the A185 borders the site to the south. The site itself is brownfield and already being used as coal storage, with better quality and greener habitats present to the south and west of the site.

Within 2km of the site, the 'MAGIC' website identified a single European Protected Species (EPS) licence for the destruction of a common pipistrelle resting place, approximately 0.9km north east of the site. It also identified Priority Habitats, such as mudflats and deciduous woodland, the closest being 0.8km east and 0.1km south, respectively. There is a relative lack of connectivity from the site to these habitats, due to the intensively developed and industrial nature of the site and the surrounding areas.

4.2 Consultation

Statutory and non-statutory sites along with protected species data within 2km of the site was requested from the Environmental Records Centre North East (ERIC).

4.2.1 Protected and Listed Sites

ERIC provided the following non-statutory sites within 2km of the site boundary:

Local Nature Reserves

- Station Burn approx. 2km to the south of the site
- Primrose approx. 1.8km south west of the site

North Tyneside Local Wildlife Sites

- Northumberland Dock approx. 1.5km north of the site
- River Tyne Tidal Extent approx. 1km north of the site

South Tyneside Local Wildlife Sites

- Jarrow Slake Mud Flats approx. 1.2km north west of the site
- River Don Salt Marsh approx. 0.8km north west of the site
- Straker Street approx. 1.3km west of the site
- Cemetary Road approx. 1.4km west of the site
- Primrose approx. 1.8km south west of the site
- Temple Park West approx. 1.7km south east of the site

Special Areas of Conservation

No records held by ERIC within the 2km search radius.

Special Protection Areas

No records held by ERIC within the 2km search radius.

RAMSAR sites

No records held by ERIC within the 2km search radius.

Sites of Special Scientific Interest



No records held by ERIC within the 2km search radius.

National Nature Reserves

No records held by ERIC within the 2km search radius.

4.2.2 Protected Species

General records for protected and notable species within 2km of the centre of the site were supplied by ERIC. These are listed in Table 1, below.

Table 1. ERIC data summary			
Species	Most recent record	Closest record (m)	Record status
Great crested newt	2012	2094	Recent
Otter	2015	976	Recent
Water vole	2013	1228	Recent
Badger	2011	-	Recent
Whiskered/Brandt's bat	2008	-	Out of date
Pipistrelle species	2013	1223	Recent
Common pipistrelle	2015	1103	Recent
Common toad	2015	1417	Recent
Hedgehog	2014	1105	Recent
Water shrew	2013	-	Recent
Dingy skipper	2014	1125	Recent
Wall butterfly	2010	1144	Out of date

Records of 53 bird species were provided within 2km, a number of which were Annex 1 listed, Schedule 1 listed, and/or Birds of Conservation Concern. These are detailed in Appendix 3, showing the species noted, the closest record and the designation status. No records were provided from within the site boundary.

Other bird species data provided through consultation regards species which are not of current conservation concern or are unlikely to be present on site.

4.3 Habitats on site

A habitat map is provided in Appendix 1 and should be viewed in conjunction with the descriptions below.

4.3.1 Hardstanding (Habitat code: J5) (Appendix 2, photographs 1 - 2)

The majority of the site consisted of hardstanding. Large mounds of coal was present within the site at the time of survey. These mounds covered large proportions of the hardstanding present on site.

4.3.2 Ruderal and Scrub (Habitat codes: C3 & A2) (Appendix 2, photograph 2 & 3)

Small amounts of tall ruderal vegetation was present around the boundaries of the site. Species included: Ragwort (*Senecio jacobaea*), Yorkshire fog (*Holcus lanatus*), dandelion (*Taraxacum* agg.), white clover (*Trifolium repens*), colt's foot (*Tussilago*)



farfara), black medic (*Medicago lupulina*), creeping thistle (*Cirsium arvense*), spear thistle (*Cirsium vulgare*), dock sp. (*Rumex* sp.), cock's foot (*Dactylis glomerata*), hogweed (*Heracleum sphondylium*), red clover (*Trifolium pratense*), vetch sp (*Vicia* sp.), birds-foot trefoil (*Lotus corniculatus*), perennial ryegrass (*Lolium perenne*), shepherds purse (*Capsella bursa-pastoris*), purple toadflax (*Linaria purpurea*), sow thistle (*Sonchus* sp), ribwort plantain (*Plantago lanceolata*) nettles (*Urtica dioica*) and rosebay willowherb (*Chamerion angustifolium*). The majority of these areas will be unaffected by the proposals. Scattered scrub species were present around the site boundary areas. Scrub species included bramble (*Rubus fruticosus*), butterfly bush (*Buddleja* sp.), cherry sp. (*Prunus* sp), bindweed sp. (*Calystegia sepium*), elder (*Sambucus nigra*) and ash (*Fraxinus excelsior*).

4.3.3 Poor Semi-Improved Grassland (Habitat code: B6) (Appendix 2, photograph 4)

A small 0.05ha of poor semi-improved grassland was present within the south of the site. This area was largely encroached by scattered scrub species, as described above, but included the following grassland species: cock's foot, perennial ryegrass, Yorkshire fog, annual meadow grass (*Poa annua*), brome sp. (*Bromus* sp.) and fescue sp. (*Festuca* sp.).

4.3.4 Boundary Features (Habitat code: J2. 4, J2. 5) (Appendix 2, photograph 2-3)

The site was fenced to the east and west and was walled to the south. The southern boundary was a retaining wall of around 3m in height, adjacent to the A185 road.

4.4 Adjacent Habitats

4.4.1 Buildings (Habitat code:J3. 6) (Appendix 2 – photograph 5)

Three buildings were present adjacent to the south of the site. None of the buildings were accessible, being outside of the red line boundary and are not likely to be affected by the proposals. Of the three buildings, the two most westerly had the potential to support roosting bats, being timber structures with felt roofs, providing ample opportunities for roosting bats if a population is present within the area. The building to the south east was considered to have only low risk of roosting bat opportunities, being constructed of a corrugated material for both the walls and roof, with a small lean-to single story structure on one site, which had a roofing felt roof covering. If any works would affect these buildings directly then they should be subject to a bat risk assessment survey to identify any evidence indicating the presence of bats and further activity surveys. However, at this stage, it is not expected that the buildings would be affected in any way by the proposal.

4.4.2 Running Water (Habitat code: G2) (Appendix 2, photograph 6)

A drain/ditch was present to the west of the site. This was approximately 4m in width and 100m in length. It was not possible to measure the depth however, it was likely to be around 2m. The banks were stone/rubble hard core, with rough grassland and scattered scrub vegetation. No aquatic vegetation was present within the ditch. The water flow within the ditch was quite fast, and the water quality appeared to be quite poor. The ditch is culverted to the north and south. It is unlikely due to the flow rate and lack of egg laying material that this ditch was suitable for great crested newts. It does, however, have the potential to support otter, potentially providing food sources,



it has been assumed that this ditch is linked to the River Don approximately 250 m to the west of the site, flowing into the River Tyne.

4.5 Protected and UKBAP Species

4.5.1 Bats

No bats or evidence indicating the presence of bats was recorded during the survey. Only two species records were provided by ERIC, none recorded within the site boundary, the closest (common pipistrelle) record being ~1km away from the site. No buildings or trees suitable to support roosting bats are present within the site boundary. Three buildings are present adjacent to the site to the south. There is the potential that these buildings provide roosting opportunities for bats within the area, however, they would be unaffected by the proposal. The habitats on site are considered to be of low to negligible quality for commuting or foraging bats, with limited vegetation cover, and much higher quality habitats present in the surrounding area. Higher quality habitats are present to the south of the site where woodland areas are present, to the north west of the site near to the River Don and the ditch to the west of the site providing limited foraging potential.

4.5.2 Great Crested Newts

A single record of great crested newt was provided by ERIC. This record was approximately 2km away from the site, in Cleadon and was from 2012. No further records were provided within 2km of the site.

No ponds are present within 250m of the site boundary. The closest pond is located approximately 450m to the south of the site, within a residential unit. Between this pond and the site lies a number of barriers to newt dispersal, including the A185 road, the A194 road as well as a number of large industrial units. These barriers, and the distance that the site is away from the closest pond, as well as the small quantity of terrestrial habitats present on site indicates that the risk to newts is likely to be negligible. Natural England's Rapid Risk Assessment tool indicates that an offence from the proposal would be highly unlikely, based on a worst case of 0.9ha of land lost from the site and the distance of the pond from the site, see table below.

Component	Likely effect	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
	0.5 - 1 ha lost or	
Land >250m from any breeding pond(s)	damaged	0.03
Individual great crested newts	No effect	0
Maximum:		0.03
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

The ditch to the west of the site was considered unsuitable for great crested newts due to the fast flow rate, the lack of aquatic vegetation suitable for egg laying and the very likely presence of fish within the ditch.

If other amphibians are present within the area, it is unlikely that they will utilise the hardstanding areas of the site. If they are present, they are likely to be within the



small patches of scattered scrub, tall ruderal vegetation and grassland areas around the site boundary perimeter.

4.5.3 Otter

The hardstanding across most of the site provide negligible habitats for otter and the limited quantities of scrub, ruderal and grassland habitats are unlikely to provide shelter for the species however, there is the possibility that they may at times be used by otter if the species are utilising the ditch habitats off to the west of the site. No evidence indicating the presence of otter around the ditch habitats was identified during the survey, however, they may on occasion utilise the ditch. However, higher quality habitats are present in the surrounding area, such as the River Don to the north west and the River Tyne to the north. ERIC provided a number of otter records within 2km of the site. The most recent record was from 2015, and the closest record was 0.9km away from the south. Many of the records provided were associated with the River Don.

4.5.4 Water Vole

No evidence of water vole was recorded during the survey and it is considered unlikely that water vole would ever inhabit the site. No evidence indicating the presence of the species was recorded within the ditch to the west of the site, and if a population moved into the area it would be unlikely that the habitats present within the site would support the species. The ditch itself was considered to be sub-optimal for water vole, the banks being largely channelised and managed with a base of compacted hard core. A number of water vole records were provided by ERIC. The most recent record was from 2013, and the closest record was around 1.2km away from the site.

4.5.5 Birds

Limited numbers of birds were recorded during the survey. The site has limited nesting opportunities for birds, with limited areas of tall ruderal vegetation and scrub present around the perimeter of the site. A small area of scrub to the south east which will be removed to enable a cable route to the site has the potential to support a small number of breeding birds, at times through the year. Species which may breed within this disturbed area are likely to be locally common garden bird species. The hard standing areas within the site are disturbed on a regular basis and are used for the storage of coal, which will be moved on and off site on a regular basis, creating large amounts of disturbance to any species which may want to nest within the area. A large number of bird records were provided by ERIC, shown in Appendix 3. No records were provided from within the site, however, this may be under recording as the site is closed off to the public.

4.5.6 Reptiles

Although the habitats on site provide limited amounts of basking, foraging and refuge opportunities for reptiles, the site is open and exposed leaving any reptiles which may be present open to predation by birds, as well as being located within a busy port which is subject to high levels of disturbance throughout the day. No records of reptiles were provided by ERIC within 2km of the site boundary.

4.5.7 Badger



No evidence indicating the presence of badger was recorded during the survey. The site provides limited opportunities for badgers, the site being located within a busy port and subject to high levels of disturbance. However, there is the potential that the site is used on occasion by foraging badgers, or badgers commuting from one area to another. The scrub and tall ruderal vegetation on site has the potential to be used as a food source for badger on occasion, and there may be sett building opportunities in some of the larger areas of vegetation on site. However, higher quality habitats are present within the surrounding area. Records of badger were recorded within 2km of the site by ERIC, the most recent record from 2011. The location of this record was confidential.

4.5.8 UKBAP and Other Species

During the survey, tracks of fox, deer and rabbit were recorded in the wet ground substrate and muddy areas of the site. Vegetation suitable to support some Priority invertebrate species was recorded within the tall ruderal vegetation around the sites perimeter, such as bird's-foot trefoil and butterfly bush. Priority invertebrate Species likely to be in the area include dingy skipper and wall butterflies. ERIC provided records of these species within 2km of the site boundary, as well as other Priority Species such as hedgehog and common toad.

4.5.9 Invasive Animal Species

No invasive species were noted during the survey. ERIC provided records of Himalayan balsam and Japanese knotweed within 2km of the site boundary. Although these species were not found on site at the time of surveys, anyone working on or around the site should be aware of the species and their potential to spread quickly into new areas.

4.6 Constraints and Reasoning

There were no constraints to site access.



5 ECOLOGICAL EVALUATION

The value of ecological habitats and presence or potential presence of protected species has been assessed according to CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. This table is interpreted below.

Table 2. Assessment of ecological value			
Importance of resource or feature	Example of resource or feature		
International	Permanent loss of or damage to the integrity of SAC, SPA, RAMSAR.		
	Permanent loss of places of rest or shelter that would otherwise permit the persistence of a species listed on Annex II of the Habitats Directive.		
National Permanent loss of habitat designated as an habitat of such quality or NNR's. Permanent loss of places of rest or shelter th used by species which are nationally rare whe loss of such habitat would be associated negative impact on the conservation status species.			
		County / Regional	Permanent loss of habitats which may be listed as an LNR or be of equivalent value.
	Permanent loss of places of rest or shelter which are otherwise limited within the county, cannot be easily replicated and would potentially affect the conservation status of a protected species which is of county ecological value.		
Local	Temporary loss of habitat which is likely to have a temporary effect as such habitats can be recreated within the short-term.		
	Temporary loss of places used by locally common protected species which can be replicated or mitigated for in the short-term.		
The Bat Conservation Trust Good Practice Guidelines also refer to the term ' Parish ' this term can be applied to wider ecological assessment and is defined for the purpose of EES reporting as a feature or species which adds considerable value across an area of greater than local influence but which is of only of moderate or low value in a countywide context. Impacts on such features may be temporary or permanent.			

Where resources or features do not fit into the above categories, they are deemed to be of low ecological value. Where the site has no potential to support species or require further consideration they are considered of negligible ecological value.



5.1 Habitats

Habitats within the site boundary vary in their ecological value. The hardstanding which covers the majority of the site provides little in terms of ecological value. The fence lines and walls which border the site are also considered to provide limited ecological value. Therefore, these features are considered to be of negligible ecological value.

The scrub, tall ruderal and grassland habitats are considered to be of no more than local value, supporting a small range of locally common species within relatively small areas around the perimeter of the site which are fragmented from other areas of similar habitats by busy roads and vast areas of industry.

The ditch which lies off site to the west is likely to be of no more than local value, supporting minimal plant species and being of poor water quality.

5.2 Protected and UKBAP Species

5.2.1 Bats

The majority of the site is likely to be of negligible value to bats, being hard standing and currently a storage area for coal. The scrub, tall ruderal and grassland may provide limited amounts of foraging habitat for the species, however, higher quality habitats are present in the wider area, for example, the ditch to the west, the River Don to the north west, the banks of the River Tyne to the north and blocks of woodland to the south. Therefore, the vegetated areas within the site are considered to be of low value, having the potential to be used on occasion by the species, with higher quality habitats present elsewhere within the wider area.

The proposal is likely to be located on the hardstanding area within the site, with minimal impacts upon any of the vegetation.

5.2.2 Great Crested Newts

The site is located over 450m away from the closest pond, making it highly unlikely that great crested newts would be present on site. The hardstanding on site would be of negligible value to the species, the vegetated areas having the potential to support amphibians at times, although they are fragmented away from other areas of suitable habitats and are subject to high levels of disturbance. As the proposal is likely to have a minimal impact upon the vegetated areas within the site, and the ditch to the west of the site is unsuitable for great crested newts, the site is considered to be of negligible value to the species.

5.2.3 Otter

Habitats on site are considered unlikely to support otter, with the ditch to the west providing foraging potential but no evidence of the species recorded during the survey. It is considered unlikely that even if otter utilise the ditch for foraging on occasion, they are unlikely to utilise the habitats within the site. Therefore, the habitats on site are considered to be of low to negligible value to otter.

5.2.4 Water Vole

Water vole are highly unlikely to utilise any of the habitats on site, even if a population becomes known within the ditch in the future. Therefore, habitats on site



are considered to be of negligible value to water vole. The ditch is considered suboptimal for water vole, and it is unlikely that it would be impacted in any way by the proposal, therefore no impacts upon the water vole would be expected if a population was present within that stretch of water.

5.2.5 Birds

The site has the potential to provide nesting opportunities for a small number of garden birds within the scrub and grassland habitats to the south east of the site and around the perimeter of the site. The majority of the site is subject to high levels of disturbance, with the hardstanding areas being used for coal storage, with materials moved in, out and around the site on a regular basis, decreasing the sites value for ground nesting birds. The area of vegetation to be removed to allow for the cable route provides higher quality habitats for breeding birds in comparison to the hard standing across the majority of the site, however, this area still lies within a very busy industrial area, likely limiting its use to a small number of locally common garden birds, which are more likely to use the scrub habitats present within that area. Better quality habitats are present within the surrounding area, therefore, the habitats on site are considered to be of at most, local value, to a small number of locally common birds.

5.2.6 Reptiles

No records of reptiles were provided within 2km of the site boundary. Although the habitats on site have the potential to support locally common reptiles such as the common lizard, it is unlikely that a site of that size with such limited vegetation would support a population of the species, with its limited connectivity to other suitable areas of habitat. Therefore, the site is considered to be of low value to reptiles.

5.2.7 Badger

The habitats on site have the potential to support foraging badger, however, higher quality habitat is present in the surrounding area. No evidence of badger was recorded during the surveys and it is considered unlikely that the species would utilise the site on more than an occasional basis with the site being subject to high levels of disturbance. However, suitable foraging habitat is present and there is the opportunity for the species to open up setts within the vegetated areas of the site or adjacent to it, if a population persists within the area. The site is considered of up to local value for this species.

5.2.8 UKBAP and Other Species

The habitats on site have the potential to support a number of Priority Species, including dingy skipper, wall butterfly, hedgehog and common toad, therefore it can be considered to be of no more than local value to those species, if they are present within the area.

5.2.9 Overall Ecological Value

The habitats on site are considered to be of negligible to local value, supporting a small range of locally common species, with the majority of the site and the areas to be affected by the proposal considered to be of negligible ecological value. The habitats of local value represent more value to protected species such as bats, amphibians, badger, reptiles and a small range of priority species, although it is understood that the majority of the habitats on site would be left unaffected by the



proposal and only the hardstanding and a small amount of scrub and grassland would be removed to allow for a cable route.



6 IMPACT ASSESSMENT

The impact assessment below considers potential impacts in the absence of mitigation and is based on a worst case scenario.

6.1 Short-Term Impacts

Short term and temporary impacts associated with the proposal are likely to include:

- The loss of habitats of negligible value, i.e. the hardstanding present across the majority of the site;
- The loss of a small amount of scrub and grassland habitats of local value from the south east of the site to allow for a cable route;
- The harm or disturbance of breeding birds during vegetation removal;
- The disturbance to any nocturnal species such as badger, bats or otter through overnight construction or security lighting; and
- The harm to mammals travelling through the site through construction, i.e. getting trapped in trenches left open overnight.

6.2 Long-Term Impacts

Long term impact from the proposal may include:

- The permanent loss of hardstanding areas of negligible ecological value;
- The permanent loss of vegetated areas of no more than local value; and
- The occasional disturbance of local value habitats through motion censored security lighting and compound lighting, which will be used very occasionally when maintenance is required through the night.



7 MITIGATION MEASURES

The following mitigation strategy is proposed in relation to the proposed energy storage facility at Port of Tyne. Recommended mitigation measures seek to address the impacts of the proposal listed in section 6.

- Any planned landscaping should promote the use of native species wherever possible.
- Vegetation removal should be carried out outside of the nesting season (March to August) unless an ecologist confirms nesting birds to be absent through a nesting bird check. Where nests are confirmed, no works to be carried out within an agreed buffer until young have fledged.
- A mammal checking survey for badger setts and otter holts should be undertaken by a suitably qualified ecologist prior to construction starting on site to ensure that no badgers or otters are harmed or disturbed during construction. If a badger sett or otter holt is recorded, further mitigation or a licence from Natural England may be required before works can commence.
- No continuous lighting between dusk and dawn during construction to minimise disturbance to nocturnal species which may be utilising the site or the areas around it.
- Site design should ensure that no external lighting is directed to offsite features such as the scrub and ditch habitats adjacent to the site
- The use of closed panel fencing should be avoided during construction where possible to allow the movement of species such as hedgehog and badger across the site.
- Trenches and excavations should be covered overnight. Where this is not possible, the trenches or excavations should contain a means of escape for mammals such as hedgehog and badger. This should be provided by a ramp angled at no greater than 45 degrees and 300mm in width.



8 CONCLUSIONS

The habitats on site vary between negligible and local ecological value and have the potential to support a small range of locally common species and priority species. The proposal would be located within the hardstanding which covers the majority of the site. Minimal vegetation clearance would occur as a result of the proposal.

Given the implementation of the recommended mitigation strategy designed for the site, it is considered that no habitat or species would be unacceptably affected.

The data presented is valid for 12 months from the date of this report after which, updating survey will be required.



9 **REFERENCES**

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APPENDICES



10 APPENDIX 1 – Phase 1 Habitat Map

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11 APPENDIX 2 – Site Photos





Photograph 2 – Hardstanding, rubble mound and fence line



Photograph 4 – Semi-improved grassland, scattered scrub area



12 APPENDIX 3 – Bird Records from ERIC

Species	Designations	Date recorded	Distance to approx. centre of site (m)
Lesser Redpoll	BAP-2007, Bird-Red, England NERC S.41, Wales NERC S.42	03/01/2011	1778
Common (Mealy) Redpoll	Bern-A2	03/01/2011	1778
Arctic Redpoll	Bern-A2	03/01/2011	1778
Kingfisher	Bern-A2, Bird-Amber, BirdsDir- A1, FEP-007_tab2, Scottish Biodiversity List, W(NI)O- Sch1_part1, WACA-Sch1_part1	03/12/2010	1778
Teal	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, ECCITES-C, Northumberland BAP	01/01/2015	1606
Wigeon	BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, ECCITES-C, Northumberland BAP, W(NI)O- Sch1_part2	01/01/2015	1606
Mallard	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2	01/01/2015	1606
Gadwall	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, W(NI)O-Sch1_part2	01/03/2015	1746
Pink-footed Goose	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2	07/12/2010	1778
Swift	Bird-Amber, Northumberland BAP, Scottish Biodiversity List	21/05/2011	
Grey Heron	CMS_AEWA-A2, W(NI)O- Sch1_part1	01/03/2015	1606
Long-eared Owl	Bern-A2, ECCITES-A, W(NI)O- Sch1_part1	03/12/2010	1778
Pochard	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, Scottish Biodiversity List, W(NI)O-Sch1_part2	July 2003	1947
Tufted Duck	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2	01/02/2015	1606
Goldeneye	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, W(NI)O-Sch1_part2, WACA- Sch1_part2	01/11/2014	1606
Dunlin	Bern-A2, Bird-Red, CMS_A2, CMS_AEWA-A2, FEP-007_tab2, Scottish Biodiversity List, W(NI)O-Sch1_part1	01/03/2015	1746
Knot	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2	01/03/2015	1746
Goldfinch	Bern-A2, Northumberland BAP	03/12/2010	1778
Greenfinch	Bern-A2	03/12/2010	1778
Black-headed Gull	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2, Scottish Biodiversity List, Wales NERC S.42	01/03/2015	1606



Woodpigeon	BirdsDir-A2.1, Northumberland BAP	21/05/2011	
Carrion Crow	BirdsDir-A2.2	21/05/2011	
Jackdaw	BirdsDir-A2.2, Northumberland BAP	21/05/2011	
Mute Swan	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2	01/03/2015	1606
House Martin	Bern-A2, Bird-Amber	21/05/2011	
Reed Bunting	BAP-2007, Bern-A2, Bird-Amber, Durham BAP, England NERC S.41, FEP-007_tab2, North Tyneside BAP, Northumberland BAP, Scottish Biodiversity List, Wales NERC S.42	21/05/2011	
Robin	Bern-A2, Scottish Biodiversity List	25/09/2009	1553
Coot	BirdsDir-A2.1, CMS_AEWA-A2	01/03/2015	1606
Snipe	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, Durham BAP, FEP-007_tab2, Northumberland BAP	01/03/2015	1606
Moorhen	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2	01/03/2015	1606
Oystercatcher	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2, Northumberland BAP	July 2003	1947
Swallow	Bern-A2, Bird-Amber, Northumberland BAP	21/05/2011	
Herring Gull	Bird-Red, BirdsDir-A2.2, CMS_AEWA-A2, Scottish Biodiversity List	01/03/2015	1606
Great Black-backed Gull	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2	01/12/2014	1746
Black-tailed Godwit	Bird-Red, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, FEP- 007_tab2, RedList_Global_post2001_NT, Scottish Biodiversity List, W(NI)O-Sch1_part1, WACA- Sch1_part1	01/03/2015	1606
Pied Wagtail	Bern-A2	2006	1994
Grey Wagtail	Bern-A2, Bird-Amber	01/06/2013 - 31/08/2013	
Curlew	BAP-2007, Bird-Amber, BirdsDir- A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, England NERC S.41, FEP-007_tab2, Northumberland BAP, RedList_Global_post2001_NT, Scottish Biodiversity List, Wales NERC S.42	01/03/2015	1606
House Sparrow	BAP-2007, Bird-Red, Durham BAP, England NERC S.41, Wales NERC S.42	25/09/2009	1553
Cormorant	CMS_AEWA-A2	01/01/2015	1606



Red-necked Phalarope	BAP-2007, Bern-A2, Bird-Red, BirdsDir-A1, CMS_A2, CMS_AEWA-A2, Scottish Biodiversity List, W(NI)O- Sch1_part1, WACA-Sch1_part1	14/11/2001	
Magpie	BirdsDir-A2.2	20/08/2009	2028
Pica pica subsp. pica	BirdsDir-A2.2	21/05/2011	
Dunnock	Bern-A2, Bird-Amber, Northumberland BAP	25/09/2009	1553
Water Rail	BirdsDir-A2.2, CMS_AEWA-A2	03/12/2010	1778
Kittiwake	Bird-Amber, CMS_AEWA-A2, OSPAR	01/03/2015	1606
Common Tern	Bern-A2, Bird-Amber, BirdsDir- A1, CMS_AEWA-A2, Northumberland BAP, Scottish Biodiversity List, W(NI)O- Sch1_part1	July 2003	1947
Sandwich Tern	Bern-A2, Bird-Amber, BirdsDir- A1, CMS_AEWA-A2, FEP- 007_tab2, Northumberland BAP, Scottish Biodiversity List, W(NI)O-Sch1_part1	July 2003	1947
Starling	Bird-Red, BirdsDir-A2.2, Durham BAP, FEP-007_tab2, Northumberland BAP	21/05/2011	
Redshank	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, FEP-007_tab2, Northumberland BAP	01/03/2015	1606
Blackbird	BirdsDir-A2.2	25/09/2009	1553
Lapwing	BAP-2007, Bird-Red, BirdsDir- A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, England NERC S.41, FEP-007_tab2, Northumberland BAP, Scottish Biodiversity List, Wales NERC S.42	01/03/2015	1606
Shelduck	Bern-A2, CMS_A2, CMS_AEWA- A2	01/03/2015	1606

