

Millway Warehouse Extension

Preliminary Ecology Assessment

As if By Magic

Project Number: 60585249

November 2019

Quality information

Prepared by	Checked by	Approved by
Mark Hampton Principal Ecologist	Paul Benyon Associate Director	Lewis Deacon Associate Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

# Hard Copies	PDF Required	Association / Company Name

Prepared for:

As If By Magic

Prepared by:

AECOM Infrastructure & Environment UK Limited
Tanyard Suite,
Fleswick Court,
Westlakes Science & Technology Park,
Moor Row,
Cumbria,
CA24 3HZ
T: +44 (1246) 209221
aecom.com

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Executive Summary

AECOM has been appointed by As if By Magic (AIBM) to undertake a Preliminary Ecological Assessment (PEA) of a warehouse and land proposed for an extension to the warehouse at Millway in Millom (the Site). Following the PEA, a terrestrial reptile and amphibian survey was also carried out.

The proposed warehouse extension would include development of the warehouse, extending out to the north over grassland, with a land take of 0.03 ha (270 m²) behind the building, which is owned by AIBM; the scheme also includes access routes to the building from the south east and south west, which are already predominantly tarmac and concrete roads. No buildings will be demolished during the works.

The development is adjacent to Duddon Estuary Site of Special Scientific Interest (SSSI), within 150 m of Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SSSI is 200m away (Morecambe Bay has also been designated as a Special Area of Conservation) and the Iron Works Local Nature Reserve (LNR) abuts the northern boundary. No impacts are foreseen on these designated sites.

Natterjack toads are known to breed in the ponds within the LNR (nearest pond is approximately 60 m away). Common Lizard are also found in the local and wider area.

The PEA recorded a grassland habitat in the area to be developed, some of which was relatively species-rich. There were also scrub and shrubs near the Site, but these would not be impacted by the extension. The proposed access routes were already concrete/tarmac tracks/roads. Japanese Knotweed was found on Site and within the development footprint.

There was potential reptile and amphibian habitat on the edges of the grassland around the Site. The warehouse itself was considered to hold negligible bat roost potential and no other protected species were likely to be impacted by the proposal.

A reptile and amphibian terrestrial survey was carried out on the Site. Refugia were put out at high density across the Site and eleven survey visits were made during September and October 2019. Only smooth newt and common toad were found on Site during the survey.

The key recommendations include:

- An ecological watching brief during site clearance as a precaution to check for amphibians (specifically natterjack toad), reptiles and hedgehogs.
- Works/site clearance should be completed outside of the bird nesting season (March to August inclusive). If this is not possible then a bird nest check of the building should be carried out.
- Ensure that a method statement for ensuring no spread of invasive weeds due to works occurs is completed and adhered to.
- As a biodiversity net gain, it is recommended that bat boxes are put up on the building to encourage bat use and provide additional roosting habitat on the site

The Site will need to be reassessed if there is a significant change to the type or scale of development proposed, or if there are any significant changes in the use or management of the land. If a planning application is made two years or more after a PEA (November 2021) it is advisable to review and update the survey data.

1. Introduction

1.1 Overview of the project

AECOM has been appointed by As if By Magic to undertake a Preliminary Ecological Assessment (PEA) of a warehouse and land proposed for an extension to the warehouse at Millway in Millom (hereafter referred to as the Site); the location of the Site is shown on Figure 1 in Appendix A.

1.2 Proposed Development

The proposed warehouse extension would include development of the warehouse, extending out to the north over grassland; the scheme also includes access routes to the building from the south east and south west (Figure 1), which are already predominantly tarmac roads. No buildings will be demolished during the works.

1.3 Scope of the Report

This report relates to the building and land where the extension is proposed, which is in Millom, Cumbria. The surveys that have been undertaken were commissioned to inform of any ecological constraints to the warehouse extension scheme at the Site.

This report presents a preliminary ecological assessment (PEA), which includes habitat mapping and assessing the potential for protected species. It also identifies any other sensitive ecological features.

In order to deliver the PEA element, a desk study and an extended Phase 1 Habitat survey were undertaken by an appropriately experienced ecologist to identify ecological features within the Site. Additional details are provided in Section 3: Methodology.

The aim of this report is to provide baseline ecological information, such as the habitats present on the Site and the potential for these habitats to support protected and/or otherwise notable species that could be adversely affected by any proposed works.

1.4 Site Description

The Site is at Millway, to the east of the town of Millom (grid reference: SD 1852 7985) and comprises predominantly industrial and office buildings; the wider landscape includes a nature reserve (Iron Works Local Nature Reserve), the River Duddon flood plain and estuary to the north, east and west, a water treatment plant further to the east and an industrial estate and agricultural land to the south.

2. Legislation and Planning

2.1 Wildlife Legislation

The following legislation relates to species and habitats that could potentially occur within the Site (see Appendix B for more detail):

- The Conservation of Habitats and Species & Planning (Various Amendments) (England & Wales) Regulations 2018 (Habitats Regulations);
- Natural Environment and Rural Communities (NERC) Act, 2006
- The Countryside and Rights of Way (CROW) Act, 2000
- The Protection of Badgers Act, 1992
- Wild Mammals (Protection) Act, 1996
- The Wildlife and Countryside Act, 1981 (as amended)

2.2 Planning

Consideration has also been given to relevant national, regional and local planning policy and strategy documents. These are listed below:

- National Planning Policy Framework (NPPF)
- Copeland Local Plan 2013 - 2028 (adopted December 2013)

A summary of relevant policy is provided below.

An updated and revised National Planning Policy Framework (NPPF) was published on 24th July 2018 and revised 19th February 2019 and it sets out the Government's planning policies for England and how these are expected to be applied.

Promoting a strong theme of sustainable development, the Framework aims to strengthen local decision making and reinforce the importance of up-to-date plans. Core aims of the NPPF include:

- The Presumption in favour of Sustainable Development;
- Delivering Sustainable Development – Building a strong competitive economy and ensuring the vitality of town centres;
- Promoting sustainable transport;
- Meeting the challenge of climate change, flooding and coastal change;
- Conserving and enhancing the natural environment; and
- Conserving and enhancing the historic environment.

The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. It specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this is to be delivered in the planning system. Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required (see Appendix B for more detail).

The Copeland Local Plan (2013) contains relevant environmental policies, and 'ENV2 Coastal Management and ENV3 Biodiversity and Geodiversity' are particularly relevant to the proposed development. Policy ENV3 states that:

"The Council will contribute to the implementation of the UK and Cumbria Biodiversity Action Plan within the plan area by seeking to:

- A. *Improve the condition of internationally, nationally and locally designated sites*
- B. *Ensure that development incorporates measures to protect and enhance any biodiversity interest*
- C. *Enhance, extend and restore priority habitats and look for opportunities to create new habitat*
- D. *Protect and strengthen populations of priority or other protected species*
- E. *Boost the biodiversity value of existing wildlife corridors and create new corridors, and stepping stones that connect them, to develop a functional Ecological Network*
- F. *Restrict access and usage where appropriate and necessary in order to conserve an area's biodiversity value."*

2.3 Biodiversity

The NERC Act 2006 Section 41 (S41) lists habitats and species which are of principal importance for the conservation of biodiversity in England. The habitats and species included on the S41 list are identified as conservation priorities under the UK Post-2010 Biodiversity Framework, which replaced the UK Biodiversity Action Plan (UK BAP).

The Cumbria Biodiversity Action Plan (BAP) was published in 2001, by the Cumbria Biodiversity Partnership and aims to raise public awareness and understanding of the natural environment and hopes to encourage local people and politicians to take a closer look interest in biodiversity to take action to help vulnerable wildlife and threatened habitats.

Twenty-one species and 18 habitats have been identified in the Cumbria BAP for priority action and targets set for recovery, and includes bats, natterjack toad *Epidalea calamita* water vole *Arvicola amphibius*, song thrush *Turdus philomelos*, hay meadows and coastal habitats.

The above legislation has been considered when undertaking this PEA using the methods described in Section 3, when identifying potential constraints to the proposed schemes and when making recommendations for further survey, design options and mitigation, as outlined in Section 5. Compliance with legislation may require the attainment of relevant protected species licences prior to the implementation of the proposed schemes.

3. Methodology

3.1 Desk-Study

A stratified approach is usually taken when defining the desk study area, based on the likely zone of influence of the proposed scheme on different ecological receptors and on an understanding of the maximum distances typically considered by statutory consultees (2 km for statutory site designations and a minimum of 1 km for local, non-statutory designations together with protected and notable habitats and species).

This search area is from a centre point of SD 1851 7985 and for a diameter of 2 km around it for statutory and non-statutory sites and protected/notable species.

The desk study was carried out using the data sources detailed in Table 1. Protected and otherwise notable habitats and species include those listed under Schedules 1, 5, and 8 of the Wildlife and Countryside Act 1981 (as amended); Schedules 2 and 5 of the Habitats Regulations, species and habitats of principal importance for nature conservation in England listed under section 41 (s41) of the NERC Act and other species that are Nationally Rare, Nationally Scarce or listed in national or local Red Data Lists and Biodiversity Action Plans.

Table 1: Desk study data sources

Data source	Accessed	Data Obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website.	8 th August 2019	<ul style="list-style-type: none"> • International statutory designations within 2 km. • Other statutory designations within 2 km. • Ancient woodlands and notable habitats within 2 km. • Information on habitats and habitat connections (based on aerial photography) relevant to interpretation of planning policy and assessment of potential protected and notable species constraints.
Cumbria Biodiversity Data Centre.	7 th August 2019	<ul style="list-style-type: none"> • Non-statutory designations within 2km. • Protected and notable species records within 2km.

3.2 Extended Phase 1 Habitat Survey

An extended Phase 1 Habitat Survey of the Site was completed on 7th August 2019.

The aim of the survey was to identify the type and extent of habitats present within and adjacent to the Site and to identify the potential for these habitats to support protected or otherwise notable species. The survey was conducted according to the standard Phase 1 habitat survey methodology (Joint Nature Conservation Committee 2010¹) and with adherence to standard guidelines² and was extended to include targeted searches for signs of protected species such as bats, amphibians, reptiles, and badger (*Meles meles*). The survey also included a search for invasive species listed under schedule 9 of the Wildlife and Countryside Act, such as Japanese knotweed (*Reynoutria japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Target notes (TN) were made to provide supplementary information on species composition, features of interest, topography, location of habitats and evidence of management. Botanical nomenclature follows Stace (2019³).

3.3 Pond assessment for amphibians

Any ponds on Site or accessible near to the Site were subject to a Habitat Suitability Assessment during the Phase 1 Habitat Survey.

¹ Joint Nature Conservation Committee, (2010), Handbook for Phase 1 Habitat survey – a technique for environmental audit, ISBN 0 86139 636 7.

² Chartered Institute of Ecology and Environmental Management (April 2013) *Guidelines for Preliminary Ecological Appraisal* (GPEA) Professional Guidance Series (CIEEM: <http://www.cieem.net/>)

³ Stace, C.A. (2019) *The New Flora of the British Isles*. 4th Ed. C & M Floristics, Ipswich.

3.3.1 Habitat Suitability Index

Habitat suitability is determined by using the Habitat Suitability Index (HSI), which is calculated using ten habitat variables ('suitability indices') which are known to affect the survival of great crested newt. These are:

- Geographical location (i.e. with respect to the range of great crested newt);
- Pond area;
- Permanence of water (estimated number of years a waterbody is likely to dry out in spring, per decade);
- Water quality;
- Percentage shade of waterbody margin;
- Presence of waterfowl;
- Occurrence of fish;
- Pond density;
- Connectivity and quantity of suitable terrestrial habitat; and
- Macrophyte (aquatic plant) coverage.

Each habitat variable is assessed by experienced surveyors in the field. The ten suitability indices are combined to derive the final HSI score for the pond. The HSI, expressed as a value between 0.01 and 1.0, is then categorised based on the criteria outlined in Table 2.

Table 2: HSI score and suitability of the aquatic habitat for great crested newt⁴

HSI Score	Suitability of the aquatic habitat for Great Crested Newt
0.01 – 0.49	'Poor'
0.50 – 0.59	'Below average'
0.60 - 0.69	'Average'
0.70 – 0.79	'Good'
0.80 – 1.00	'Excellent'

It is generally considered unsuitable to apply the HSI tool when assessing ditches. Ditches can form long networks, thus determining the area of a ditch is not always possible. Some sections of a ditch may be more suitable for great crested newts than other sections (which for example may be dry). Ditches within 500 metres of the Proposed Scheme that were accessible during the survey period were visually assessed for their potential to support great crested newts by experienced AECOM ecologists and professional judgement was used to determine whether further survey to determine great crested newt presence/absence was required.

3.4 Reptile/amphibian (terrestrial) presence-absence survey

From previous work local to the Site it is known that species such as common lizard (*Zootoca viviparus*) and natterjack toads occur local to and within 1 km of the Site. It was therefore considered that it would be relevant to place refugia out and check to see if these species utilised the Site.

⁴ Taken from: Oldman, R. S., Keeble, J., Swan, M. J. S., and Jeffcote, M. (2000). *Evaluating the Suitability of Habitat for the Great crested newt (Triturus cristatus)* Herpetological Journal 10 (4), 143-155.

The survey was carried out following reptile guidelines in the identified suitable habitat as per the guidelines (Froglife (1999⁵); Gent and Gibson, 2003⁶; Sewell *et al.*, 2013⁷). The aim was to detect use by common lizard but also the terrestrial use of the site by amphibians and specifically natterjack toad.

In each habitat area, roofing felt refugia measuring a minimum of 0.5 m x 0.5 m were placed out in areas identified as suitable habitat.

In non-linear habitats, refugia should be placed at a density of at least 10/ha in suitable habitat. In linear habitats refugia should be placed at a frequency of at least one every 10 m in suitable habitat.

Once placed out the artificial refugia were left to settle for a minimum of 14 days prior to conducting the first check.

The refugia were checked for reptiles and amphibians by carefully lifting each refugium on the required number of occasions (all sites a minimum of seven visits, upgraded to twenty visits if reptiles/amphibians are recorded).

Each check was conducted during the following conditions:

- Time: conducted between 07:00 and 18:00;
- Air temperature: 10°C - 20°C;
- Wind: Still to moderate (equivalent to max Beaufort 4; 13 - 17mph); and
- Rain: No or light rain only at time of survey. Surveys between periods of heavy rain (when all other conditions are suitable) were also acceptable.

During each check the surveyor recorded details of all reptiles/amphibians encountered during the survey, including refuge number, species, number, life stage (adult, sub-adult, juvenile) and, when possible, sex.

If non-native species listed on Schedule 9 were found during the survey, then details were recorded. As no handling of reptiles was anticipated as part of the survey all non-natives found were to be left in-situ.

The refugia were placed out on 7th August 2019 and following a four-week bedding in period, eleven visits were carried out during September/October 2019 (the initial 7 visits were completed, but because it was known that natterjack toads had bred quite late in the local ponds, further visits were carried out into mid/late-October as temperatures allowed). The area surveyed was 0.03 ha in size. Twenty-seven refugia were put out across the area, which exceeds the density recommended by Froglife⁵.

3.5 Bat Roost Potential Assessment

An initial assessment of the building for potential roost features (PRF) was made during the survey. The survey was conducted in line with the Bat Conservation Trust (BCT) survey guidelines (Collins, 2016)⁸. The surveyor was not a licenced bat ecologist, but has over 30 years' experience in ecology, including bat work. The assessment was made on that experience and where there was any doubt, a survey by a licenced bat ecologist would be recommended.

Close focusing binoculars were used where required to conduct an external assessment of previously identified mature trees within the Site. All potential bat access/egress points and features with potential roosting features (e.g. cracks, crevices, fissures) were identified and recorded along with any evidence that may have indicated the location of roosts, such as:

- Stains around entrance holes (resulting from the deposition of oil secretions in bat fur);
- Scratch marks around entrance holes (resulting from bat claw holds);
- Bat droppings;

⁵ Froglife (1999) Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth, Suffolk

⁶ Gent, T., & Gibson, S., 1998 (revised 2003). Herpetofauna Workers' Manual. JNCC, Peterborough.

⁷ Sewell, D.; Griffiths, D.; Beebe, T.J.; Foster, J. & Wilkinson, J.W. 2013. Survey protocols for the British herpetofauna. Version 1.0

⁸ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.). London: Bat Conservation Trust.

- Feeding remains; and
- Odours or noise characteristics of bats.

During the survey, high-powered torches were used where required to make a search for bats and signs of bats such as droppings, urine staining and feeding remains.

Based on the external assessment, the overall suitability of the building to support roosting bats was then classified using a scale of negligible, low, moderate, high or confirmed. This assessment was based on both the intrinsic suitability of the feature to support roosting bats and other evidence giving an indication of the likelihood of use (e.g. presence of droppings, cobwebs, or exposure to elements).

3.6 Limitations and Assumptions

Information obtained during a desk study is dependent upon people and organisations having made and submitted records for the area of interest. The absence of records for a species does not therefore necessarily mean that such species does not occur in the study area.

The survey was carried out in August, which is considered within the guidelines proposed survey period of April to September and no constraints are foreseen.

It should be noted that the Phase 1 Habitat map (Figure 2) is indicative habitat boundaries and these have not been surveyed-in accurately in terms of GIS, particularly given the mosaic nature of the Site where actual boundaries are difficult to delineate.

4. Results

4.1 Desk Study

The results for the search carried in August 2019 for statutory and non-statutory sites are included in Appendix C. The desk study results for protected and notable species received from Cumbria Biodiversity Data Centre were too numerous to include as raw data therefore only the relevant species have been identified and considered within the body of the report (a full record set can be issued on request).

4.1.1 Statutory Designations

The Site is adjacent to Duddon Estuary Site of Special Scientific Interest (SSSI). This has been designated for its wintering and breeding bird populations, including internationally important numbers of redshank *Tringa totanus* and knot *Calidris canutus*, its saltmarsh and dune habitats, and the presence of natterjack toads.

The Duddon Estuary is a Ramsar Site and the original Duddon Estuary Special Protection Area (SPA) has now been subsumed by Morecambe Bay and Duddon Estuary SPA, which is designated for its international assemblage of bird populations. The Site is around 150 m south of the Ramsar and SPA boundaries.

The Morecambe Bay SSSI (designated for its internationally important populations of breeding and wintering birds, including over 110,000 wintering waders, diverse salt marsh habitats and geological formations) is situated less than 200 m north of the Site.

Morecambe Bay has also been designated as a Special Area of Conservation (SAC) for the important coastal habitats present such as mudflats, coastal lagoons and saltmarsh communities.

The Iron Works Local Nature Reserve (LNR) abuts the northern boundary of the Site and is known to support natterjack toads and an important assemblage of breeding (including skylark *Alauda arvensis*) and over wintering bird species.

4.1.2 Non-statutory Designations

Table 3 details the non-statutory nature conservations identified by the desk study, based on the method given in Section 3.1 of this report. The designations are listed in order of increasing distance from the Site boundary. Table 3 includes Candidate and Potential/Historic sites. Candidate County Wildlife Sites (CWS) are those which have clear evidence that they meet the CWS criteria but have not been formerly designated. Potential/Historic CWS are former parish, county and district-level sites but have not been recently surveyed to check status.

Table 3: Sites with non-statutory designations for nature conservation

Designation	Reason(s) for Designation	Relationship to the Site boundary
Hodbarrow Lagoon and RSPB Reserve County Wildlife Site	Notable habitat (wetland and grassland) and species (birds)	1 km to the southwest of the Site
Millom Marsh County Wildlife Site	Notable habitat (saltmarsh) and species (birds)	1 km to the northwest of the Site

4.1.3 Protected and Notable Species

Table 4 provides a summary of potentially relevant species identified through the desk study. The table summarises the conservation status of each species and provides commentary on the likelihood of presence.

Where species are identified in Table 4 as likely or possible within the Site or immediate wider area, depending on the potential for effects from the proposed scheme, they could be material to determination of a planning application and could represent a legal constraint. Where they are flagged as a potential constraint, further surveys are likely to be required to determine presence/ population size so the impacts from the proposed scheme can be assessed to the satisfaction of the Planning Authority. Requirements for further surveys are identified in Section 5 of this report.

Table 4: Protected and notable species relevant or potentially relevant to the proposed scheme

Species	Legally Protected Species	Species of Principal Importance	Other Notable Species	Present on Site	Present/Potentially Present in Wider Zone of Influence	Supporting Comments
Great crested newts (<i>Triturus cristatus</i>)	✓	✓	-	?	-	There was one record of this species, which was approximately 2.4 km from the Site boundary.
Natterjack Toad	✓	✓	-	?	✓	There were many records for this species. The nearest record is on the Iron Works Nature Reserve adjacent to the Site, in the ponds, approximately 50 m from the nearest point of the development area to the north.
Common Lizard	✓	✓	-	?	✓	The desk study noted that this species is local to the Site recorded in the Iron Works nature reserve adjacent to the Site.
Bats	✓	✓	-	?	?	The desk study returned 9 bat records within 2 km of the site. Species included Pipistrelle species (<i>Pipistrellus</i> sp.) and noctule (<i>Nyctalus noctula</i>). A pipistrelle roost is known 1.8 km from the Site.
Breeding birds	✓	✓	-	?	?	The desk study revealed the presence of many birds, amongst others, Oystercatcher (<i>Haematopus ostralegus</i>), Lapwing (<i>Vanellus vanellus</i>), skylark and ringed plover (<i>Charadrius hiaticula</i>) within 2 km of the Site.

Key to symbols: ✓ = yes, X = no, ? = possibly, see Supporting Comments for further rationale.

Species present on site are those for which recent direct observation or field signs confirmed presence. Species which are possibly present are those for which there is potentially suitable habitat based on the results of the desk study records.

Legally protected species are those listed under Schedules 1,5 and 8 of the Wildlife and Countryside Act 1981 (as amended) and Schedules 2 and 4 of the Conservation of Habitat & Species Regulations 2010 (as amended).

Species of Primary Importance are those listed under Section 41 of the NERC Act. Planning Authorities have a legal duty under Section 40 of the same Act to consider such species when determining planning applications.

Other notable species include native species of conservation concern listed in the LBAP (except species that are also of Principal Importance), those that are Nationally Rare, Scarce or Red Data List and non-native controlled weed species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.2 Phase 1 Habitat Survey

The habitats recorded within the Survey Area and their approximate extent are detailed below and shown in Table 5. The location of the Site is shown in Figure 1 in Appendix A. The Phase 1 Habitat Map is shown in Figure 2 in Appendix A. Details of target notes (TN) and associated photographs are found in Appendix D.

Table 5: Habitats present within the Survey Area, in descending order based on spatial area occupied

Habitat	Area (ha)	% of Survey Area
Buildings	0.031	22
Calcareous grassland - semi-improved	0.027	19
Dense scrub	0.002	1
Hard-standing (access roads)	0.08	58
Linear Features	Length (m)	% of Survey Area
Fence	44	N/A
Scattered trees/ tree line	10	N/A

The habitats are described in greater detail below.

4.2.1 Calcareous (semi-improved) grassland

The strip of grassland behind and to the west of the warehouse was calcareous (basic) grassland, which has been disturbed to a degree with some areas having tall ruderal species present. There was a vehicle (mobile home) parked on the grass to the west and building materials and pallets were seen near the building to the east. There was a post and wire fence along the northern boundary (see Photographs 1 and 2).

Species recorded in the grassland included cocksfoot (*Dactylis glomerata*), Common bent (*Agrostis capillaris*), Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*), creeping bent (*Agrostis stolonifera*), smooth meadow grass (*Poa pratensis*), false oat grass (*Arrhenatherum elatius*), black knapweed (*Centaurea nigra*), common mouse ear (*Cerastium fontanum*), creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), smooth hawk's-beard (*Crepis capillaris*), dandelion (*Taraxacum officinale* agg.), an eyebright (*Euphrasia nemorosa* agg.), yellow-wort (*Blackstonia perfoliata*), common vetch (*Vicia sativa*), ribwort plantain (*Plantago lanceolata*), red bartsia (*Odontites vernus*), ragwort (*Jacobaea vulgaris*), common centaury (*Centaureum erythraea*), coltsfoot (*Tussilago farfara*), fairy flax (*Linum catharticum*), selfheal (*Prunella vulgaris*), hop trefoil (*Trifolium campestre*), a tare (*Vicia* spp.), yarrow (*Achillea millefolium*), rosebay willowherb (*Chamaenerion angustifolium*), rough hawkbit (*Leontodon hispidus*), a mullein (*Verbascum* spp), a St-john's-wort (*Hypericum* spp.) and meadow vetchling (*Lathyrus pratensis*).

There were also two small stands of Japanese knotweed (*Reynoutria japonica*) in the grassland (see TN1 and photographs 3 and 4). One stand was a single plant and the stand to the east was two plants.

4.2.2 Scrub and Scattered Shrubs

A small stand of dense scrub was present in the far western corner of the Site, which was predominantly bramble (*Rubus fruticosus* agg.) and willow (*Salix* spp.). There were also scattered hawthorn (*Crataegus monogyna*) and willow shrubs along the fence (see Photograph 5).

4.2.3 Building

The existing warehouse on Site was a brick-built building with a metal corrugated roof (see Photograph 6); inside it was completely open with no loft space and the roof appeared to have added/upgraded relatively recently (see Photograph 7). It was a completely open floor space inside, but works were being carried out to create office space within the warehouse.

4.2.4 Hardstanding

To the south of the building was concrete hardstanding (see Photograph 8), which was further surrounded by other industrial buildings and is the main access point for the warehouse. In addition, to the south west was another access route, which was also concrete hardstanding (see Photograph 9).

4.2.5 Surrounding habitats

To the north and west is the Iron Works LNR, which comprises calcareous grassland, open short ephemeral communities, scrub, mounds of old iron works slag, ponds and tall ruderals. The grassland directly to the north of the Site was tall and unmanaged grass and herbs with species such as black knapweed, false oat grass, ragwort, rosebay willowherb, yarrow, willow, bramble and hawthorn (TN2 and see Photograph 10). Beyond which was the Duddon estuary.

There were five ponds in the LNR. Pond 1 (see Photograph 11) was approximately 160 m to the west and was a large shallow waterbody with a silty substrate with bricks and stones present and some wetland plants such as a spearwort (*Ranunculus* spp), water plantain (*Alisma plantago-aquatica*) and sea club rush (*Bolboschoenus maritimus*). Ponds 2 - 5 were between 50 and 90 m to the north-northeast of the Site beyond the tall, rough grassland adjacent to the Site boundary (see Photographs 12 – 15). These were small, shallow ponds with some aquatic vegetation present such as a pondweed (*Potamogeton* spp.), which were created as breeding habitat for natterjack toads. There were marsh orchids (*Dactylorhiza* spp.) local to the ponds.

To the south and immediately east and west was the Millway Industrial area, comprised predominantly of hardstanding and buildings with areas of grassland and dense and scattered scrub. The grassland within the

wider Millway site boundary was again species rich calcareous and species recorded in the grassland to the west included all the species recorded on Site, along with other species such as bird's-foot trefoil (*Lotus corniculatus*), ox-eye daisy (*Leucanthemum vulgare*), agrimony (*Agrimonia eupatoria*), goats-beard (*Tragopogon pratensis*), tufted vetch (*Vicia cracca*) and kidney vetch (*Anthyllis vulneraria*).

Directly to the east of the Site (within the industrial area) was another small area of grassland, which became bramble and then dense willow scrub.

4.3 Protected and Notable Species

4.3.1 Great crested newts

The five ponds within the LNR have connectivity to the Site, are within 500 m and may offer habitat to great crested newts (GCN); in addition, there was terrestrial habitats within and surrounding the Site such as rough grassland and scrub that were suitable for great crested newts. GCN are not known to be present within the local area and it should be noted that natterjack toad surveys carried out on the Site did not record GCN during those surveys; the desk study identified only one historic record of GCN, which was 2.4 km from the Site. Further, reptile trapping on the wider Millway site in 2018, which included putting out refugia, did not record GCN, although smooth newts (*Lissotriton vulgaris*) were recorded.

Habitat Suitability Index

A habitat suitability index (HSI) assessment was completed for the waterbodies recorded on the survey as follows (see Appendix E for the table of full results). A summary of the results of the HSI assessment undertaken during the extend Phase 1 Habitat survey are shown in Table 6.

Table 6: Habitat Suitability Index Assessment Results

Pond Reference	Pond location	Grid Reference	HSI score	HSI Value
Pond 1	160 m west of Site	SD 1835 7991	0.80	Excellent
Pond 2	50 m north of Site	SD 1855 7989	0.62	Average
Pond 3	50 m northwest of Site	SD 1858 7987	0.60	Average
Pond 4	65 m northwest of Site	SD 1860 7986	0.57	Below Average
Pond 5	75 m northwest of Site	SD 1861 7985	0.55	Below Average

4.3.2 Natterjack toad

Natterjack toads are typically confined to coastal sand dune systems, coastal grazing marshes and sandy heaths. They are known to be present in the nature reserve adjacent to the Site (last natterjack toad survey was 2016). In addition, during the reptile and amphibian survey several checks of the ponds were made and natterjack tadpoles and toadlets were seen in Ponds 4 and 5 (see Photograph 16). None of the other ponds had tadpoles.

4.3.3 Reptiles

The mosaic of grassland, wetland, open ephemeral communities and scrub around the Site provides suitable habitat for common reptile species such as common lizard, slow worm (*Anguis fragilis*) and grass snake (*Naatrix helvetica*).

A reptile clearance carried out in 2018 for another project local to the warehouse Site recorded common lizards and so common lizards could utilise the Site. There were no records for other reptiles in the local area.

4.3.4 Reptile and amphibian (terrestrial) presence-absence survey

Based on the possible presence of common lizard a specific survey was undertaken but no reptiles were recorded during the survey. The only amphibians recorded were common toad and smooth newts. The results (including dates and temperatures) are found in Appendix F.

4.3.5 Bats

The existing warehouse was assessed for the presence of potential roost features (PRF). The building was brick built with an unlined metal corrugated roof, that appeared quite a recent addition to the building (see Photograph 6). There was no loft space, with the building being totally open (see Photograph 7). There was a fascia board around the front and back of the building with a narrow soffit enclosing the space between the edge of the roof and the brickwork with no gaps seen (see Photograph 17). The two gable ends of the building have an enclosed plastic (fascia and soffit) with no gaps seen (see Photograph 18).

No evidence of bats was seen during the survey (droppings, staining etc.) and it was considered the building had negligible potential for a bat roost to be present.

In communication with the landowner, a bat survey was carried out in 2019 and a pipistrelle roost was found in the Millway building local to the warehouse (approximately 100 m to the southwest).

4.3.6 Birds

The Site contains a building and scrub which may be suitable for nesting birds and the grassland in the wider area offers potential for ground nesting birds.

The grassland present within the Site is unlikely to hold ground nesting birds due to the disturbed nature of the area.

4.3.7 Badger

No evidence of badgers was found on the Site or in the local area and they are not considered further.

4.3.8 Red Squirrel

There are no records for red squirrel either on or local to the Site. There was no red squirrel habitat on or adjacent to the Site and they are not considered further.

4.3.9 Invasive weeds

Japanese knotweed was noted in the grassland area within the redline boundary (TN1 and Photographs 3 and 4) and will be impacted by the scheme.

4.3.10 Other fauna

There is potential that hedgehog (*Erinaceus europaeus*) and brown hare (*Lepus lepus*) would be found local to the Site as there was suitable habitat.

The Site itself is unlikely to support a notable terrestrial invertebrate fauna, although the nature reserve adjacent to the Site is likely to hold a good invertebrate fauna. In addition, the areas of wetland habitat offer potential for invertebrate diversity on the nature reserve.

5. Summary of potential constraints

5.1 Designated Sites

5.1.1 Duddon Estuary Ramsar site and SSSI, Morecambe Bay SAC and The Iron Works Local Nature Reserve

The Duddon Estuary, local to the north and west of the Site, is designated as a SPA, Ramsar site and Site of Special Scientific Interest (SSSI). The Duddon Estuary is also part of the Morecambe Bay Special Area of Conservation (SAC).

The Iron Works Local Nature Reserve is adjacent to the north and west of the Site.

There is no direct impact of the proposed scheme on any of these designated sites. Given the nature of the development and existing industrial use of the Site no indirect impacts on the designated sites is foreseen.

5.1.2 Non-statutory Designated Sites

Hodbarrow Lagoon and Millom Marshes County Wildlife Sites are approximately 1 km from the Site. No direct or indirect impacts due to the development are foreseen.

5.2 Terrestrial Habitats

The development would result in the loss of approximately 0.03 ha of grassland, some of it rough grassland with tall ruderal species present, although also some diverse calcareous grassland. This area of grassland behind the existing warehouse is already used for storage of materials, an outdoor workspace and has a large mobile home/caravan present. The size and nature of the grassland area would not constitute priority habitat and there are significant areas of similar or better-quality grassland within and surrounding the Site. The loss of this strip of grassland is not considered significant in terms of the overall biodiversity value of the wider area and is not considered further.

No shrubs or scrub will be impacted by the development.

5.3 Species

5.3.1 Amphibians

Great Crested Newts

GCN is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Habitats Regulations. This legislation, when taken together, results in a level of protection that prohibits the intentional, deliberate or reckless:

- Killing, injuring, taking or disturbance of a great crested newt;
- Damaging, destroying or obstructing any place used by a great crested newt for the purposes of breeding or sheltering / protection; and
- Selling and/or advertising for sale a great crested newt or any part thereof.

There are five ponds within 160 m of the Site, which could support breeding GCN. The habitats present within the Site such as scrub and stored materials, could also provide suitable terrestrial habitat for GCN. The proposed scheme therefore has the potential impact on GCN, if present.

The HSI surveys recorded the ponds as generally good quality great crested newt habitat. However, the ponds present on the LNR have been surveyed on several occasions (most recently 2016) and GCN were not present. In addition, during the reptile survey no GCN were recorded. Further in a reptile/amphibian trapping exercise local to the Site no GCN were found. It is considered unlikely that GCN are present in these ponds or in the local area and no further surveys or mitigation for GCN is required.

Natterjack Toad

Natterjack toads are present in the ponds local to the Site. However, the dense vegetation between the Site and the ponds would be a significant barrier to the movement of toads into the development area. In addition, no natterjack toads were recorded during the amphibian and reptile survey and it is unlikely they would be utilising the Site as terrestrial habitat. The survey was extended to the end of October given the late breeding in the ponds local the Site and whilst it was considered unlikely that the toadlets seen in the ponds would find their way to the Site and none were recorded, no adult toads were found either.

However, as a precaution, it is recommended that a search of the Site by a suitably qualified ecologist is carried out during site clearance (when stored materials are being cleared and vegetation removed) to ensure that there would be no impact on amphibians. In the unlikely event that natterjack toads are found, then works would have to stop and a licence to clear them from the Site sought from Natural England.

5.3.2 Reptiles

All common UK reptiles receive partial protection under the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill, injure or take any reptile. In addition, the Natural Environment and Rural Communities (NERC) Act 2006 places additional responsibilities on local planning authorities, in discharging their planning duty, to consider impacts on all reptiles. Based on the habitats recorded, previous surveys and desk study data, there is potential for common lizard to be present on Site. However, this risk is low, as the current survey did not record common lizards or other reptiles, but they are highly mobile species and may utilise the Site on a transient basis.

As a precaution, it is recommended that supervision and a search of the Site by a suitably qualified ecologist is carried out during site clearance (when stored materials are being cleared and vegetation removed) to ensure there is no impact on common lizard.

5.3.3 Bats

The building was considered to have negligible potential has habitat for roosting bats as the soffits appeared sealed and there was no actual roof space for bats to roost; in addition, the extension to the warehouse will have no impact on commuting or foraging bats and no further surveys are required.

However, as a biodiversity net gain for the project, bat boxes or bat roosting structures could be included within the extension design to encourage local bats to roost in the new structure, thus increasing the local habitat for these species.

5.3.4 Breeding birds

All species of bird are protected under the Wildlife and Countryside Act 1981 (as amended) with additional protection afforded to certain species under Schedule 1 of the act. This legislation makes it an offence to intentionally:

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

There were no obvious signs of breeding birds with the existing building and no scrub habitat will be impacted by the works. The grassland area was small and subject to regular disturbance by the nature of the works on Site and it is unlikely that ground nesting species will be present.

It is recommended any demolition works (wall and roof to facilitate the extension) are undertaken outside the bird nesting season (March – August inclusive). If this is not possible, a check of the building for the presence of nesting birds prior to works starting on the extension must be carried out. If birds are present in the areas of impact, then works must be delayed until the young have fledged.

5.3.5 Invasive weeds

Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside (W&C) Act 1981 (as amended) as an invasive non-native species (INNS). Under the W&C Act it is an offence to plant or otherwise cause to grow in the wild any plants listed under Schedule 9.

Other legislation relating the INNS (including Japanese knotweed) includes the Anti-social Behaviour, Crime and Policing Act 2014 and Community Protection Notices, the EU Regulation on invasive alien species 2014 and the National Infrastructure Act 2015, all of which aim to ensure the control and management of species such as Japanese knotweed.

There are two small stands (1 and 2 plants respectively) within the development area and these will need to be dealt with in a responsible manner ensuring that legislation is complied with. It is recommended that a method statement is completed prior to works starting and that this method statement is implemented to ensure the species is not spread by the works.

5.3.6 Other fauna

Hedgehogs could be present in the rough grassland areas to the north and around the building; consideration should be given to this species in terms of impact in these areas and a check for this species is recommended as a minimum prior to any works starting and during Site clearance.

5.4 Summary

It is assessed that there is potential for the development to have an impact on ecological receptors. Summaries of ecological constraints and mitigation requirements are given in Table 7.

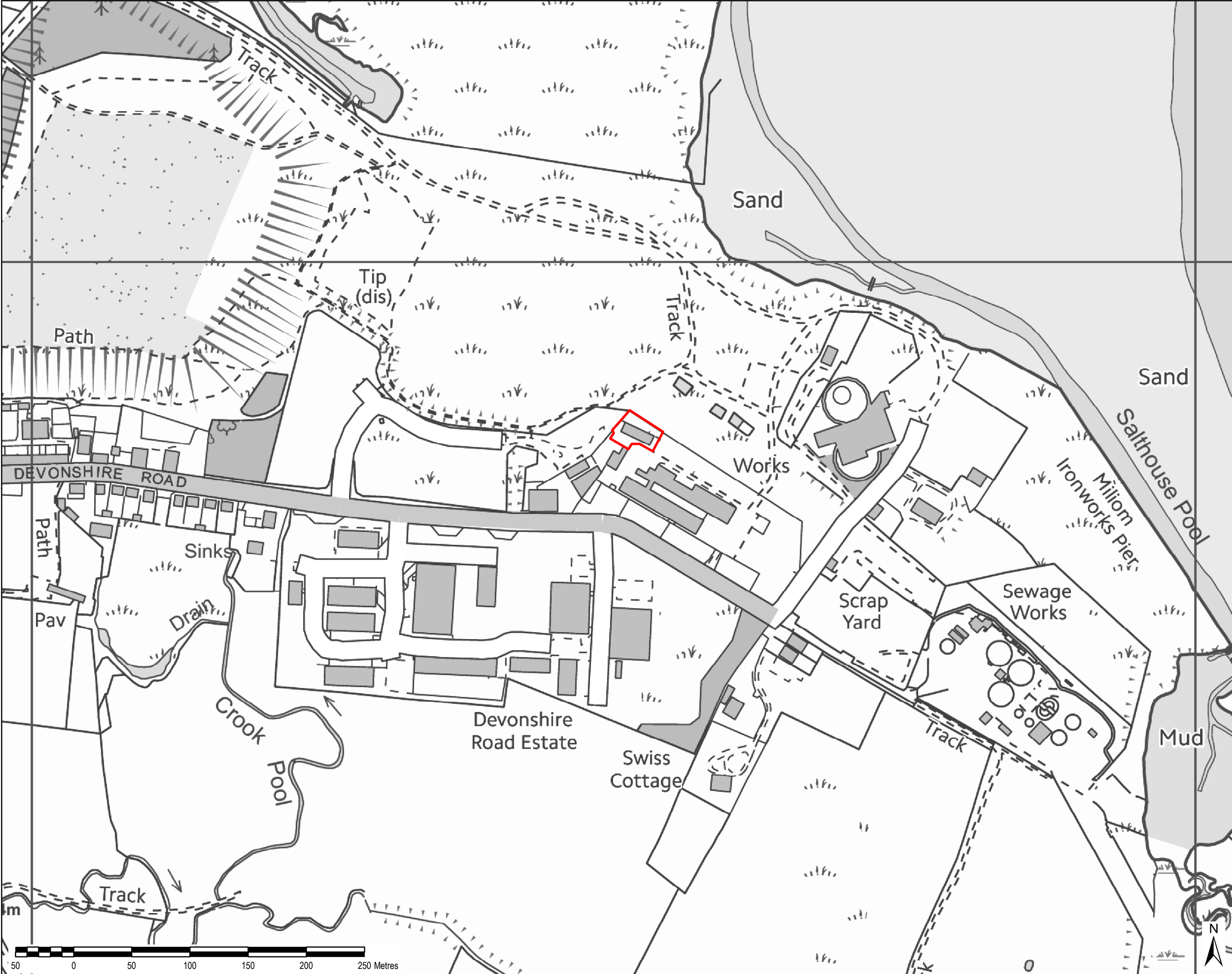
Table 7: Summary Appraisal of Features of Ecological Constraints and Recommended Further Action

Receptor	Scale of Constraint	Further Requirements, Including Potential Mitigation Requirements	Driver	When is Action Likely to be Required		
				To Inform Design	Before Planning Application	Pre-construction Onwards
Natterjack Toad	Low	As a precautionary approach, a site search and presence of ecologist during site clearance to ensure no natterjack toads are impacted by works.	The Habitats Regulations. WCA 1981. LBAP	-	-	✓
Reptiles	Low	As a precautionary approach, site search and presence of ecologist during site clearance to ensure no reptiles are impacted by works.	WCA 1981, LBAP, NERC Act 2006	-	-	✓
Bats	Low	As a biodiversity net gain, it is recommended that bat boxes are put up on the building to encourage bat use and provide additional roosting habitat on the site.	The Habitats Regulations. WCA 1981. LBAP	-	-	✓
Breeding Birds	Medium	It is recommended that works are completed outside of the bird nesting season (March to August inclusive). If this is not possible then a bird nest check of the building should be carried out.	WCA 1981. NERC Act 2006, LBAP	✓	✓	✓
Invasive weeds	High	Ensure that a method statement for ensuring no spread of invasive weeds due to works	WCA 1981	✓	-	✓

Receptor	Scale of Constraint	Further Requirements, Including Potential Mitigation Requirements	Driver	When is Action Likely to be Required		
				To Inform Design	Before Planning Application	Pre-construction Onwards
		occurs is completed and adhered to.				
Hedgehog		Ensure species are not harmed during site clearance and works and protection of supporting habitats.	WCA 1981, LBAP, NERC Act 2006	✓	✓	✓

Appendix A Figures

Figure 1 Site Location map



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LEGEND

Site Boundary

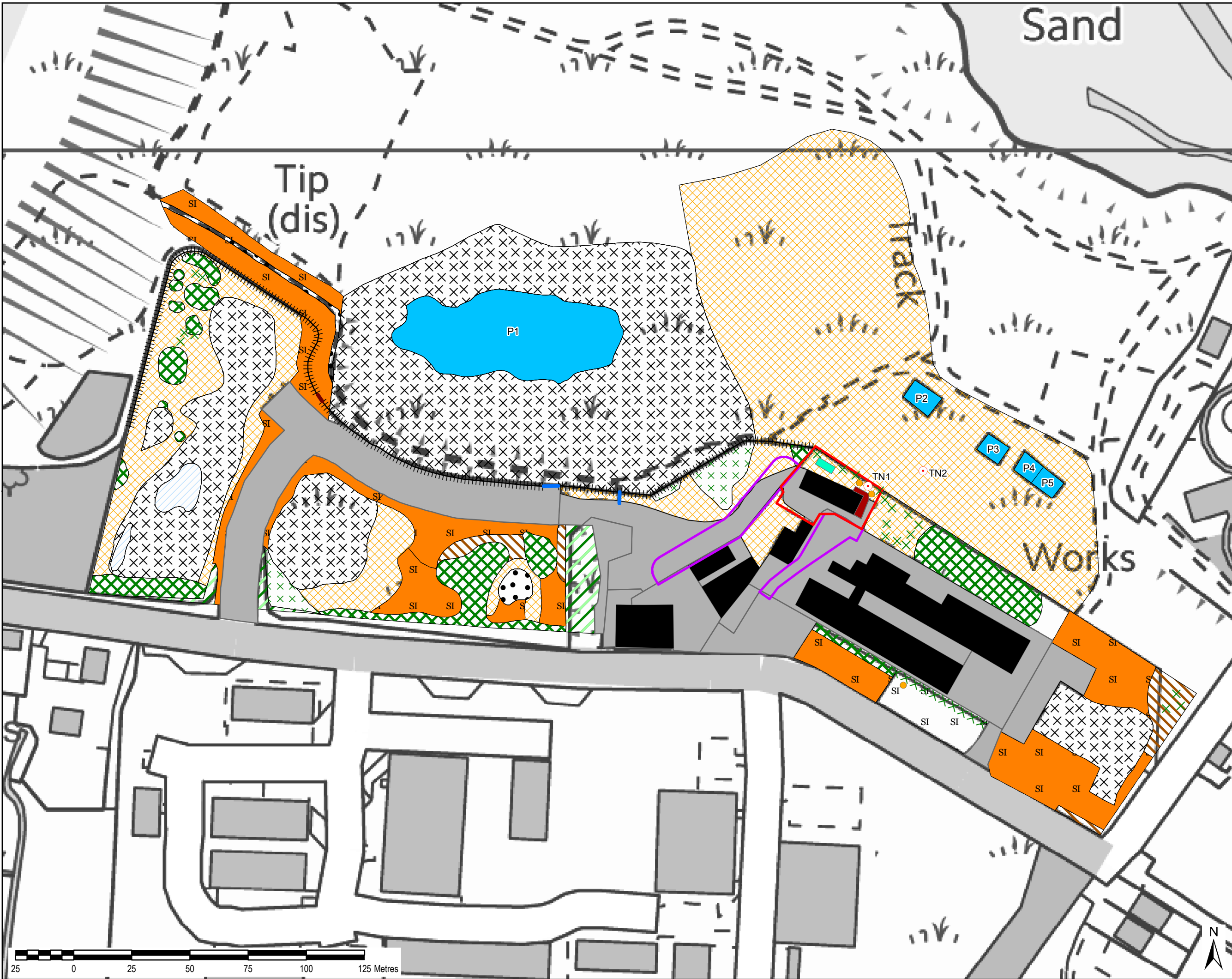
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Project Title					
MILLWAY WAREHOUSE EXTENSION					
Drawing Title					
SITE LOCATION					
Drawn	Checked	Approved	Date		
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FIGURE 1					00

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Figure 2 Phase 1 Habitat Map

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LEGEND

- Site Boundary
- Japanese Knotweed
- Old Gate
- Gate
- Scrub - Scattered
- Target Note
- Possible Access Points On Existing Roadway
- Building Materials
- Mobile Caravan
- Mixed woodland - Plantation
- Scrub - Dense/Continuous
- Scrub - Scattered
- Neutral Grassland - Semi-Improved
- Semi-Improved Grassland
- Other Tall Herb and Fern - Ruderal
- Inundation Vegetation
- Standing Water
- Cultivated/Disturbed Land - Ephemeral/Short Perennial
- Buildings
- Bare Ground
- Basic Grassland
- Hard Standing

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Project Title

MILLWAY WAREHOUSE EXTENSION

Drawing Title

PHASE 1 SURVEY

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Appendix B Legislation and Planning Policy

The Conservation of Habitats and Species and Planning (Various Amendments) (England & Wales) Regulations 2018

The original Regulations transposed the EU Directive on Natural Habitats, and Wild Fauna and Flora 9/43/EEC) into domestic legislation. Amendments in 2007 and 2009 addressed a number of gaps and inconsistencies in the original legislation and provided a greater legal certainty and clarity in a number of areas. In April 2010 the Regulations were brought up to date to consolidate changes made since 1994. The Regulations afford a high level of protection to a variety of species that are considered important at a European scale. The Regulations identify European Protected Species and various habitats of importance within the European Union, with important sites for these habitats/species or both being designated as special Areas of Conservation (SAC). Any proposed works that may have a significant effect on a SAC or Special Protection Area (SPA) should be assessed in relation to the site's 'conservation objectives', i.e. the reasons for which the Site is designated.

The new Regulations simplified the species protection regime to better reflect the Habitats Directive, providing a clear legal basis for surveillance and monitoring of European Protected Species (EPS). The Regulations also amended the WCA, updating Schedules 5 and 8 to consider provisions made by the Habitats Regulations 1994 in relation to the protection of EPS. They also offered further clarification to Part 4 of Section 9 considering "reckless" offences on wild animals, which was previously amended by the CROW Act 2000.

In 2012, the Regulations were further amended to place new duties on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds. They were also amended to ensure certain provision of the Habitats Directive and the Birds Directive were transposed clearly and Section 15 was amended to make clear that Local Nature Reserves can be designated for re-establishing bird habitat

The current Regulations came into force on 28th December 2018. They amended the Conservation of Habitats and Species Regulations 2017, the Neighbourhood Planning (General) Regulations 2012, the Town and Country Planning (Permission in Principle) Order 2017 and the Town and Country Planning (Brownfield Land Register) Regulations 2017.

Regulation 2 amends the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") applicable to special development orders, local development orders, neighbourhood development orders, simplified planning zones, enterprise zones and the conversion of footpaths into cycle tracks to incorporate the habitats assessments provisions in regulation 63 of the Habitats Regulations. Except for the conversion of footpaths into cycle tracks, this regulation also incorporates regulations 65 and 66 for the review of existing decisions and consents.

Regulation 2 also amends the Habitats Regulations to allow for the application of regulation 63 to applications for permission in principle.

Regulation 3 amends the Neighbourhood Planning (General) Regulations 2012 to change the prescribed condition relating to habitats for the purpose of examination of neighbourhood development plans to require that a neighbourhood development plan complies with the provisions applicable to land use plans in Chapter 8 of Part 6 of the Habitats Regulations.

Regulation 4 amends the Town and Country Planning (Permission in Principle) Order 2017 to change the definition of habitats development (for which a local planning authority may not grant permission in principle) to incorporate the habitats assessment process under regulation 63 of the Habitats Regulations.

Regulation 5 amends the Town and Country Planning (Brownfield Land Register) Regulations 2017 to change the definition of habitats development (which a local planning authority may not enter onto Part 2 of the Brownfield Land Register) to incorporate the habitats assessment process under regulation 63 of the Habitats Regulations.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the major domestic legal instrument for wildlife protection in the UK, and is the primary means by which the following are implemented:

- The Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention'); and

- The Council Directive 79/409/EEC on the Conservation of Wild birds (the 'Bird Directive')

Wild Birds

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally:

- kill, injure, or take any wild bird,
- take, damage or destroy the nest of any wild bird while that nest is in use or being built (also [take, damage or destroy the nest of a wild bird included in Schedule ZA1] under the Natural Environment and Rural Communities Act 2006), or
- take or destroy an egg of any wild bird.

Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of

Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

Other Animals

The Act makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Flora, Fungi and Lichens

The Act makes it an offence (subject to exceptions) to intentionally pick, uproot or destroy:

- any wild plant listed in Schedule 8, or
- unless an authorised person, to intentionally uproot any wild plant not included in Schedule 8,
- to sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native Species

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

The Countryside and Rights of Way (CroW) Act, 2000

Part III of this Act deals specifically with wildlife protection and nature conservation in England and Wales. The CroW Act strengthened the safeguards afforded to SSSIs.

Natural Environment and Rural Communities (NERC) Act 2006

Section 41 of the NERC Act requires the listing of habitats and species that are considered to be of principle importance for the conservation of biodiversity in England, including habitats and species in England that have been identified as priorities within the UK Biodiversity Action Plan (UKBAP).

The NERC Act requires that the Section 41 list be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

The EU Invasive Alien Species Regulations 2014

The EU Invasive Alien Species Regulations sets out to address the problems concerned with invasive alien species (IASs) in order to protect native biodiversity and ecosystem services and minimize and mitigate the human health and/or economic impacts that IASs can have. It sets out rules to prevent and manage the

introduction and spread of IASs in the EU through prevention, early detection and rapid eradication, and management.

National Planning Policy Framework

The NPPF came into being in March 2012 and was revised and updated in July 2018, relevant sections are as follows (although full details should be considered, which are found at <https://www.gov.uk/government/publications/national-planning-policy-framework--2>):

Section 15 of the NPPF relates specifically to “Conserving and Enhancing the Natural Environment”. Paragraph 170 states that “*Planning policies and decisions should contribute to and enhance the natural and local environment by:*”

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”

Paragraph 171 states that Plans should: distinguish between the **hierarchy of international, national and locally designated sites**; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a **strategic approach to maintaining and enhancing networks of habitats and green infrastructure**; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries

Paragraph 174 states that: *To protect and enhance biodiversity and geodiversity, plans should:*

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider **ecological networks**, including the hierarchy of international, national and locally designated sites of importance for biodiversity; **wildlife corridors and stepping stones** that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- b) promote the **conservation, restoration and enhancement of priority habitats, ecological networks** and the protection and **recovery of priority species**; and identify and **pursue opportunities for securing measurable net gains for biodiversity**.

Paragraph 175 states: *When determining planning applications, local planning authorities should apply the following principles:*

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) **development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it** (either individually or in combination with other developments), **should not normally be permitted**. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the Site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- c) **development resulting in the loss or deterioration of irreplaceable habitats** (such as ancient woodland and ancient or veteran trees) **should be refused**, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while **opportunities to incorporate biodiversity improvements in and around developments should be encouraged**, especially where this can secure measurable net gains for biodiversity.

Paragraph 176 states: ***The following should be given the same protection as habitats sites:***
potential Special Protection Areas and possible Special Areas of Conservation;

- a) listed or proposed Ramsar sites; and
- b) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Paragraph 177 states: **The presumption in favour of sustainable development does not apply where development requiring appropriate assessment** because of its potential impact on a habitats site is being planned or determined.

Appendix C Desk Study: Statutory and Non-Statutory sites

Site Check Report generated on Mon Nov 18 2019
You selected the location: Centroid Grid Ref: SD18527985
 The following features have been found in your search area:

Local Nature Reserves (England) - points

Reference	1083226
Name	MILLOM IRONWORKS
Hectares	21.03
Hyperlink	https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1083226

Local Nature Reserves (England)

Reference	1083226
Name	MILLOM IRONWORKS
Hectares	21.03
Hyperlink	https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1083226

Ramsar Sites (England)

Name	DUDDON ESTUARY
Reference	UK11022
Hectares	6779.71

Sites of Special Scientific Interest Units (England) - points

Name	DUDDON ESTUARY
Reference	1058736
Site Unit Condition	DESTROYED
Citation	1018356
Hectares	3.62
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018356

Name	DUDDON ESTUARY
Reference	1058742
Site Unit Condition	FAVOURABLE
Citation	1018344
Hectares	1155.05
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018344

Name	DUDDON ESTUARY
Reference	1058735
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1018368
Hectares	30.67
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018368

Name	DUDDON ESTUARY
Reference	1058737
Site Unit Condition	UNFAVOURABLE NO CHANGE
Citation	1018357
Hectares	27.28
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018357

Name	DUDDON ESTUARY
Reference	1058739
Site Unit Condition	FAVOURABLE
Citation	1010589
Hectares	77.24
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1010589

Name	DUDDON ESTUARY
Reference	1058738
Site Unit Condition	FAVOURABLE
Citation	1018369
Hectares	39.59
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018369

Name	DUDDON ESTUARY
Reference	1058740
Site Unit Condition	FAVOURABLE
Citation	1018363
Hectares	31.27
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018363

Sites of Special Scientific Interest Units (England)

Name	DUDDON ESTUARY
-------------	----------------

Reference	1058736
Site Unit Condition	DESTROYED
Citation	1018356
Hectares	3.62
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018356
Name	DUDDON ESTUARY
Reference	1058742
Site Unit Condition	FAVOURABLE
Citation	1018344
Hectares	1155.05
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018344
Name	DUDDON ESTUARY
Reference	1058734
Site Unit Condition	FAVOURABLE
Citation	1018355
Hectares	243.66
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018355
Name	DUDDON ESTUARY
Reference	1058735
Site Unit Condition	UNFAVOURABLE RECOVERING
Citation	1018368
Hectares	30.67
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018368
Name	DUDDON ESTUARY
Reference	1058737
Site Unit Condition	UNFAVOURABLE NO CHANGE
Citation	1018357
Hectares	27.28
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018357
Name	DUDDON ESTUARY
Reference	1058739
Site Unit Condition	FAVOURABLE
Citation	1010589
Hectares	77.24
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1010589
Name	DUDDON ESTUARY
Reference	1058738
Site Unit Condition	FAVOURABLE
Citation	1018369
Hectares	39.59
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018369
Name	DUDDON ESTUARY
Reference	1058740
Site Unit Condition	FAVOURABLE
Citation	1018363
Hectares	31.27
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018363
Name	DUDDON ESTUARY
Reference	1058731
Site Unit Condition	FAVOURABLE
Citation	1018343
Hectares	1725.67
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018343
Name	DUDDON ESTUARY
Reference	1058720
Site Unit Condition	FAVOURABLE
Citation	1018342
Hectares	1177.67
Hyperlink	http://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1018342
Sites of Special Scientific Interest (England)	
Name	Duddon Estuary SSSI
Reference	1003904
Natural England Contact	PIN DHILLON-DOWNEY
Natural England Phone Number	0845 600 3078
Hectares	6785.95
Citation	1000104
Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000104

Discharges

Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream (NB this does not include discharges to mains sewer which are unlikely to pose a risk at this location).

Water Supply**Notes 1****Notes 2****GUIDANCE - How to use the Impact Risk Zones**

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

Special Areas of Conservation (England)**Name**

MORECAMBE BAY

Reference

UK0013027

Hectares

61537.51

Hyperlink

<http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?euocode=UK0013027>

Areas of Outstanding Natural Beauty (England)

No Features found

Limestone Pavement Orders (England)

No Features found

Moorland Line (England)

No Features found

National Nature Reserves (England) - points

No Features found

National Nature Reserves (England)

No Features found

National Parks (England)

No Features found

Ramsar Sites (England) - points

No Features found

Proposed Ramsar Sites (England) - points

No Features found

Proposed Ramsar Sites (England)

No Features found

Sites of Special Scientific Interest (England) - points

No Features found

Special Areas of Conservation (England) - points

No Features found

Possible Special Areas of Conservation (England) - points

No Features found

Possible Special Areas of Conservation (England)

No Features found

Special Protection Areas (England) - points

No Features found

Special Protection Areas (England)

No Features found

Potential Special Protection Areas (England) - points

No Features found

Potential Special Protection Areas (England)

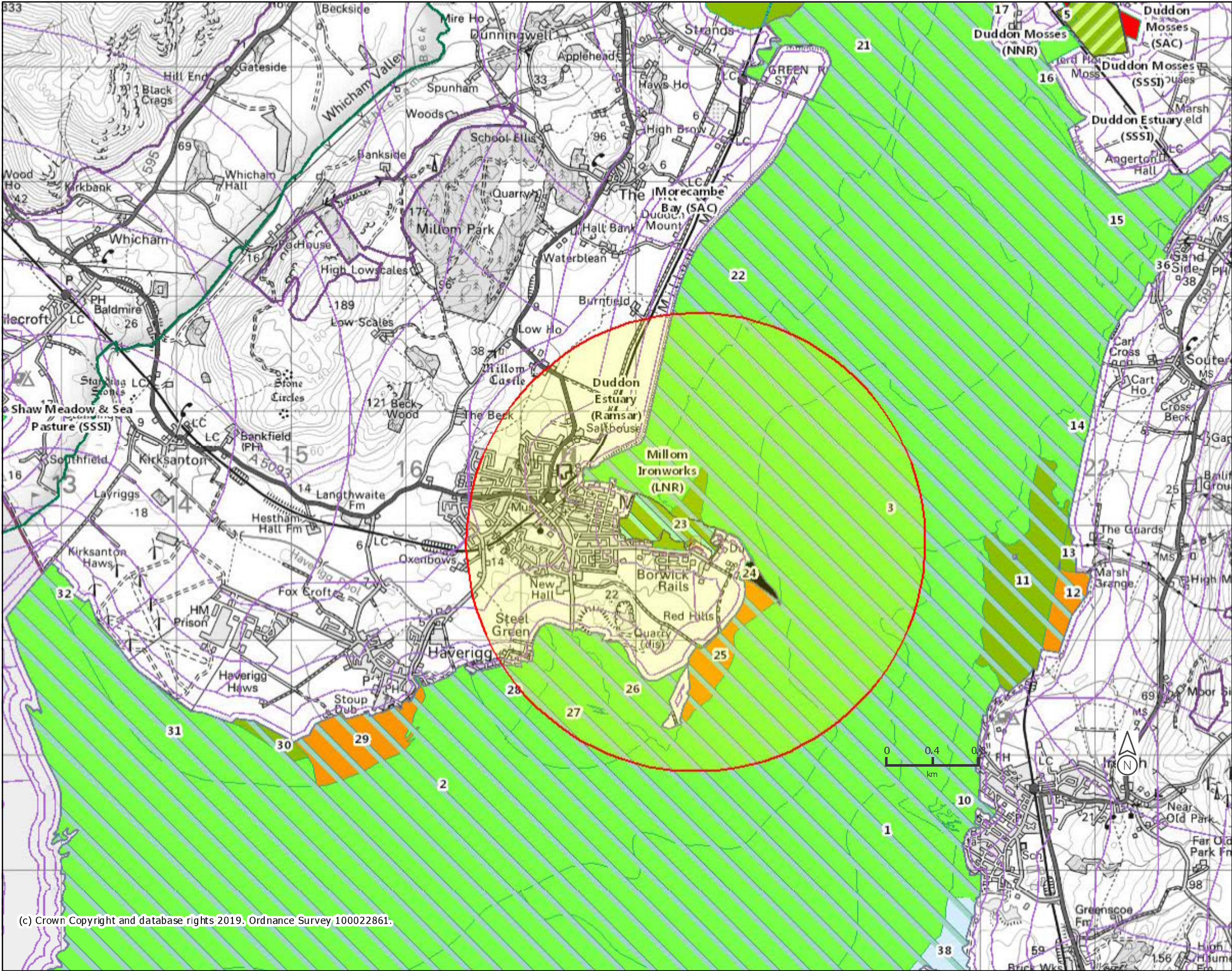
No Features found

Biosphere Reserves (Scotland) - points

No Features found

Biosphere Reserves (Scotland)

No Features found



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Legend

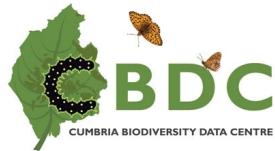
- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)

Sites of Special Scientific Interest Units (England)

- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)
- Biosphere Reserves (Scotland)

Projection = OSGB36
xmin = 312200
ymin = 477900
xmax = 323500
ymax = 482800

Map produced by MAGIC on 18 November, 2019.
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Cumbria Biodiversity Data Centre (CBDC): Non-Statutory Sites Search

For: Mark Hampton at AECOM

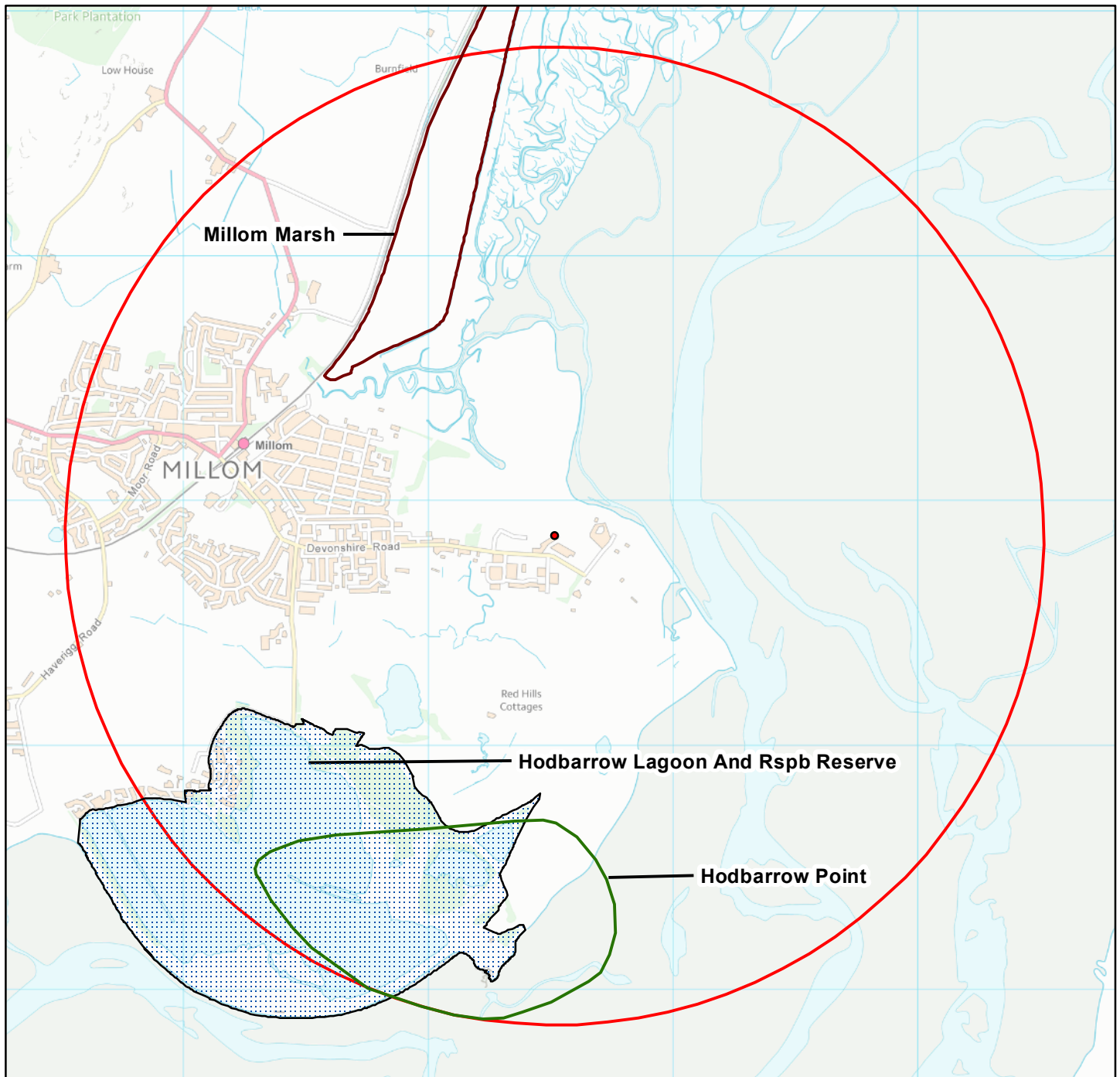
Centroid: SD 1851 7985

Site Name: Millway, Millom, Cumbria


Buffer: 2km

Search Date: 06/08/2019

N.B. Sites are displayed only if they exist within the search area



Key

 County Wildlife Sites

 Local Geological Sites

 Site of Invertebrate Significance

0 250 500 1,000
m



Any queries in the first instance contact:
Dr Moustafa Eweda
Biological Data Officer
Cumbria Biodiversity Data Centre (CBDC)

T. 01228 618770
E. dataofficer@cbdc.org.uk

Appendix D Photographs and Target Notes

Target Note (TN)	Photograph Description
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Photograph 1: Grassland on site (with caravan to the west)	
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Photograph 2: Grassland and fence to north.	
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Target Note (TN) Photograph Description

Target Note 1 and Photograph 3:
Japanese knotweed.



Target Note 1 and Photograph 4:
Japanese knotweed.



Target Note (TN) Photograph Description

Photograph 5:
Shrubs along fence.



Photograph 6:
Warehouse
(external – brick
built with metal
corrugated roof)



**Target Note (TN) Photograph
Description**

Photograph 7:
Warehouse (internal
- completely open
with no loft space).



Photograph 8:
Main access to site
– tarmac and other
industrial buildings.



Target Note (TN) Photograph Description

Photograph 9:
Secondary access
route – existing
concrete and gravel
road.



Photograph 10:
Local Nature
reserve habitat
adjacent to Site –
tall grasses,
ruderals, bramble
and scrub.



**Target Note (TN) Photograph
Description**

Photograph 11:
Pond 1.



Photograph 12:
Pond 2.



**Target Note (TN) Photograph
Description**

Photograph 13:
Pond 3.



Photograph 14:
Pond 4.



Target Note (TN) Photograph Description

Photograph 15:
Pond 5.



Photograph 16:
Natterjack tadpoles
in Pond 5.



**Target Note (TN) Photograph
Description**

Photograph 17:
Fascia and
enclosed soffit of
building.



Photograph 18:
Gable end of
warehouse with
plastic enclosed
fascia and soffit.



Appendix E Habitat Suitability Index results

Table F1: Habitat suitability index results (HSI) results for Pond 1

HSI categories	Suitability Index Results	Suitability Index Scores
Location	Area A	1
Pond Area	600 m ²	1
Pond Drying	Sometimes	0.5
Water Quality	Moderate	0.67
Shading	0%	1
Waterfowl	Minor	0.67
Fish	Absent	1
Other Ponds	6	0.80
Terrestrial Habitat	Good	1
Macrophytes	30%	0.60
HSI Score		0.80
Pond Suitability		Excellent

Table F2: HSI results for Pond 2

HSI categories	Suitability Index Results	Suitability Index Scores
Location	A	1.00
Pond Area	40m ²	0.08
Pond Drying	Sometimes	0.50
Water Quality	Moderate	0.67
Shading	0%	1.00
Waterfowl	Minor	0.67
Fish	Absent	1.00
Other Ponds	6	0.80
Terrestrial Habitat	Good	1.00
Macrophytes	25%	0.55
HSI Score		0.62
Pond Suitability		Average

Table F3: Habitat suitability index results (HSI) results for Pond 3

HSI categories	Suitability Index Results	Suitability Index Scores
Location	A	1.00
Pond Area	40m ²	0.08
Pond Drying	Sometimes	0.50
Water Quality	Moderate	0.67
Shading	0%	1.00
Waterfowl	Minor	0.67
Fish	Absent	1.00
Other Ponds	6	0.80
Terrestrial Habitat	Good	1.00
Macrophytes	15%	0.45
HSI Score		0.60
Pond Suitability		Average

Table F4: Habitat suitability index results (HSI) results for Pond 4

HSI categories	Suitability Index Results	Suitability Index Scores
Location	A	1.00
Pond Area	24m ²	0.05
Pond Drying	Sometimes	0.50
Water Quality	Moderate	0.67
Shading	0%	1.00
Waterfowl	Minor	0.67
Fish	Absent	1.00
Other Ponds	6	0.80
Terrestrial Habitat	Good	1.00
Macrophytes	10%	0.40
HSI Score		0.57
Pond Suitability		Below Average

Table F5: Habitat suitability index results (HSI) results for Pond 5

HSI categories	Suitability Index Results	Suitability Index Scores
Location	A	1.00
Pond Area	20m ²	0.04
Pond Drying	Sometimes	0.50
Water Quality	Moderate	0.67
Shading	0%	1.00
Waterfowl	Minor	0.67
Fish	Absent	1.00
Other Ponds	6	0.80
Terrestrial Habitat	Good	1.00
Macrophytes	5%	0.35
HSI Score		0.55
Pond Suitability		Below Average

Appendix F Results of Reptile and terrestrial amphibian presence-absence survey

Warehouse Presence/absence (0.03ha and 27 mats put out)				Common Lizard	Slow worm	Natterjack Toad	Smooth newt	Common Toad
Visit 1	4/9/2019	Survey: Temp 15°C, sunny and dry, light wind. Light rain earlier in day and through previous night (max 17°C, min 12°C). Previous day wet and windy max temp 15°C, min temp 10°C.	Nothing found	0	0	0	0	0
Visit 2	7/9/2019	Survey: 16°C, Sunny with occasional cloud (Max 16°C, min 9°C). Previous day was clear with light rain later in day and through night (max 15°C, min 9°C).	Nothing found	0	0	0	0	0
Visit 3	13/9/2019	Survey: 15°C, Sunny with occasional cloud (Max 15°C, min 9°C); rest of the day was dry and sunny. Previous day was wet during the day and early evening but then dry through the night (max 15°C, min 7°C).	Nothing found	0	0	0	0	0
Visit 4	19/09/2019	Survey: 16°C, Sunny (Max 19°C, min 10°C); rest of the day was sunny. Previous day was dry (max 18°C, min 15°C) with some cloud.	Nothing found	0	0	0	0	0
Visit 5	26/09/2019	Survey: 16°C, Sunny (Max 17°C, min 9°C); rest of the day was cloudy with sun. Previous day was a mix of rain and sun (max 16°C, min 11°C).	Nothing found	0	0	0	0	0
Visit 6	29/09.2019	Survey: 14°C, Sunny (Max 16°C, min 10°C); day had rain and cloud with sunny intervals. Previous day was dry in the morning and then rain through afternoon and night (max 17°C, min 10°C).	Nothing found	0	0	0	0	0
Visit 7	9/10/2019	Survey: 13°C, Sunny with cloud (Max 13°C, min 10°C); day was sunny with patchy cloud. Previous day there was light rain during parts of the day and evening (max 14°C, min 10°C).	Nothing found	0	0	0	0	0
Visit 8	12/10/2019	Survey: 14°C, Sunny with cloud (Max 14°C, min 10°C); day was cloudy with sunny periods and rain. Previous day wet for much of the day and evening (max 15°C, min 9°C).	Female smooth newt recorded next to the existing warehouse to the west end	0	0	0	1	0
Visit 9	15/10/2019	Survey: 13°C, Sunny with cloud (Max 13°C, min 11°C); day was cloudy with sunny periods and dry. Previous day was dry during the day with some light rain during the night (max 15°C, min 8°C).	Adult common toad recorded next to the existing warehouse to the west end	0	0	0	0	1
Visit 10	24/10/2019	Survey: 13°C, Sunny with cloud (Max 13°C, min 7°C); day was cloudy with sunny periods and some occasional light rain. Previous day had light rain during the night max 13°C, min 10°C).	Adult common toad recorded next to the existing warehouse to the west end under same mat as previous record	0	0	0	0	1

Warehouse Presence/absence (0.03ha and 27 mats put out)				Common Lizard	Slow worm	Natterjack Toad	Smooth newt	Common Toad
Visit 11	27/10/2019	Survey: 13°C, Sunny (Max 13°C, min 6°C.); day was generally sunny but with cloud at times. Previous day had rain during the day and was dry during the night max 10°C, min 6°C).	Nothing found	0	0	0	0	0

AECOM Infrastructure & Environment UK Limited
Tanyard Suite,
Fleswick Court,
Westlakes Science Park.
Moor Row,
CA24 3HZ
UK

T: +44 (161) 602 7993
aecom.com