Padeswood Planning ApplicationMill 5

Ecological Assessment

Project Number: 60529353

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Hanson Cement

Quality information

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Table of Contents

Tables

1. Introduction

AECOM Infrastructure and Environment UK Ltd (AECOM) has been commissioned by Hanson Cement to prepare an Ecological Assessment Report to accompany a planning application for a new cement mill (Mill No. 5) and rail loading facility (hereafter referred to as the Proposed Development).

Full details of the Proposed Development are provided in the Planning Application Supporting Statement, Design and Access Statement and drawings submitted as part of the planning application but in brief the proposed development includes the demolition of existing cement storage and loading facilities and the erection of a new vertical roller mill, rail loading facility and modification to (and extension of) the existing railway line, together with ancillary development (including three steel cement storage silos, belt conveyors and pneumatic pipelines).

The application area extends to circa 3.1 ha hectares (Figure 1) and lies within the north eastern part of Padeswood Cement Works.

In summary, the proposal includes:

- Site profiling to achieve required ground levels;
- Civil foundations, services and access roadways for Mill 5;
- The demolition of silos 11 and 12, the existing rail loading facility (including silos 7, 8, 9 and 10) and a small railway cabin;
- The construction of a new vertical roller mill together with ancillary development (comprising mainly conveyors, air slides and mechanical bucket elevators) required to feed clinker and other raw materials to the mill and feed the resulting cement to existing and proposed cement storage silos and rail loading facility;
- Erect three new steel cement storage silos, each with a storage capacity of 1000 tonnes, fitted with rail and road loading facilities; and
- The laying of approximately 445 m of new or realigned railway track to service the proposed rail loading facility.

This report provides an assessment of the potential effects of the Proposed Development on ecological and nature conservation interests (flora and fauna) and, where relevant, the surrounding locality.

The ecological assessment firstly describes and evaluates any existing ecological features within the survey area and immediate wider locality and assesses the potential impacts resulting from the Proposed Development upon them. Recommendations for avoidance, mitigation and compensation are provided along with an assessment of any residual impacts.

The ecological assessment was undertaken in accordance with the scope set out in the Screening and Scoping Report prepared by Golder Associates in March 2017, reference 1773079.500/A.0 (Golder, 2017) and issued to Flintshire County Council, comprising:

- A Phase 1 Habitat survey (to standard Joint Nature Conservation Committee method) to record type, location and extent of vegetation and habitats within a survey area that included the proposed development;
- An appraisal of habitats present for their suitability to support protected or notable species of fauna, including birds, mammals and herpetofauna;
- Further survey work undertaken for bats (roosting and activity) and great crested newts; and
- Where protected or notable species are known or suspected to be present, sufficient information is provided against which an assessment of the impact of the Proposed Development upon them can be made and proportionate avoidance/reduction or mitigation measures provided to satisfy planning and/or wildlife legislation.

2. Assessment Methods

2.1 Value and Impact

The methodology used to assess the significance of impacts on ecological receptors is based on the Guidelines for Ecological Impact Assessment (EcIA) published by the Chartered Institute of Ecology and Environmental Management (CIEEM)[1].

Areas and/or species of ecological importance within the survey area are identified and the main factors contributing to their importance are described. An ecological feature or resource is important (or have potential value) at the following scales: International and European; National (i.e., England); Regional; County or other Local Authority area; and Local.

The impact on an ecological feature has several characteristics that need to be fully described before significance can be assessed. Several factors need to be considered when describing and assessing impacts, which include:

- Direction (positive, negative or neutral impact);
- Magnitude (the amount or level of impact);
- Extent (area in hectares, linear metres, etc.);
- Duration (in time or related to species life-cycles);
- Reversibility (i.e. is the impact permanent or temporary);
- Timing and frequency (e.g. related to breeding seasons); and
- Cumulative effects (between impacts from several sources (also known as inter-relationships) and/or the combined effects of other developments in the area).

2.2 Significance Criteria

CIEEM guidance states that impacts should be determined as being significant when they have an adverse or positive effect “on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area”. Such impacts may be significant at the level of importance defined in the Evaluation section or, for habitats and species, at a lesser geographical scale. For example, limited impacts on woodland of County importance might be assessed as being significant at a Local level of importance.

Using this information and judgment, it is determined whether the effects will be significant or not on the integrity (of site/ecosystems) or conservation status (of habitats/species) of each ecological feature and the impact significance is determined at the appropriate geographical scale.

[1] Chartered Institute of Ecology and Environmental Management (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland; Terrestrial, Freshwater and Coastal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester

3. Legislation and Policy

3.1 Wildlife Legislation

The following wildlife legislation is potentially relevant to the Proposed Development:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Conservation of Habitats & Species Regulations 2010 (as amended);
- The Protection of Badgers Act 1992; and
- The Hedgerows Regulations 1997.

The above legislation has been considered when identifying potential constraints to the Proposed Development, design options and mitigation. Compliance with legislation may require obtaining relevant protected species licences prior to the implementation of the Proposed Development.

Further information on the requirements of the above legislation is provided as Appendix A.

3.2 National Planning Policy

3.2.1 Planning Policy Wales

The current land-use planning policy for Wales is contained in 'Planning Policy Wales' (PPW); Edition 9 November 2016 and particularly Chapter 5; Conserving and Improving Natural Heritage and the Coast[2]. The PPW provides the strategic policy framework for the effective preparation of local planning authority development plans. The objectives set out by the Welsh Assembly Government (WAG) for conservation and natural heritage are:

- Promote the conservation of landscape and biodiversity and the conservation of native wildlife and habitats;
- Ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment;
- Ensure that statutorily designated sites are properly protected and managed;
- Safeguard protected species; and
- Promote the functions and benefits of soils, and their function as a carbon store.

The document also sets out how Local Planning Authorities should include policies for nature conservation within local plans for development management.

This is overarching national policy combining and integrating the intent and aspiration of the national legislation referred to above and in the specific context of Wales.

3.2.2 Planning Policy Wales Technical Advice Note 5 Nature Conservation and Planning 2009

Planning Policy Wales is supplemented by several Technical Advice Notes (Wales) and Technical Advice Note 5 (TAN 5) provides advice on nature conservation and planning.[3] This TAN provides details on development management for Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs). Guidance also relates to the protection and enhancement of Local Nature Reserves, protected species and commons and greens and to protect and enhance the wider biodiversity and geological conservation.

[2] http://gov.wales/docs/desh/publications/161117ppw-chapter-5-en.pdf
[3] Welsh Assembly Government (2009) Technical Advice Note (TAN) 5; Nature Conservation and Planning. Welsh Assembly Government, Cardiff

The aim of TAN 5 is for LPAs to:

- pay attention to the principles of sustainable development;
- contribute to the protection and improvement of the environment;
- promote the conservation and enhancement of statutorily designated areas and undeveloped coast;
- ensure that appropriate weight is attached to designated sites of international, national and local importance;
- protect wildlife and natural features in the wider environment with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- ensure that all material considerations are considered …. about the potential effects of development on nature conservation;
- ensure that a range and population of protected species is sustained; and
- adopt a stepwise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation. Where there may be significant harmful effects, the LPA should be satisfied that any reasonable alternatives have been fully considered

TAN 5 is effectively the tool-box for implementing the nature conservation component of Planning Policy Wales. For the proposed development to be compliant with TAN 5, there has been direct consultation with the planning authorities, Natural Resources Wales (NRW) as the Statutory Consultee and Advisor; the collection of information and surveys are deemed appropriate and adequate and the development has been designed to avoid, reduce and mitigate for any adverse effects.

3.3 Local Planning Policy

Relevant local planning policies for Flintshire County Council are detailed in the following document: Flintshire Unitary Development Plan (FUDP) 2000 – 2015. Although the Plan expired in 2015, it is still current as the new Local Development Plan has not yet been adopted.

Table 3-1 provides a summary of relevant local planning policies. For the precise wording of each specific policy, please refer to the source document. This planning policy has been considered when assessing potential ecological constraints and opportunities identified by the desk study and field surveys; and, when assessing, design options and ecological mitigation.

Table 3-1: Summary of Relevant Policies in FUDP

Planning Policy	Purpose
WB1	Species Protection; Development which would have a significant adverse effect on important species or their habitats will not be permitted unless appropriate measures are taken to secure their long-term protection and viability.
WB2	Sites of International Importance Development will not be permitted unless: - a. it is demonstrated that it will not have a significant adverse effect on any Ramsar Site or Natura 2000 site (including SPAs, potential SPAs, SACs, candidate SACs); or b. it is demonstrated, following appropriate assessment, that it will not adversely affect the integrity of any Ramsar or Natura 2000 site.
WB3	Statutory Sites of National Importance Sites of Special Scientific Interest (SSSI) will be protected. There will be a presumption against development either within or near a site which would have a significant adverse effect on the nature conservation interest of the site.
WB4	Local Sites of Wildlife and Geological Importance Wildlife Sites and Regionally Important Geological Sites will be protected. Planning permission will not be granted for development that is likely to have a significant adverse effect on their nature conservation or geological value.
WB5	Undesignated Wildlife Habitats Development will be permitted only if it will not have a significant adverse effect on wildlife and habitats of local importance.

WB6	Enhancement of Nature Conservation Interests The incorporation within development proposals of measures which improve the nature conservation value of an area will be permitted by the Local Planning Authority.

The main objectives of the above policies are to protect and enhance biodiversity. This is done through minimising loss or damage through development to sites of international/national/county value for geology and/or nature conservation.

4. Baseline Conditions

Details of the methodologies and results of the desk study and field surveys are provided in Appendix A and a summary is provided below.

4.1 Methodologies

4.1.1 Desk Study

A desk study was carried out in June 2015 to identify nature conservation designations, and protected and notable habitats and species potentially relevant to the Proposed Development (Table 4-1).

The desk study sought to identify any international nature conservation designations and any other statutory nature conservation designations within 2 km (checked in March 2017) and local non-statutory nature conservation designations, and protected and notable habitats and species within 1 km.

Records of non-native controlled weed species were also collated; such species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Table 4-1: Desk Study Data Sources

Data Source	Data Obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website	• Statutory designations within 2 km • Ancient woodlands and notable habitats within 1 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
North Wales Environmental Information Service; COFNOD	• Non-statutory designations within 1 km • Protected and notable species records within 1 km (records for the last 10 years only)

4.1.2 Fieldwork

The initial field survey in June 2015 comprised an extended Phase 1 Habitat survey of a survey area that included the Proposed Development area (Figure 1) and an appraisal was made of the potential suitability of the habitats present to support protected and notable species (Appendix A). A similar survey undertaken in August 2015 was extended to include the whole of the cement works complex and surrounding land (Appendix A).

4.1.2.1 Phase 1 Habitat Survey

The surveys in June and August 2015 were undertaken by suitably experienced AECOM ecologists who recorded and mapped all habitat types present within the Proposed Development area and the wider landholding around the cement works, along with any associated relevant ecological receptors observed.

4.1.2.2 Appraisal of Habitats to Support Protected/Notable Species

An appraisal was made of the potential suitability of the habitats present to support protected and notable species of plants or animals. Field signs, habitat features with potential to support protected species and any sightings were recorded when encountered, but no detailed surveys were carried out at that time for any species.

4.1.2.3 Great Crested Newt Habitat Appraisal

In 2014, water samples were taken from several ponds present around the cement works and sent for analysis for presence of latent great crested newt DNA. This technique used at Padeswood to detect the presence/probable absence of great crested newts came about following research project funded by DEFRA. The research, which has now been published, can be found here: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18650&FromSearch=Y&Publisher=1&SearchText=wc1067&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description

The use of the technique at Padeswood was as a screening method to allow the presence or otherwise of great crested newts to be taken into consideration when planning future development.

Water sampling was undertaken at the site by two URS (now AECOM) ecologists both of who had extensive experience in sampling protocols for a range of analyses. The laboratory (ADAS) that supplied the kits and undertook the analysis was one of the two approved by Natural England to undertaken this work in 2014.

After the e-DNA analysis in 2014, all the known ponds within the landholding (Figure 2) were surveyed for the presence of great crested newts in spring 2016. Where great crested newts were recorded, an estimate of the population size was undertaken by extending the number of visits from four (presence/probable absence) to six (population estimate).

4.1.2.4 Bat Activity

The nearest boundary to the Proposed Development was subject to two bat activity surveys in July and August 2015. This is the boundary of the large open disturbed area with the woodland to the east.

On the evening of the 30th July and 17th August 2015, two AECOM ecologists, both licenced bat workers, walked a transect (Figures 3 & 4) around the area three times between sunset and two hours after sunset. They were equipped with a bat box duet and edirol recorder.

On each survey occasion, a remote recording bat detector (SM2) was placed out and left to record for five consecutive nights. The detector was placed out near to the small shed alongside the railway on each occasion (Figure 3).

4.1.2.5 Bat Emergence

A small building (railway cabin) by the side of the railway (Figure 3) in the south east part of the Proposed Development was assessed to have low potential for roosting bats. It was subject to an emergence survey on the evening of the 31st July 2015 and the evening of 17th August 2015. A licenced bat surveyor stood in front of the building to scan for emergence of any bats from 20 minutes before sunset until 1hr: 45 minutes after sunset. The surveyor was equipped with a bat box duet and edirol recorder.

4.1.2.6 Tree Climb and Inspect Survey

Two oak trees had been identified as having bat roost potential during the walkover survey in June 2015 (Figure 1). These two trees were climbed and the features inspected for signs of roosting bats on the 31st July 2015. The survey was undertaken by two licenced bat ecologists both of whom were also certificated tree climbers.

4.2 Desk Study and Field Survey Limitations

Information obtained during a desk study is dependent upon people and organisations having made and submitted records for the area of interest. Thus, lack of records does not necessarily mean that the habitats or species do not occur within the area of Proposed Development and *vice versa*.

4.3 Results and Ecological Value

4.3.1 Desk Study

4.3.1.1 Statutory Designations

Deeside and Buckley Newt Sites Special Area for Conservation (SAC) is located approximately 1.3 km to the north and is designated as it contains one of the largest populations of great crested newts in Great Britain. Buckley Claypits and Commons Site of Special Scientific Interest (SSSI) is a constituent part of the SAC and is also designated for great crested newts.

Table 4-2: Statutory Designated Sites

Site Name	Designation(s)	Reason for Designation	Relationship to Site
Deeside and Buckley Newt Sites	Special Area for Conservation (SAC)	Primary reason; one of the largest populations of great crested newt in GB	Approximately 1.3 km to the north
Buckley Claypits and Commons	Site of Special Scientific Interest (SSSI)	One of the largest populations of great crested newt in GB	Approximately 1.3 km to the north

4.3.1.2 Non-statutory Designations

There is one non-statutory designated site within 1 km of the Proposed Development. This is Black Brook Plantation, a plantation of poplars with a tall herb ground flora and marshy grassland at its southern end.

Table 4-3: Non-statutory Designated Sites

Site Name	Designation(s)	Reason for Designation	Relationship to Site
Black Brook Plantation	Local Wildlife Site	Plantation of balsam poplar with tall herb vegetation; small marshy grassland southern end	Approximately 850 m to the south

4.3.1.3 Protected/Notable species

COFNOD provided records of protected and notable species within 1km of the boundary of the Proposed Development. These are shown below in Table 4-4.

Table 4-4: Non-statutory Designated Sites

Species		Protection	Relationship to Proposed Development
Common Name	**Scientific Name**		
Otter	*Lutra lutra*	Habitat Regs; W&C Act Sch 5; Wales Priority; LBAP	500 m to the south east
Unidentified bat	*Chiroptera sp.*	Habitat Regs; W&C Act Sch 5	250 m to the south
Common Pipistrelle	*Pipistrellus pipistrellus*	Habitat Regs; W&C Act Sch 5; LBAP	950 m south east
Great crested newt	*Triturus cristatus*	Habitat Regs; W&C Act Sch 5; Wales Priority; LBAP	650 m to the south
Grey partridge	*Perdix perdix*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south
Lapwing	*Vanellus vanellus*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south
Woodlark	*Lullula arborea*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south

Habitat Regs: Conservation of Habitats and Species Regulations 2010. Species protected under Annex II of the EU Habitats Directive.

Wales Priority spp.: species listed as a priority species, from Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 - Habitats and Species of Principal Importance in Wales

W&C Act Sch 1, 5, 8: Wildlife & Countryside Act 1981 (as amended); species protected under Schedule 1 (birds), 5 (other animals), 8 (plants).

Local BAP species: Species in Local Biodiversity Action Plan

Additionally, further bird records were provided but these were only accurate to the nearest 1 km square.

4.3.2 Phase 1 Survey

The following habitats were recorded during the Extended Phase 1 Habitat Survey:

- Semi-natural broad-leaved woodland;
- Scattered broad-leaved trees;
- Dense/scattered scrub;
- Ephemeral/short perennial grassland;
- Running water;
- Buildings;
- Tall ruderal; and
- Bare ground/hard standing.

The habitats identified during the survey are presented on Figure 1 and described briefly below and in detail in Appendix A.

4.3.2.1 Semi-natural Broad-leaved Woodland

Several areas of this habitat type were recorded, including both sides of the brook to the east of the Proposed Development. The woodland was dominated by semi-mature stands of sycamore (*Acer pseudoplatanus*) and poplar (*Populus* sp.), with stands of ash (*Fraxinus excelsior*), oak (*Quercus* sp.), elm (*Ulmus* sp.), hawthorn (*Crataegus monogyna*) also recorded.

4.3.2.2 Scattered Broad-leaved Trees

Several trees of note were recorded from the survey, including two mature, gnarly oaks, TN3 and TN4. Both trees were noted to have potential to support roosting bats.

4.3.2.3 Dense/Scattered Scrub

Several linear patches of scrub were recorded along both the western fringes of the woodland and to the north of the industrial storage area. Several areas of scattered scrub were also recorded from vegetated spoil mounds that surround the industrial storage area. Species recorded include stands of hawthorn, silver birch (Betula pendula), buddleia (*Buddleja davidii*) and bramble (*Rubus fruticosus* agg.). A single stand of Japanese knotweed was also recorded from the western ridge of spoil that borders the industrial storage area to the east.

4.3.2.4 Ephemeral/short Perennial Grassland

This habitat type was recorded throughout forming a mosaic with areas of bare ground including the spoil mounds.

4.3.2.5 Running Water

Two watercourses were identified to the east of the Proposed Development; TN1 - a channel heavily shaded and containing scattered and connected pools of slow-flowing water with several stretches becoming dry. The second very similar watercourse was to the east of TN1. The two watercourses join before entering a culvert immediately north of the disused railway building. The channel then re-appears in the south before flowing first eastwards, then south-west.

4.3.2.6 Tall Ruderal

Scattered patches of tall ruderal vegetation were recorded on spoil mounds towards the north of the Proposed Development.

4.3.2.7 Buildings/ Hard Standing/ Bare Ground

Bare ground/buildings and hard standing provided the bulk of the habitat recorded within and immediately adjacent to the Proposed Development, and included expansive areas of bare and semi-vegetated spoil mounds, industrial buildings, a large area of stockpiled metal and several access tracks/roads.

4.3.2.8 Non-Native Invasive Species

A single stand of Japanese knotweed was also recorded from the western ridge of spoil that borders the industrial storage area to the east.

None of the habitats recorded within the Proposed Development have significant ecological value; they are largely secondary in nature having developed on previously disturbed land and are common in the wider area. Collectively the habitats that would be lost are assessed to have no more than **Local** value.

The broadleaved woodland to the east has a higher value but appears to have been disturbed previously and appears to be relatively young, having developed following closure of Padeswood Colliery, which used to occupy the area. The two oak trees are older and most likely were in hedgerows lost to development of the colliery. The woodland is assessed to be of **Local** value.

4.3.3 Fauna

4.3.3.1 Bats

The Phase 1 survey assessed two mature oaks as having medium-high bat roost potential. These two trees were climbed and the features inspected but no signs of use of bats were found

A single unidentified bat dropping was found on a sill of the old railway building; the window was broken, which would allow bats to enter the building. The building was subject to one emergence survey but no bats were recorded emerging from the building.

Two activity surveys were undertaken along a transect route that included the boundary of the Proposed Development (Figures 3 and 4). On the evening of the 30th July 2015, four common pipistrelle passes were recorded; the earliest being around 20 minutes after sunset, with a single *Myotis* sp at 1hr 10 minutes after sunset and a noctule bat around 1hr and 25 minutes after sunset. On the second visit on the 17th August, there were six passes of common pipistrelle; the earliest being 15 minutes after sunset and one soprano pipistrelle pass recorded 40 minutes after sunset.

Alongside the activity surveys, on each occasion a recording detector was placed out to record over five nights (for results see Appendix A). On the first occasion, 73 passes were recorded over the evening/morning of the 2nd/3rd August with half of these common pipistrelle (39) and the others soprano pipistrelle (19), noctule (11) and Myotis species (2). There were less passes on each of the other evenings. This is assessed to be low activity and passes were predominantly common pipistrelle.

On the second occasion, numbers of passes were again low each evening with a peak of 42 passes on the evening morning of the 17th/18th August. Again, the most frequent passes were common pipistrelle.

No roosts are present within or immediately adjacent to the Proposed Development and the activity surveys indicate that a small number of bats, predominantly common pipistrelle roosting in the wider area use the woodland edge for foraging and commuting. It is assessed that the woodland edge is of **Local** value for the bat population from the wider area. The Proposed Development is assessed to be of **Negligible** value.

4.3.3.2 Amphibians

During the Phase 1 survey in June 2015, two great crested newts were found under conveyor belting at the base of the bund along the woodland edge to the east of the Proposed Development. Two juvenile smooth newts were seen in the debris at the base of the spoil mounds and one juvenile toad was found in the south west near to the large hopper south of the railway line.

There are several ponds in the wider area around the works and surveys undertaken in 2014 and 2016 have shown them to hold populations of great crested newts.

The nearest ponds are situated approximately 50m to the north east in pasture on the other side of the woodland from the Proposed Development (Ponds P7, P8 and P9, Figure 2). The three ponds here all held great crested newt populations when surveyed in 2016 and all were assessed to hold a medium population (peak count either bottle trapping or torchlight survey between 11 – 100 adults).

A small number of great crested newts have been found within the Proposed Development. The Proposed Development for the most part is unsuitable for great crested newts but there are piles of materials, which provide

suitable refuges and small areas of scrub that provide cover. The nearest source pond (P8) is located approximately 50 m to the north east with another (P9) 20 m further east and one 75 m to the north (P7).

Pond P7 to the north is located within a large area of woodland and the Proposed Development would not be expected to provide significant terrestrial habitat for animals based in this pond. Similarly, ponds P8 and P9 to the north east have woodland habitat between them and the Proposed Development again would not be expected to provide significant terrestrial habitat.

It is assessed that the Proposed Development has **Local** value only, not for the maintenance of the populations based in the ponds to the north and north east but does provide areas that great crested newts could use for shelter and hibernation in the form of spoil mounds and temporary stockpiles.

4.3.3.3 Reptiles

Although no reptiles were observed during the Phase 1 survey, suitable habitat exists across the central, western and northern parts of the area surveyed including the Proposed Development.

No survey has been undertaken for reptiles and the desk study did not identify any records of reptiles within at least 1 km of the Proposed Development. If reptiles are present, the Proposed Development provides small and limited habitat and should a population be present in the area that includes the Proposed Development it is assessed to be of **Local** value.

4.3.3.4 Badger

Information on badgers is provided in Appendix B.

4.3.3.5 Birds

Several bird species were noted during the Phase 1 survey including buzzard, magpie, carrion crow, pied wagtail, robin and blackcap. A pair of peregrine falcons has also bred on Kiln 4.

The woodland/ scrub areas that are found along the boundary of the Proposed Development afford nesting opportunities for birds but within the Proposed Development it is limited to small areas of scrub, vegetated bunds and spoil mounds. Better quality habitat lies immediately to the east and it is assessed that the Proposed Development is of **Site** value for nesting birds.

Table 4-5: Assignment of Ecological Value

Ecological Receptor	Description	Assessed Value
Deeside and Buckley Newt Sites SAC	Primary reason; one of the largest populations of great crested newt in GB	European
Buckley Claypits and Commons SSSI	One of the largest populations of great crested newt in GB	National
Blackbrook Plantation LWS	Plantation of balsam poplar with tall herb vegetation; small marshy grassland southern end	County
Broadleaved woodland	Swathe of woodland along the two watercourses to the east of the Proposed Development. There are one or two older trees that may remain from when hedgerows where present but most appears to be of relatively recent origin	Local
Other habitats	Patches of scrub and ephemeral/short perennial vegetation developing over waste ground	Local

Table 4-5: Assignment of Ecological Value

Ecological Receptor	Description	Assessed Value
Bats Roosting and Foraging	No roosts and surveys have shown low level of foraging and commuting activity along woodland edge	Local
Great crested newts	Populations present around several the ponds around the Cement Works Complex, including 3 ponds with medium populations to the north and north east; terrestrial habitat limited within Proposed Development but shelter provided by spoil mounds and temporary stockpiles of materials	Local
Badger	See Confidential Appendix B	Local
Reptiles	Limited habitat save for around the margins with the woodland	Local
Nesting birds	Suitable habitat limited in extent and type within the Proposed Development	Site

5. Assessment of Potential Impact from the Proposed Development

5.1 Proposed Scheme

5.1.1 Development Description

The Planning Statement provides the detail of the Proposed Development but in brief the following will be involved:

Demolition of redundant plant & buildings - To allow the installation of the new vertical roller mill and rail loading silos some existing plant must be removed. The main items to be removed are four existing steel silos (Silos 7, 8, 9 and 10) and Silos 11 and 12. In addition, a small railway cabin situated adjacent to the existing railway track will be demolished to allow the railway line to be realigned.

Ground Preparation and Civils Works - The area within which the Proposed Development will be undertaken is an area of previously developed land, largely bare ground with piles of rubble and stored materials with patchy ground vegetation and small areas of scrub. The area is at various levels and ground preparation will be required to clear and level the footprint of the proposed Mill 5. A temporary site compound would use land to the east of the proposed Mill 5 location and a laydown area for materials within the northern part.

Vertical Roller Mill - The new vertical roller mill to be erected has the capacity to produce 95 tonnes of cement per hour or 665,000 tonnes per annum.

Once Mill 5 is operational, Mills 1, 2 and 4 will be mothballed, but Mill 3, being the most modern and efficient of the four, is to remain operational.

Rail Loading Facility - The existing operational rail connection and sidings are currently used for importing coal. However, the existing cement rail loading facility is obsolete and it is proposed to demolish the existing and erect a new rail loading facility. It will also be necessary to realign sections of the existing railway line and to extend the railway track further into the works. The rail loading facility will provide the following benefits:

- employ Best Available Techniques to prevent/minimise the potential for dust emissions
- be energy efficient
- provide safe access for operators
- provide the ability to load road tankers utilising the rail loading spouts and weighbridge.

Modification and Extension of Existing Railway Line - The Liverpool to Wrexham railway line runs adjacent to the Cement Works and includes a set of signals and rail points. The rail line is currently used for importing coal and will continue, thus once complete, the Cement Works will be able to both receive deliveries of coal and export cement.

The works required to the railway line will involve approximately 600 m of new rail track, which will directly renew, realign or extend the existing railway line and will include a curve through the proposed location for the new rail loading facility and proceed towards the main site road. The planning application area includes the circa 445m of railway line that will be new or realigned to service the proposed rail loading facility.

5.2 Embedded Mitigation

The potential for many effects during the construction and operational phases are mitigated during the design stage and others through adoption of best working practices. These are embedded into the Proposed Development and therefore form part of the Scheme and as such are effects when assessing impacts upon identified sensitive receptors.

Embedded measures include standard industry best practice for dust suppression, lighting, noise, surface water management all of which significantly reduce the potential for significant adverse impacts on sensitive receptors.

5.2.1 Noise

Ground preparation works would utilise standard machinery such as 360 excavators, medium size dump trucks, compressors and bulldozers. During construction, various types of mobile plant and machinery would be used. All equipment would be well maintained with any suppression equipment fitted in full working order. At the eastern boundary, noise levels are predicted to be between 57 - 58 dBA, which would reduce rapidly into the woodland (Refer Noise assessment).

The Mill and associated structures will be maintained to a high standard and will be fully enclosed further reducing external noise levels. This means at the eastern boundary with the woodland, levels are predicted to be between 47 – 51 dBA (Refer Noise assessment).

5.2.2 Air Quality/Dust

Standard dust suppression measures (water bowser) would be undertaken during ground works and construction. Once operational the Mill and associated conveyors are to be enclosed and it is expected that there would be minimal potential for dust escaping the building. This would also be true of the rail loading facility (Refer Air Quality and Dust assessment).

There is a current permit issued by Natural Resources Wales; Permit No. EPR/BL10961B dated 19th July 2016. The levels in the existing permission will not be increased.

5.2.3 Surface and Ground Water

The area is at low risk from flooding and there is no surface water entering the Proposed Development. As such, the potential for surface water pollution is minimal.

5.2.4 Lighting

A formal lighting plan has been produced but subject to requirements for essential health and safety; lighting would be kept to a minimum. External lighting that is required would be fitted with cowls, directed downwards and be directed into the site to minimise any spill into the adjacent woodland.

5.3 Potential Impacts from the Proposed Development

5.3.1 Construction

5.3.1.1 Statutory and Non-Statutory Sites

Construction of the new VRM (Mill 5) and associated facilities would have no effect on either statutory or non-statutory designated sites identified from the desk study. There are no identified pathways by which they could be affected by the proposals.

5.3.1.2 Habitats

The Proposed Development boundary encloses approximately 3.1 ha of land of which 0.3 ha would be lost to the new VRM and associated facilities. The rest of the area would be affected temporarily as it is to be used for the construction site compound and lay down areas, although the whole area would be required to be cleared and levelled. This would result in the loss of small areas of scrub and ephemeral/short perennial vegetation with most of the area being bare ground, spoil piles, old foundations and current built development. It is considered that the loss of these small areas to the Proposed Development is a **Negligible** effect on nature conservation, given the Local value of the habitats to be lost.

5.3.1.3 Bats

None of the habitats within the footprint of the Proposed Development are important for foraging and commuting bats. Bats were however recorded foraging along the woodland edge. This boundary would not be disturbed during construction, although the construction compound would be adjacent. However, most of the activity at the compound would be during the day and at night, save for late autumn, winter and early spring would require

minimal lighting for health and safety purposes; during these periods bats are not generally active and so no significant effect on the bat activity is expected from the construction phase. The new Mill and associated facilities are distant from the woodland and no significant effect is anticipated.

The Phase 1 survey identified two mature oaks with bat roost potential. Neither of the two trees would be affected by the Proposed Development and when inspected, no signs of use by bats were found.

The old railway cabin would be demolished but this was subject to one emergence survey and no bats were recorded emerging from the building. It has limited potential for roosting bats, having no roof structure.

5.3.1.4 Amphibians

The Proposed Development for the most part is unsuitable for great crested newts but there are piles of materials, which provide suitable refuges and small areas of scrub cover for great crested newts. A small number of great crested newts were found under materials during the Phase 1 survey in June 2015. The nearest source pond is located approximately 50 m to the north east with another 20 m further east and one 75 m to the north. The three ponds here all held great crested newt populations when surveyed in 2016 and all were assessed to hold a medium population (peak count either bottle trapping or torchlight survey between 11 – 100 adults).

Construction would result in the ground works removing debris and levelling the area within the Proposed Development boundary. This means areas suitable for shelter and hibernation would be lost. However, between the Proposed Development and the ponds is a swathe of woodland with high suitability for foraging and hibernating great crested newts and it is assessed that the loss of these areas of rubble and stored materials would not be significant for maintenance of the populations present in these ponds, rather it is the risk that during clearance and subsequently during construction, individual/small numbers of great crested newts could wander into the site and be disturbed or come to harm. Based on the level of protection that great crested newts receive under the Habitats & Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended), without measures being taken to avoid this, there is the potential for an offence.

5.3.1.5 Reptiles

If reptiles are present, the Proposed Development provides small and limited suitable habitat and significant populations would not be expected to occur. However, all common reptile species receive protection from deliberate harm under the Wildlife and Countryside Act 1981 (as amended) and as such, if any where present when the area is cleared, without measures to avoid this, there is the potential for an offence.

5.3.1.6 Badger

Information on badgers is provided in Appendix B.

5.3.1.7 Birds

There are limited opportunities within the Proposed Development for nesting birds and the loss of this limited area of habitat would not be significant for the local bird assemblage. However, all birds receive protection from harm whilst nesting or attempting to nest under the Wildlife and Countryside Act 1981 (as amended) and so without measures to avoid nesting birds there is the potential for an offence.

Noise generated from construction is predicted to be between 57 - 58 dBA at the site boundary. This will rapidly reduce into the woodland but there could be a narrow strip where the noise level is higher than the 55 dBA below which it is considered by Natural England that there is unlikely to be an effect on nesting birds. This is not considered to be significant and will be a Minor temporary effect.

5.3.2 Operational

5.3.2.1 Statutory and Non-Statutory Sites

Operation of the new VRM and associated facilities would have no effect on either statutory or non-statutory designated sites identified from the desk study. There are no identified pathways by which they could be affected by the proposals.

5.3.2.2 Habitats

Once operational, no effects are expected on the habitats adjacent to the Proposed Development. Any effects from dust are expected to be very limited, given that it is modern equipment, in some cases replacing existing older plant, and for the most part enclosed with limited potential for the external generation of dust.

5.3.2.3 Bats

Once operational no effects are expected on bats that forage along the woodland edge. The Mill and associated facilities are at their nearest around 40 m from the woodland edge, although a concrete apron around the building would be closer. There would be no increase in lighting and lighting would be minimised and directed to the west away from the woodland edge. There would be no effect from the railway, which already runs along the woodland edge.

5.3.2.4 Amphibians

Once operational, it is not expected that there would be a significant effect on the populations based in the ponds to the north and north east. There is however the possibility that small numbers of great crested newts could wander into the area occupied by the new VRM. This is the case now and small numbers of great crested newts have been found elsewhere within the Padeswood Cement Works complex (e.g. underground cable tunnels; these animals originating from other ponds located to the south east and south west of the facility). The risk at the new VRM would be no different than the current risks identified. This has been recognised and there are measures that are to be instigated through licencing that will allow any animals that are discovered to be moved into suitable terrestrial habitat in the area outside the footprint of the factory close to their source ponds.

5.3.2.5 Reptiles

Once operational, no effects on reptiles are anticipated.

5.3.2.6 Badger

Information on badgers is provided in Appendix B.

5.3.2.7 Birds

No effects are expected on nesting birds from the operation of the plant. Noise generated during operation is predicted to be between 47 - 51 dBA at the site boundary. This will rapidly reduce into the woodland and the noise level at the boundary is lower than the 55 dBA below which it is considered by Natural England that there is unlikely to be an effect on nesting birds.

The table below summarises the potential effects on the identified sensitive receptors from construction and/or operation of the proposed Mill and associated facilities.

Table 5-1: Summary of Potential Effects on Ecological Receptors Before Mitigation

Receptor	Nature of Impact	Significance of Impact
Statutory Sites	None expected	Negligible
Non-statutory Sites	None expected	Negligible
Bats; Roosting	None expected	Negligible
Bats; Foraging	None expected	Negligible
Great Crested Newts	Temporary disturbance to largely unsuitable habitat within 250m	Negligible effect on populations; potential for harm/disturbance to small number of great crested newts
Reptiles	None expected	Negligible; potential for an offence should reptile be present within the Proposed Development boundary
Badgers	None expected	Negligible
Nesting Birds	Construction – potential for reduced nesting along woodland edge from noise None expected provided vegetation is cleared between September – end February	Minor temporary effect Negligible; potential for an offence should vegetation require to be cleared during nesting season
Other habitats	Small areas of habitat lost to construction of the Proposed Development	Negligible

6. Mitigation Proposals

Based on the assessment in the previous section it has been concluded that there would be no significant (i.e. Moderate or Major) adverse effects on the identified ecological receptors from construction or operation of the Proposed Development. The Proposed Development is wholly located within the existing footprint of the Padeswood Cement Works and is previously developed land. However, to avoid the potential for an offence under the Habitats and Species Regulations 2010 (as amended) or the Wildlife and Countryside Act 1981 (as amended) measures are required with respect to great crested newts, reptiles and nesting birds.

6.1 Great Crested Newts

There are populations of great crested newts associated with several ponds located within the landholding beyond the footprint of the Cement Works. Survey work undertaken in 2016 has shown that populations exist in the north and north east; the south east and the south west. The three ponds to the north (P7) and north east (P8 & P9) are the ones nearest to the Proposed Development and in June 2015 a small number of animals from these ponds were found beneath stored/waste materials in the i north part of the Proposed Development boundary. Small numbers of animals have also been found in other parts of the Cement Works, mainly underground cable tunnels.

The Proposed Development is a previously built area with old foundations and comprises largely bare and sparsely vegetated ground. The northern two thirds of the area are used to store and stockpile materials that are regularly moved and there are also piles of rubble and other debris scattered across the area. The decision was taken to pursue a licence to enable the area to be cleared of great crested newts and a fence erected along the boundary with the woodland so that stockpiling and clearance can continue without the threat of disturbing and harming great crested newts. The application also included provision to be able to rescue any great crested newts and other amphibians that find their way into other parts of the factory such as the cable tunnels. Clearance of the area in the north east will also ensure that should the Proposed Development get planning; it will not pose any risk of harm or disturbance to great crested newts.

As part of the licence application, a management plan was produced for all the landholding around the factory. This includes but not exclusively so, measures to enhance the aquatic and terrestrial habitat for great crested newts to demonstrate that the actions to be taken will not be detrimental to their conservation status and in fact will provide benefit and security for the populations in the longer term.

The licence was issued on the 26th April 2017 and work to clear the whole area is being undertaken.

6.2 Reptiles

Reptiles have not been noted within the Proposed Development and there is limited suitable habitat for them to be present. The proposed clearance of great crested newts from the area would also provide for any reptiles that may be present. They would be moved into suitable habitat in the wider landholding around the factory; a biodiversity park is being developed to the south west of the Cement Works complex.

6.3 Nesting Birds

To avoid the potential for harming nesting birds, as far as practicable vegetation and ground clearance would be undertaken September – end February i.e. outside of nesting bird season. However, where this is not feasible, prior to removing vegetation, a check would be made by an experienced ecologist and should a nest(s) be found, it would be cordoned off and left until the young have fledged.

Provided the measures outlined above are undertaken, it is concluded that the Proposed Development would have no significant effect on any of the identified ecological features either during construction or once operational.

7. Summary

A new cement mill is proposed to be erected and operated within the existing footprint of Padeswood Cement Works, near Buckley, Flintshire. The proposed development also includes demobilisation and demolition of old equipment and installation of modern equipment to allow cement to be taken out of the site by railway. This would result in lower emissions, significantly less dust generation and a reduction in road traffic.

The area proposed for the new mill and associated facilities is in the north east part of the site and has been previously developed but latterly mainly used for storage of materials.

A walkover undertaken in June 2015 found the Proposed Development area to be largely bare and sparsely vegetated ground but with small areas of developing scrub. The Proposed Development, is bounded to the north and east by broad leaved woodland beyond which are pastures with several ponds. The ponds have been shown to contain populations of great crested newts along with other ponds to the south east and south west and a small number of great crested newts were found under matting in the area during the survey in June 2015. Two oak trees and a small railway cabin were assessed and surveyed for roosting bats in 2015 but no signs of use were found. Activity surveys undertaken found the boundary with the woodland to be used by small numbers of foraging and commuting bats; largely common pipistrelle. The developing scrub and adjacent woodland is suitable for nesting birds.

The area within which the Proposed Development is located is used for storage of materials and because of finding the two great crested newts, a licence has been applied for and issued to allow the area to continue to be used for storage. Under the licence, a fence has been erected along the boundary of the area with the woodland and a period of trapping and searching is being undertaken to ensure great crested newts are no longer present in the area. The area has been assessed as not to be critical to the populations based in the ponds to the north and north east but without removal of the animals and erection of the fence it is possible that small numbers of great crested newt could be disturbed or come to harm through movement of materials. As part of the licence application, a management plan has been produced that provides for the long-term benefit of the populations of great crested newts throughout the wider area around the Cement Works complex and not just in the north and north east.

It has been assessed that the Proposed Development would have no significant effect on foraging/commuting bats. There would be no direct effect; the woodland edge remaining intact and indirect effects from lighting would be kept to a minimum through use of directional lighting and using the minimum essential for health and safety. The species recorded; all in low numbers and particularly pipistrelles are tolerant of light and can forage around lighting, as it attracts moths and other insects.

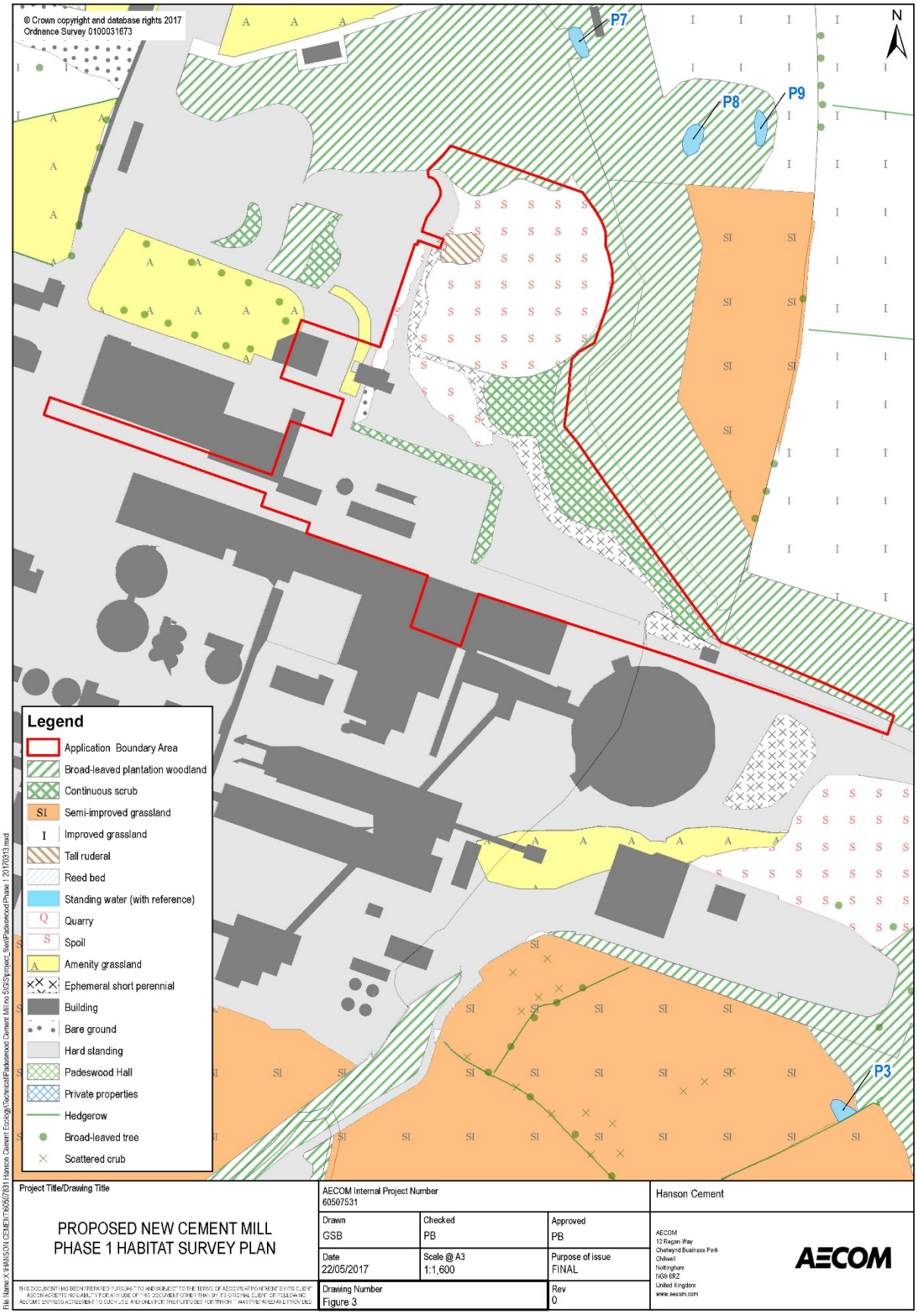
Standard measures would be taken to avoid nesting birds; small areas of scrub would be lost to the Proposed Development but most of the area is bare, with hardstanding and rubble.

The habitats to be lost are common and typical and the area to be lost small and no significant impact would result from the Proposed Development.

A management plan has been produced for the land around the Cement Works complex, which is primarily aimed at enhancement of both aquatic and terrestrial habitat for great crested newts but other species would also benefit. In the south west of the Cement Works complex, a biodiversity park is being created.

It is concluded that that provided the measures put forward for great crested newts and nesting birds are undertaken, the Proposed Development would have no significant effect on biodiversity and that the commitment to the management plan for the areas around the Cement Works complex and the biodiversity park in the south west, afford an opportunity for the long -term benefit of the populations of great crested newts but also wider biodiversity.

FIGURES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P7
P8
P9
P3
Legend
Application Boundary Area
Broad-leaved plantation woodland
Continuous scrub
SI Semi-improved grassland
I Improved grassland
Tall ruderal
Reed bed
Standing water (with reference)
Q Quarry
S Spoil
A Amenity grassland
Ephemeral short perennial
Building
Bare ground
Hard standing
Padeswood Hall
Private properties
Hedgerow
Broad-leaved tree
Scattered crub
Project Title/Drawing Title
PROPOSED NEW CEMENT MILL
PHASE 1 HABITAT SURVEY PLAN
AECOM Internal Project Number
60507531
Hanson Cement
Drawn GSB
Checked PB
Approved PB
Date 22/05/2017
Scale @ A3 1:1,600
Purpose of issue FINAL
Drawing Number Figure 3
Rev 0
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12 Regan Way
Chetwynd Business Park
Chilwell
Nottingham
NG9 6RZ
United Kingdom
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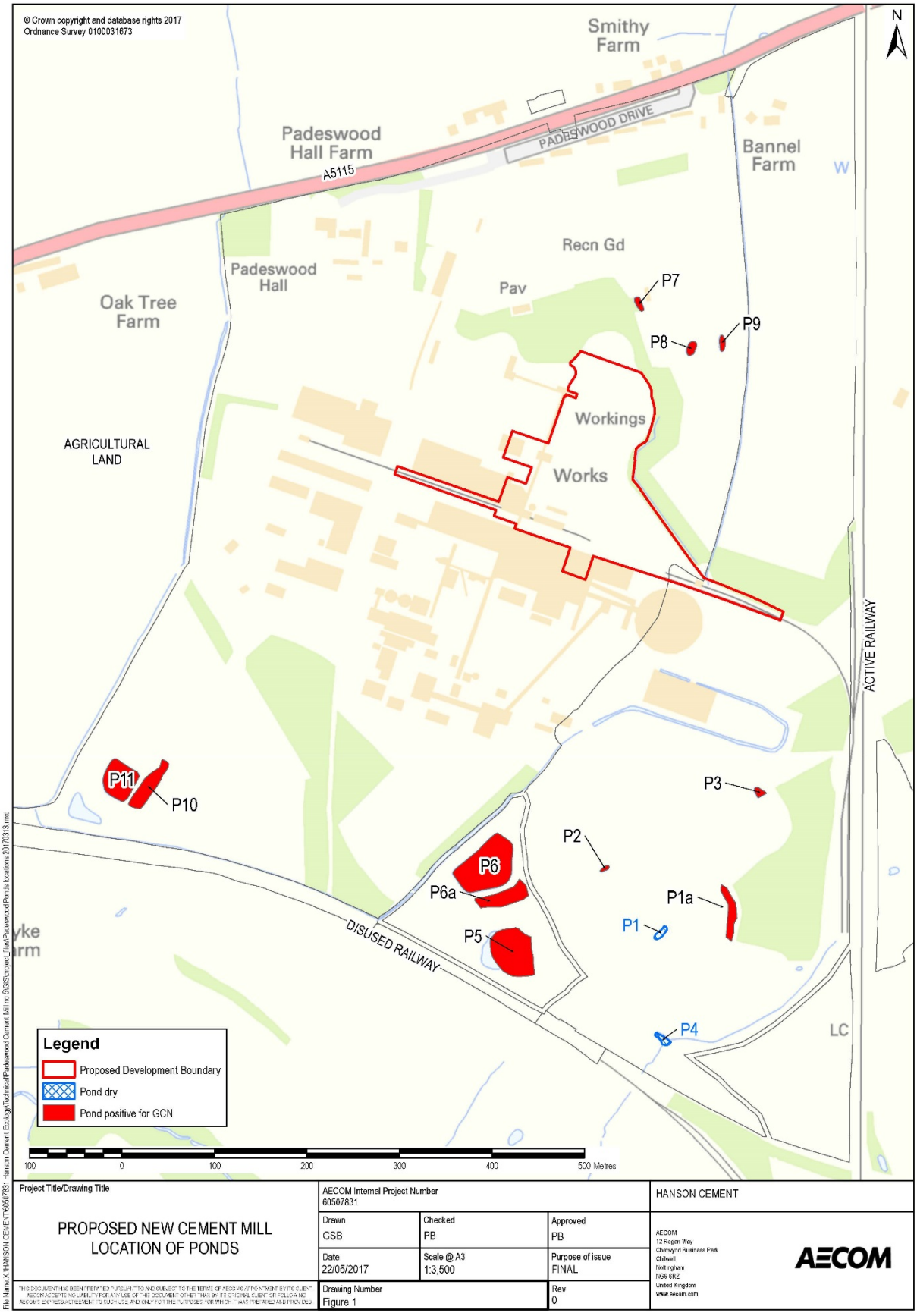
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Ordnance Survey 0100031673
N
Smithy Farm
Padeswood Hall Farm
A5115
PADESWOOD DRIVE
Bannel Farm
Recn Gd
Padeswood Hall
Pav
Oak Tree Farm
P7
P8
P9
Workings
Works
AGRICULTURAL LAND
ACTIVE RAILWAY
P11
P10
P3
P2
P6
P6a
P1a
P1
P5
DISUSED RAILWAY
P4
LC
Legend
Proposed Development Boundary
Pond dry
Pond positive for GCN
100 0 100 200 300 400 500 Metres
Project Title/Drawing Title
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LOCATION OF PONDS
AECOM Internal Project Number
60507831
HANSON CEMENT
Drawn
GSB
Checked
PB
Approved
PB
Date
22/05/2017
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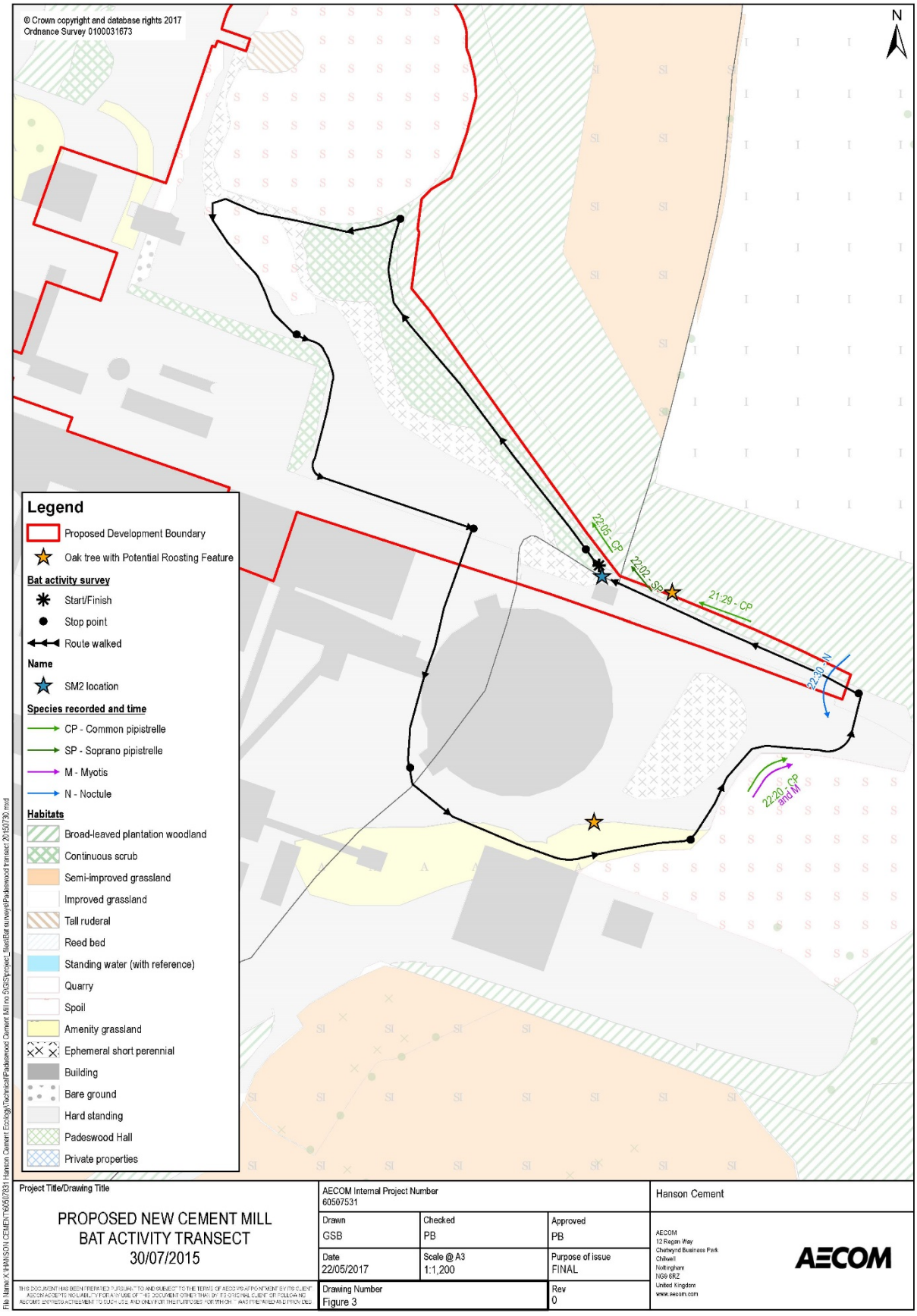
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Ordnance Survey 0100031673
N
Legend
Proposed Development Boundary
Oak tree with Potential Roosting Feature
Bat activity survey
Start/Finish
Stop point
Route walked
Name
SM2 location
Species recorded and time
CP - Common pipistrelle
SP - Soprano pipistrelle
M - Myotis
N - Noctule
Habitats
Broad-leaved plantation woodland
Continuous scrub
Semi-improved grassland
Improved grassland
Tall ruderal
Reed bed
Standing water (with reference)
Quarry
Spoil
Amenity grassland
Ephemeral short perennial
Building
Bare ground
Hard standing
Padeswood Hall
Private properties
22:05 - CP
22:02 - SP
21:29 - CP
22:30 - N
22:20 - CP and M
Project Title/Drawing Title
PROPOSED NEW CEMENT MILL
BAT ACTIVITY TRANSECT
30/07/2015
AECOM Internal Project Number
60507531
Hanson Cement
Drawn
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Chilwell
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NG9 6RZ
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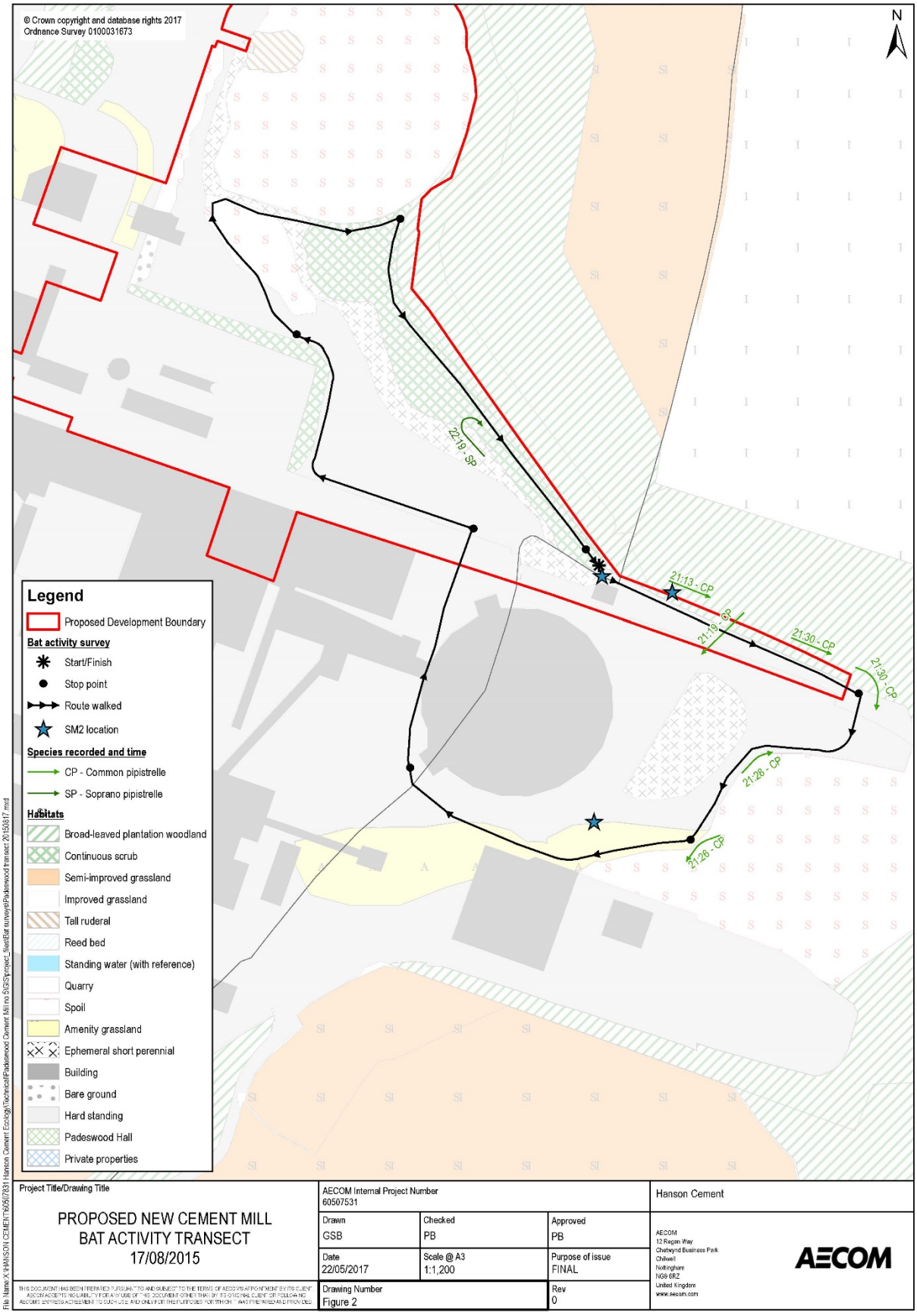
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N
22:19 - SP
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21:30 - CP
21:30 - CP
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21:26 - CP
Legend
Proposed Development Boundary
Bat activity survey
Start/Finish
Stop point
Route walked
SM2 location
Species recorded and time
CP - Common pipistrelle
SP - Soprano pipistrelle
Habitats
Broad-leaved plantation woodland
Continuous scrub
Semi-improved grassland
Improved grassland
Tall ruderal
Reed bed
Standing water (with reference)
Quarry
Spoil
Amenity grassland
Ephemeral short perennial
Building
Bare ground
Hard standing
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Private properties
Project Title/Drawing Title
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BAT ACTIVITY TRANSECT
17/08/2015
AECOM Internal Project Number
60507531
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Appendix A – Baseline Information

1. Survey and Desk Study June 2015

1.1 Desk Study Methods

A desk study was carried out to identify statutory and non-statutory designated sites potentially relevant to the proposed development within 2 km and 1 km of the proposed boundary respectively and records of protected and notable species within 1 km. The search distances used were greater than the area potentially affected.

The desk-based study data obtained is presented in Appendix 1. This data, along with the results of the Phase 1 Habitat survey, have been used to establish the baseline ecological context of the proposed development area and its relationship to the surrounding environment. Table 1 is a summary of the data types collected from each source, which also shows the search distances used for each topic.

The Multi Agency Geographic Information for the Countryside (MAGIC) is an interactive resource which allows the identification of statutory designated sites for nature conservation within the search area.

Records of protected and notable species and locally and nationally designated sites were also requested from North Wales Environmental Information service (COFNOD) for a 1 km search area from the boundary of the proposed development (the centre of which is approximately OSGRSJ 2925 6230), as shown on the plan in Appendix 1.

Attention was given to protected and notable habitats and species included under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended); Schedules 2 and 4 of The Conservation of Habitat & Species Regulations 2010 (as amended); and Species and Habitats of Principal Importance in Wales, listed under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006.

The habitat connections between the proposed development and other areas were assessed from air photography. In addition to physical connections such as linear woodland, hedges and watercourses, an appraisal was made of the potential of habitat within the proposed development to support local populations of protected and notable species occurring in the surrounding area.

Table 1: Desk Study Data Sources

Data Type	Data Source	Date Obtained/Comments
Statutory designated sites within 2 km of the proposed Site boundary	MAGIC	Accessed 2nd July 2015
Non-statutory designated sites within 1 km of the proposed Site boundary	North Wales Environmental Information service (COFNOD)	Information provided 7th July 2015
Ancient Woodland within 1 km of the proposed Site boundary	MAGIC	Accessed 2nd July 2015
Habitat connections and green corridors within 1 km of the proposed Site boundary	On-line aerial photography	Accessed 2nd July 2015
Local Biodiversity Action Plan Species and Habitats	Flintshire Biodiversity Action Plan	Accessed 2nd July 2015
Protected and notable Species Data within 1 km of the proposed Site boundary	COFNOD	Information provided 7th July 2015

1.2 Desk Study Results

The statutory and non-statutory designated sites within 2 km and 1 km respectively are summarised in Tables 2 & 3 below. Desk study records of protected and notable species are provided in Table 4.

1.2.1 Statutory Designated Sites

Information from the MAGIC website identified that there are two statutory designated sites within 2 km.

Deeside and Buckley Newt Sites Special Area for Conservation (SAC) is located approximately 1.3 km to the north and is designated as it contains one of the largest populations of great crested newts in Great Britain. Buckley Claypits and Commons Site of Special Scientific Interest (SSSI) is a constituent part of the SAC and is also designated for great crested newts.

Table 2: Statutory Designated Sites

Site Name	Designation(s)	Reason for Designation	Relationship to Site
Deeside and Buckley Newt Sites	Special Area for Conservation (SAC)	Primary reason; one of the largest populations of great crested newt in GB	Approximately 1.3 km to the north
Buckley Claypits and Commons	Site of Special Scientific Interest (SSSI)		Approximately 1.3 km to the north

1.2.2 Non-Statutory Designated Sites

There is one non-statutory designated site within 1 km of the survey area. This is Black Brook Plantation, a plantation of poplars with a tall herb ground flora and marshy grassland at its southern end.

Table 3: Non-statutory Designated Sites

Site Name	Designation(s)	Reason for Designation	Relationship to Site
Black Brook Plantation	Local Wildlife Site	Plantation of balsam poplar with tall herb vegetation; small marshy grassland southern end	Approximately 850 m to the south

1.2.3 Protected and Notable Species

COFNOD provided records of several protected and notable species within 1 km of the boundary of the proposed development. These are shown below in Table 4.

Table 4: Protected and Notable Species Records

Species		Protection	Relationship to Survey Area
Common Name	**Scientific Name**		
Otter	*Lutra lutra*	Habitat Regs; W&C Act Sch 5; Wales Priority; LBAP	500 m to the south east
Unidentified bat	*Chiroptera sp.*	Habitat Regs; W&C Act Sch 5	250 m to the south
Common Pipistrelle	*Pipistrellus pipistrellus*	Habitat Regs; W&C Act Sch 5; LBAP	950 m south east
Great crested newt	*Triturus cristatus*	Habitat Regs; W&C Act Sch 5; Wales Priority; LBAP	650 m to the south
Grey partridge	*Perdix perdix*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south
Lapwing	*Vanellus vanellus*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south

Table 4: Protected and Notable Species Records

Species		Protection	Relationship to Survey Area
Common Name	**Scientific Name**		
Woodlark	*Lullula arborea*	W&C Act Sch 5; Wales Priority; LBAP	250 m to the south

Habitat Regs: Conservation of Habitats and Species Regulations 2010. Species protected under Annex II of the EU Habitats Directive.

Wales Priority spp.: species listed as a priority species, from Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 - Habitats and Species of Principal Importance in Wales

W&C Act Sch 1, 5, 8: Wildlife & Countryside Act 1981 (as amended); species protected under Schedule 1 (birds), 5 (other animals), 8 (plants).

Local BAP species: Species in Local Biodiversity Action Plan

There were also a lot of bird records provided but these were only accurate to the nearest 1 km square.

1.3 Field Survey Methods

1.3.1 Habitats

The habitat survey methodology followed the Phase 1 Habitat Assessment (Joint Nature Conservation Committee, 2010). This involved a survey, undertaken on 23rd June by a suitably experienced AECOM ecologist, recording and mapping habitat types and other ecological features.

Where ecological features of note were present target notes were marked on the map and noted in the text. Plant species were identified for different habitat types; however, these are indicative of habitat, rather than detailed inventories of the species present on site.

An appraisal was made of the potential suitability of the habitats to support protected or notable species of plants or animals. Field signs, features with potential to support protected species and evidence of their presence were recorded when encountered, but no detailed surveys were carried out for species.

1.3.2 Invasive Non-Native Plant Species

A note was made of visible instances of invasive non-native plant species on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Japanese knotweed (*Fallopia japonica*). Areas of invasive non-native species found were mapped and target noted.

1.3.3 Limitations

If the proposed development boundary or other details of the proposed development are amended in future, this study should be reviewed and revised as appropriate.

The desk study and habitat survey should be revised after 3 years if the development has not commenced by then.

1.4 Field Survey Results

1.4.1 Habitat Survey and Appraisal

The following habitats were recorded during the Extended Phase 1 Habitat Survey:

- Semi-natural broad-leaved woodland;
- Scattered broad-leaved trees;
- Dense/scattered scrub;
- Ephemeral Short Perennial grassland
- Running water;
- Buildings;
- Tall ruderal;
- Bare ground/hard standing;

The habitats identified during the survey are presented on Figure 1 and are described below.

1.4.1.1 Semi-natural Broad-leaved Woodland

Several areas of this habitat type were recorded from the survey area, including both sides of the brook TN1 that forms the eastern boundary of the survey area. There was no flow on the day of the survey and the brook was more a series of pools. The woodland belt was dominated by semi-mature stands of sycamore (*Acer pseudoplatanus*) and poplar (*Populus* sp.), with stands of ash (*Fraxinus excelsior*), oak (*Quercus* sp.), elm (*Ulmus* sp.), hawthorn (*Crataegus monogyna*) also recorded. Several ivy-covered trees were also recorded to the east of the brook in the denser areas of woodland.

1.4.1.2 Scattered Broad-leaved Trees

Several trees of note were recorded from the survey, including two mature, gnarly oaks, TN3 and TN4. TN3 was located, approximately 10m to the south of the large round tower (TN5) to the south east of the survey area. TN4 constituted an ivy-covered oak tree, located to the south of the tree belt that forms the eastern boundary of the survey area. The tree also lies adjacent to the former railway siding. Both trees have the potential to support roosting bats.

1.4.1.3 Dense/Scattered Scrub

Several linear patches of this habitat type were recorded along the both the western fringes of the woodland tree belt TN1 and to the north of industrial storage area TN6. Several areas of scattered scrub were also recorded from vegetated spoil mounds that surround the industrial storage area. Species recorded include stands of hawthorn, silver birch (*Betula pendula*), buddleia (*Buddleja davidii*) and bramble (*Rubus fruticosus agg*.), with the occasional immature stand of ash. A single stand of Japanese knotweed at TN7 was also recorded from the western ridge of spoil that borders the industrial storage area TN6 to the east.

1.4.1.4 Ephemeral/Short Perennial Grassland

This habitat type was recorded throughout the survey area, and formed a mosaic with areas of bare ground including the spoil mound areas that border TN6. Two adjacent areas of this habitat type were also recorded to the south of the round tower building TN5, to the south-west of the survey area. Species recorded included; ribwort plantain (*Plantago lanceolata*), curled dock (*Rumex crispus*), bird's-foot trefoil (*Lotus corniculatus*), common vetch (*Vicia sativa*), colts foot (*Tussilago farfara*), ragwort (*Senecio jacobaea*), spear thistle (*Cirsium vulgare*), dandelion (*Taraxacum officinale* agg.), red clover (*Trifolium pratense*) and immature bramble. Grasses recorded included; Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaris*) and cock's-foot (*Dactylis glomerata*).

1.4.1.5 Running Water

Two watercourses were identified to the east of the survey area; TN1 – the previously mentioned channel was found to be heavily shaded and contained scattered and connected pools of slow-flowing water with several stretches becoming dry. The second watercourse to the east of TN1 appeared to be similar in nature to TN1. The two watercourses flow in a southerly direction before entering a culvert immediately south of their confluence, to the north of the disused railway building (TN8). The channel then re-appears to the south of TN5 before flowing first eastwards, then south-west towards the settling lagoon to the south of the survey area.

1.4.1.6 Tall Ruderal

Scattered patches of tall ruderal vegetation were recorded on spoil mounds in the north of the survey area, with stands of common nettle (Urtica dioica), hairy willowherb (Epilobium hirsutum), creeping thistle (Cirsium arvense), common teasel (Dipsacus fullonum) and cow parsley (Anthriscus sylvestris) frequent.

1.4.1.7 Buildings/ Hard Standing/ Bare Ground

Bare ground/buildings and hard standing provided the bulk of the habitat recorded within the survey area, and included expansive areas of bare and semi-vegetated quarry spoil mounds, industrial buildings and several access tracks/roads.

The central and western areas were found to be littered with extensive spoil mound areas, including the areas surrounding TN6 and both sides of the western access track. Several areas were recorded as having patches of either scrub or secondary/ephemeral grassland communities.

1.4.2 Fauna

1.4.2.1 Bats

Two mature (gnarly) oaks were assessed to have medium-high bat roost potential. TN3, an ivy-covered tree was recorded along the grassed bund approximately 10m to the south of TN5; the tree was found to contain numerous small holes and cracks. The second tree TN4 was located at the southern end of TN1, adjacent to the culvert/railway siding.

A single unidentified bat dropping was found on a sill of the old railway building (TN8). The window was broken which would allow bats to enter the building.

Several low bat roost potential trees were observed from visual inspections on the western side of the woodland (TN1).

1.4.2.2 Amphibians

Four great crested newts (GCN) were recorded at or near to TN9. Two animals were found under conveyor belting at the base of the bund along the eastern boundary stream TN1. A single juvenile toad was found in the area surrounding TN5 and two juvenile smooth newts in the debris at the base of the spoil mounds to the west of TN9.

There are several ponds in the wider area around the cement works that are known to hold populations of GCN, which historically have been found in cable tunnels within the works.

1.4.2.3 Reptiles

Although no reptiles were observed during the survey, suitable reptile habitat was recorded throughout the survey area. Good foraging habitat for both common lizard and grass snake was recorded across central, western and northern areas, with most areas having the potential for cover/lie-up sites. The proximity of several identified amphibian breeding ponds increases the potential for grass snake.

1.4.2.4 Birds

Several bird species were noted during the survey and these included; buzzard, magpie, carrion crow, pied wagtail, robin and blackcap. Anecdotal evidence suggests that a pair of peregrine falcons breed within the tower buildings, although no peregrines were seen or heard at the time of survey.

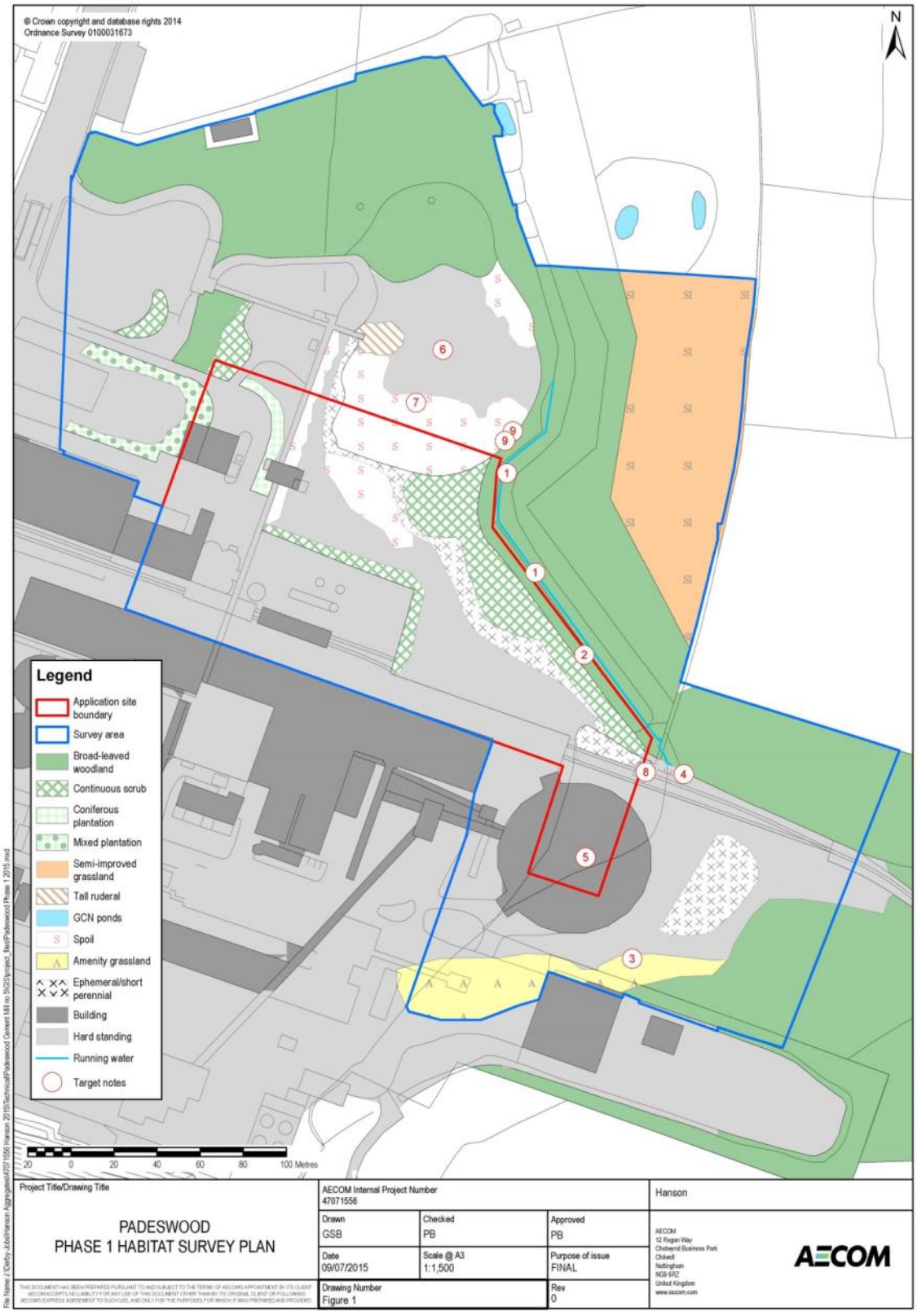
The woodland/ scrub areas that abut TN1 to both sides afford nesting opportunities for birds, along with several areas of scrub, vegetated bunds and spoil mounds recorded as having nesting potential.

1.5 REFERENCE

Joint Nature Conservation Committee (2010)

Handbook for Phase I Habitat Survey: A technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

Figure 1 - Location Plan & Phase1 Habitat Plan


© Crown copyright and database rights 2014
Ordnance Survey 0100031673
N
Legend
Application site boundary
Survey area
Broad-leaved woodland
Continuous scrub
Coniferous plantation
Mixed plantation
Semi-improved grassland
Tall ruderal
GCN ponds
Spoil
Amenity grassland
Ephemeral/short perennial
Building
Hard standing
Running water
Target notes
20 0 20 40 60 80 100 Metres
Project Title/Drawing Title
PADESWOOD
PHASE 1 HABITAT SURVEY PLAN
AECOM Internal Project Number
47071556
Hanson
Drawn
GSB
Checked
PB
Approved
PB
Date
09/07/2015
Scale @ A3
1:1,500
Purpose of issue
FINAL
Drawing Number
Figure 1
Rev
0
AECOM
12 Regan Way
Chetwynd Business Park
Chilwell
Nottingham
NG9 6RZ
United Kingdom
www.aecom.com
AECOM

APPENDIX 1- Desk Study

Site Check Report Report generated on Thu Jul 2 2015
You selected the location: Centroid Grid Ref: SJ292622
The following features have been found in your search area:

SSSI Impact Risk Zones – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications	
Infrastructure	Airports, helipads and other aviation proposals.
Wind & Solar Energy	
Quarry	
Rural Non Residential	
Residential	
Rural Residential	
Air Pollution	Pig & Poultry Units. Any other development/ industrial or commercial process that could cause AIR POLLUTION.
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	
Composting	
Discharges	
Water Supply	
Guidance	/Metadata_for_magic/SSSI IRZ User Guidance v2.2 MAGIC 05May2015.pdf

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications	
Infrastructure	
Wind & Solar Energy	
Quarry	
Rural Non Residential	
Residential	
Rural Residential	
Air Pollution	Pig & Poultry Units. Any other development/ industrial or commercial process that could cause AIR POLLUTION.
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	
Composting	
Discharges	
Water Supply	
Guidance	/Metadata_for_magic/SSSI IRZ User Guidance v2.2 MAGIC 05May2015.pdf

Sites of Special Scientific Interest (Wales)

Name	BUCKLEY CLAYPITS AND COMMONS
SSSI Code	31WWD
First Notified	15/01/2002
Last Notified	Null
Confirmation Date	09/10/2002
Eastings	328020
Northings	365529
Cartesian Area (Ha)	99.76

Special Areas of Conservation (Wales)

Name	Deeside and Buckley Newt sites
Reference	UK0030132
Marine	n
Date Notified	13/12/2004
Cartesian Area (Ha)	207.12

Areas of Outstanding Natural Beauty (England)
No Features found

Limestone Pavement Orders (England)
No Features found

Local Nature Reserves (England) - points
No Features found

Local Nature Reserves (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 Nature Reserves (Scotland) - points
No Features found

National Nature Reserves (Scotland)
No Features found

National Nature Reserves (Wales) - points
No Features found

National Nature Reserves (Wales)
No Features found

National Parks (England)
No Features found

National Parks: Lake District and Yorkshire Dales Variation Orders 2012 - subject to confirmation (England)
No Features found

Ramsar Sites (England) - points
No Features found

Ramsar Sites (England)
No Features found

Ramsar Sites (Scotland) - points
No Features found

Ramsar Sites (Scotland)
No Features found

Ramsar Sites (Wales) - points
No Features found

Ramsar Sites (Wales)
No Features found

Sites of Special Scientific Interest Units (England) - points
No Features found

Sites of Special Scientific Interest Units (England)
No Features found

Sites of Special Scientific Interest (England) - points
No Features found

Sites of Special Scientific Interest (England)
No Features found

Sites of Special Scientific Interest (Scotland) - points
No Features found

Sites of Special Scientific Interest (Scotland)
No Features found

Sites of Special Scientific Interest (Wales) - points
No Features found

Special Areas of Conservation (England) - points
No Features found

Special Areas of Conservation (England)
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Special Areas of Conservation (Scotland) - points
No Features found

Special Areas of Conservation (Scotland)
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Special Areas of Conservation (Wales) - points
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Special Protection Areas (England) - points
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Special Protection Areas (England)
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Special Protection Areas (Scotland) - points
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Special Protection Areas (Scotland)
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Special Protection Areas (Wales) - points
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Special Protection Areas (Wales)
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Biosphere Reserves (England) - points
No Features found

Biosphere Reserves (England)
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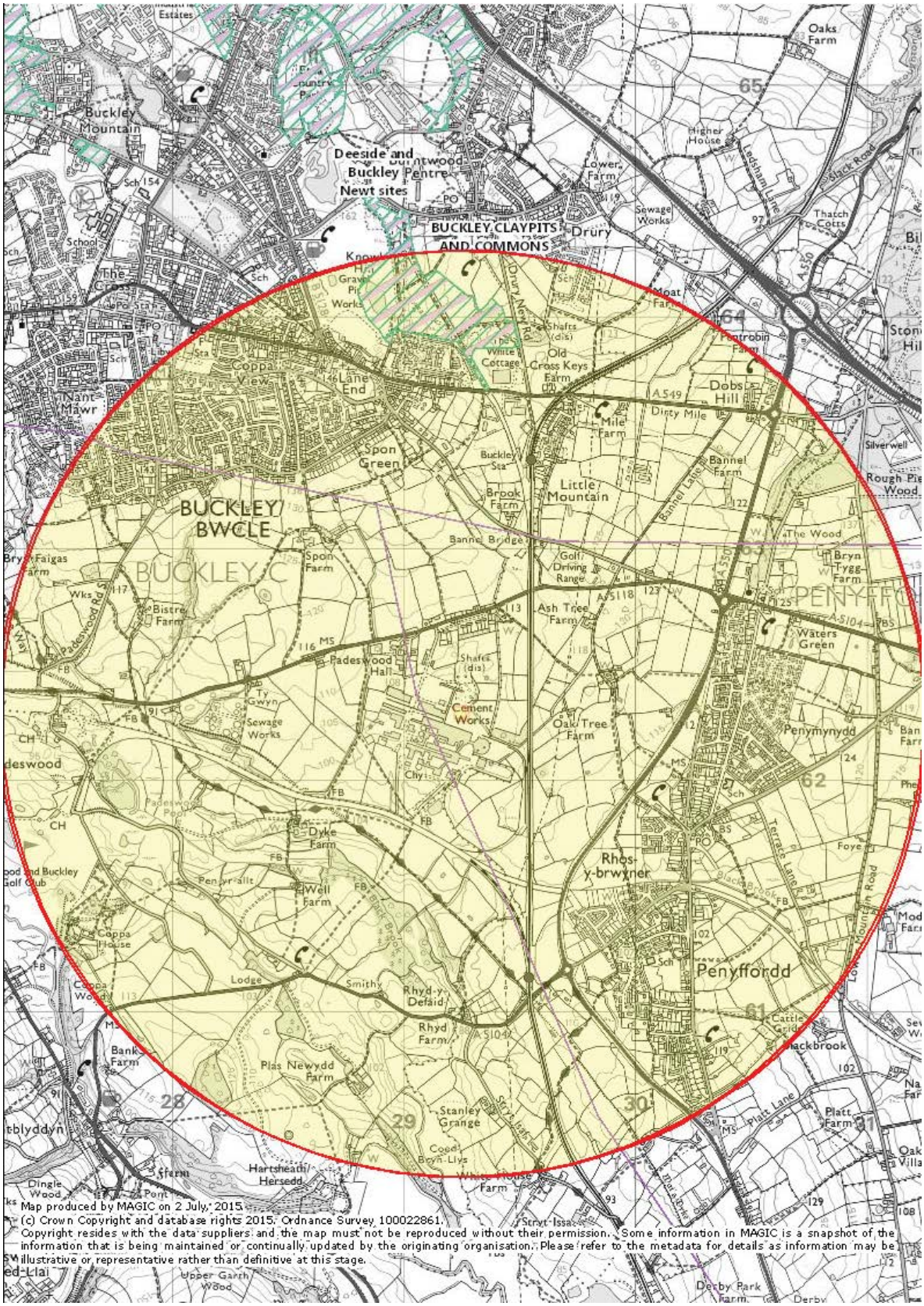
Biosphere Reserves (Scotland) - points
No Features found

Biosphere Reserves (Scotland)
No Features found

Biosphere Reserves (Wales) - points
No Features found

Biosphere Reserves (Wales)
No Features found


BUCKLEY
BWCLE
Deeside and Buckley Newt sites
BUCKLEY CLAYPITS AND COMMONS
Buckley Mountain
Drury
Little Mountain
Penyffordd
Padeswood Hall
Cement Works
Rhos-y-brwyner
Hartsheath/ Hersedd
Map produced by MAGIC on 2 July, 2015.
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Cofnod Environmental Information Search

Please read Important Issues and Notes before interpreting this information

cofnod
Gwasanaeth Gwybodaeth Amgylcheddol Gogledd Cymru
North Wales Environmental Information Service

Our Reference	Client Name	Date Run	Your Reference
E04488	AECOM	07/07/2015	Padeswood

Search Location	Grid Reference
Padeswood	SJ29256230

Category 1 Species (Species with European and/or UK Legal Protection, Section 42 [NERC] Species or UK BAP Priority Species) **within 1000m - 78 records**

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Chiroptera (Unknown Bat / Ystlum)	SJ2961 *(Estimated (Centroid of Site))*	2005 approx	BASC Recorder (160014967-1)			Site Name Withheld	Comments Withheld	D0132/001/02	S42, WCA5, LBAP[ANG, DEN, FLI, SNP]	4	✉
Erinaceus europaeus (Hedgehog / Draenog)	SJ2961	23/11/2012	Jeffrey, Sue			Pen-y-Ffordd		D1596/001/01	Bern, S42, UKBAP, LBAP[ANG, CON, FLI, GWY]	3	✉
Erinaceus europaeus (Hedgehog / Draenog)	SJ3062	2 records, between 2012 and 2013	Anon					D1574/001/01	Bern, S42, UKBAP, LBAP[ANG, CON, FLI, GWY]	3	✉
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ2862	4 records, between 14/10/2008 and 24/10/2008	Jim Hulse;Val Hulse	1 Female; 1 Male		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, Bonn, CITES, S42, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3	✉
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ2963	2 records, between 18/02/2008 and 16/12/2008	Jim Hulse;Val Hulse	1 Male; 1		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, Bonn, CITES, S42, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3	✉
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3061	5 records, between 29/08/2005 and 03/05/2010	Kevin Smith	1; 2; 3		Site Name Withheld	Comments Withheld	D0062/002/01 D0062/004/01	Bern, Bonn, CITES, S42, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3	✉
Falco tinnunculus (Kestrel / Cudyll Coch)	SJ3062	7 records, between 19/06/2004 and 24/11/2009	Jim Hulse;Val Hulse; Carol Richardson;David Richardson	1 Male; 1		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, Bonn, CITES, S42, UKBA, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3	✉
Hyacinthoides non-scripta (Bluebell / Clychau'r Gog)	SJ3062	17/03/2012	Polly Spencer-Vellacott			Penymynydd woods/ lane		D1274/002/01	WCA8, LBAP[ANG, CON, FLI, SNP]	1	✉
Lepus europaeus (Hare / Ysgyfarnog)	SJ3061 *(Approximate)*	2 records, between 14/02/2012 and 27/02/2012	Anon	1	Dead on road; Dead	Pen y ffordd	Near pasture land; Snared, near pasture land	D0108/001/03	Bern, S42, UKBAP, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1	✉
Linaria cannabina (Linnet / Llinos)	SJ2863	2 records, between 13/04/2004 and 16/05/2004	Glyn Neville Roberts	2		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, S42, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	3	✉
Locustella naevia (Grasshopper Warbler / Troellwr Bach)	SJ290614 *(Estimated (Centroid of Site))*	09/06/1999	Emily Meilleur			Black Brook Plantation	Broad habitat type: Grassland and Marsh	D0227/002/01	S42, UKBAP, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	4	✉
Lutra lutra (Otter / Dyfrgi)	SJ2861 *(Supplied by Original Recorder)*	January 2009 - February 2009	Robert G. Thorne	Droppings		Site Name Withheld	Comments Withheld	D1234/003/01	Bern, CITES, EPS, HDir, RD1(UK), RD2(UK), S42, UKBAP, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	1	✉
Lutra lutra (Otter / Dyfrgi)	SJ2961	23/12/2001	Cardiff University & Environment Agency	Adult Male	Dead on road	Site Name Withheld	Comments Withheld	D0120/001/01	Bern, CITES, EPS, HDir, RD1(UK), RD2(UK), S42, UKBAP, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3	✉

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Meles meles **(Badger / Mochyn Daear)**	SJ2861 ***(Supplied by Original Recorder)***	**2 records, between 12/03/2007 and January 2009**	**Robert G. Thorne; Clwyd Badger Group (CBG)**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D1234/003/01 D0059/001/01	**BA, Bern, LBAP[CON, DEN, FLI, WRE]**	**4**	✉
Meles meles **(Badger / Mochyn Daear)**	SJ2961	**2 records, both on 05/02/2007**	**Clwyd Badger Group (CBG)**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/01	**BA, Bern, LBAP[CON, DEN, FLI, WRE]**	**3**	✉
Meles meles **(Badger / Mochyn Daear)**	SJ2962	**2 records, both on 01/02/2004**	**Clwyd Badger Group (CBG)**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/01	**BA, Bern, LBAP[CON, DEN, FLI, WRE]**	**3**	✉
Meles meles **(Badger / Mochyn Daear)**	SJ2963	**2 records, both on 02/04/2005**	**Clwyd Badger Group (CBG)**		**Badger Sett**	**Site Name Withheld**	**Comments Withheld**	D0059/001/01	**BA, Bern, LBAP[CON, DEN, FLI, WRE]**	**3**	✉
Numenius arquata (Curlew / Gylfinir)	SJ2863	16/05/2004	Glyn Neville Roberts	3		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bonn, RD1(UK), S42, UKBA, UKBAP, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3	✉
Passer domesticus (House Sparrow / Aderyn y To)	SJ2863	3 records, between 13/04/2004 and 08/04/2009	Jim Hulse;Val Hulse; Glyn Neville Roberts	2; 73; 63		Site Name Withheld	Comments Withheld	D0062/002/01	S42, UKBAP, UKBR, WBA, LBAP[CON, FLI, GWY]	3	✉
Passer domesticus (House Sparrow / Aderyn y To)	SJ2963	2 records, between 05/02/2008 and 19/12/2008	Jim Hulse;Val Hulse	4; 10+		Site Name Withheld	Comments Withheld	D0062/002/01	S42, UKBAP, UKBR, WBA, LBAP[CON, FLI, GWY]	3	✉
Passer domesticus (House Sparrow / Aderyn y To)	SJ3061	02/12/2010	Jim Hulse;Val Hulse	25+		Site Name Withheld	Comments Withheld	D0062/004/01	S42, UKBAP, UKBR, WBA, LBAP[CON, FLI, GWY]	3	✉
Perdix perdix (Grey Partridge / Petrisen)	SJ292619 *(Estimated (Centroid of Site))*	2005 approx	BASC Recorder (160014967-1)				Shoot Size Range: 0-3km	D0132/001/02	BDir2.1, S42, UKBAP, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY]	1	✉
Pipistrellus pipistrellus **(Common Pipistrelle / Ystlum Lleiaf Cyffredin)**	SJ3061	**12/07/1993**	**Anon**	**18**		**Site Name Withheld**	**Comments Withheld**	D1486/001/01	**Bern, Bonn, EPS, HDir, RD2(UK), S42, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]**	**3**	✉
Prunella modularis (Dunnock / Llwyd y Gwrych)	SJ2863	2 records, between 13/04/2004 and 16/05/2004	Glyn Neville Roberts	8; 9		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, RD2(UK), S42, UKBA, UKBAP, LBAP[CON]	3	✉
Pyrrhula pyrrhula (Bullfinch / Coch y Berllan)	SJ2963	02/06/2008	Jim Hulse;Val Hulse	1 Male		Site Name Withheld	Comments Withheld	D0062/002/01	S42, UKBA, UKBAP, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3	✉
Pyrrhula pyrrhula (Bullfinch / Coch y Berllan)	SJ3062	23/01/2009	Julie Rogers	1 Male		Site Name Withheld	Comments Withheld	D0062/002/01	S42, UKBA, UKBAP, UKBR, WBR, LBAP[CON, DEN, FLI, GWY]	3	✉
Sturnus vulgaris (Starling / Drudwen)	SJ2862	16/01/2008	Jim Hulse;Val Hulse	250+		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBR, LBAP[CON, FLI, GWY]	3	✉
Sturnus vulgaris (Starling / Drudwen)	SJ2863	3 records, between 13/04/2004 and 08/04/2009	Glyn Neville Roberts; Jim Hulse;Val Hulse	79; 76; 3		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBR, LBAP[CON, FLI, GWY]	3	✉
Sturnus vulgaris (Starling / Drudwen)	SJ2963	2 records, between 20/11/2007 and 16/12/2008	Jim Hulse;Val Hulse	40+		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBR, LBAP[CON, FLI, GWY]	3	✉

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Sturnus vulgaris (Starling / Drudwen)	SJ3061	05/05/2008	Kevin Smith	1		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBR, LBAP[CON, FLI, GWY]	3	✉
Triturus cristatus (Great Crested Newt / Madfall Ddwr Gribog)	SJ29186158 *(Supplied by Original Recorder)*	2 records, between 1992 and 10/06/1992	Anon - Herpetofauna Consultants International; Anon - CCW	Present		Hartsheath Hall		D1122/001/01 D0137/001/01	Bern, EPS, HDir, RD1(UK), RD2(UK), S42, UKBAP, WCA5, LBAP[ANG, CON, DEN, FLI, SNP, WRE]	3	✉
Turdus iliacus (Redwing / Coch Dan Adain)	SJ2963	02/12/2008	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, UKBA, UKBR, WBA, WCA1.1, LBAP[CON]	3	✉
Turdus iliacus (Redwing / Coch Dan Adain)	SJ3061	02/12/2010	Jim Hulse;Val Hulse	2		Site Name Withheld	Comments Withheld	D0062/004/01	BDir2.2, UKBA, UKBR, WBA, WCA1.1, LBAP[CON]	3	✉
Turdus philomelos (Song Thrush / Bronfraith)	SJ2863	2 records, between 13/04/2004 and 16/05/2004	Glyn Neville Roberts	5; 4		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3	✉
Turdus philomelos (Song Thrush / Bronfraith)	SJ2962	18/12/2008	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3	✉
Turdus philomelos (Song Thrush / Bronfraith)	SJ3061	02/12/2010	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/004/01	BDir2.2, Bern, RD2(UK), S42, UKBAP, UKBR, WBA, LBAP[ANG, CON, DEN, FLI, GWY, SNP, WRE]	3	✉
Turdus pilaris (Fieldfare / Socan Eira)	SJ2863	12/03/2006	Alan Nevitt	1		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, UKBA, UKBR, WBA, WCA1.1, LBAP[CON]	3	✉
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ2863	2 records, between 13/04/2004 and 16/05/2004	Glyn Neville Roberts	7; 2		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bonn, S42, UKBA, UKBAP, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3	✉
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ292619 *(Estimated (Centroid of Site))*	2005 approx	BASC Recorder (160014967-1)				Shoot Size Range: 0-3km	D0132/001/02	BDir2.2, Bonn, S42, UKBA, UKBAP, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	1	✉
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ2962	02/12/2010	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/004/01	BDir2.2, Bonn, S42, UKBA, UKBAP, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3	✉
Vanellus vanellus (Lapwing / Cornchwiglen)	SJ3062	18/03/2009	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bonn, S42, UKBA, UKBAP, UKBR, WBR, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	3	✉
Zootoca vivipara (Common Lizard / Madfall)	SJ2963	2 records, both in 1973	BW Burnett; Burnett, B.W.			Buckley		D0035/002/01 D1076/001/02	Bern, S42, UKBAP, WCA5, LBAP[ANG, CON, DEN, FLI, GWY, SNP]	4	✉

Category 2 Species (Global Red List, British Red Data Book, Nationally Rare & Scarce, Welsh Red and Amber Birds & Welsh Vascular Plant Red Data List, where these are not identified in Category 1) **within 1000m - 17 records**

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ2861 *(Supplied by Original Recorder)*	January 2009 - February 2009	Robert G. Thorne			Hartsheath		D1234/003/01	WBA	4	✉

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Aegithalos caudatus (Long-tailed Tit / Titw Cynffon-Hir)	SJ2963	3 records, between 05/02/2008 and 18/12/2008	Jim Hulse;Val Hulse	3; 2; 6		Site Name Withheld	Comments Withheld	D0062/002/01	WBA	3	✉
Anser anser (Greylag Goose / Gwydd Wyllt)	SJ2863	13/04/2004	Glyn Neville Roberts	8		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.1, Bern, Bonn, RD2(UK), UKBA, WCA1.2, LBAP[CON]	3	✉
Apus apus (Swift / Gwennol Ddu)	SJ2863	16/05/2004	Glyn Neville Roberts	3		Site Name Withheld	Comments Withheld	D0062/002/01	UKBA, WBA	3	✉
Apus apus (Swift / Gwennol Ddu)	SJ296630 *(Selected from Interactive Map)*	11/08/2014	Stuart Blundell	1 Adult		Buckley	11.10am flying low over road	D1117/001/01	UKBA, WBA	1	✉
Columba oenas (Stock Dove / Colomen Wyllt)	SJ2863	13/04/2004	Glyn Neville Roberts	4		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), UKBA, LBAP[GWY]	3	✉
Delichon urbicum (House Martin / Gwennol y Bondo)	SJ2863	16/05/2004	Glyn Neville Roberts	4		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, UKBA, WBA, LBAP[CON]	3	✉
Egretta garzetta (Little Egret / Creyr Bach)	SJ2861	06/04/2010	Jim Hulse;Val Hulse	1		Site Name Withheld	Comments Withheld	D0062/004/01	BDir1, Bern, Bonn, CITES, RD2(UK), UKBA, LBAP[CON, GWY]	3	✉
Hirundo rustica (Swallow / Gwennol)	SJ2863	16/05/2004	Glyn Neville Roberts	3		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, UKBA, WBA, LBAP[ANG, CON, GWY]	3	✉
Oenanthe oenanthe (Wheatear / Tinwen y Garn)	SJ2863	2 records, between 13/04/2004 and 16/05/2004	Glyn Neville Roberts	1		Site Name Withheld	Comments Withheld	D0062/002/01	Bern, UKBA, WBA, LBAP[CON]	3	✉
Phalacrocorax carbo (Cormorant / Mulfran)	SJ2863	13/04/2004	Glyn Neville Roberts	3		Site Name Withheld	Comments Withheld	D0062/002/01	Bonn, UKBA, WBA, LBAP[CON, GWY]	3	✉
Scolopax rusticola (Woodcock / Cyffylog)	SJ292619 *(Estimated (Centroid of Site))*	2005 approx	BASC Recorder (160014967-1)				Shoot Size Range: 0-3km	D0132/001/02	BDir2.1, Bonn, UKBA, WBA, LBAP[CON, DEN, FLI, GWY]	1	✉
Sylvia communis (Whitethroat / Llwydfron)	SJ2863	16/05/2004	Glyn Neville Roberts	1		Site Name Withheld	Comments Withheld	D0062/002/01	UKBA, WBA, LBAP[CON]	3	✉
Turdus viscivorus (Mistle Thrush / Brych y Coed)	SJ2963	03/12/2008	Jim Hulse;Val Hulse	2		Site Name Withheld	Comments Withheld	D0062/002/01	BDir2.2, Bern, RD2(UK), UKBA	3	✉

Category 3 Species (LBAP Species not identified under Categories 1 & 2, Locally Important species as specified by local experts) **within 1000m - 1 record**

Species Name	Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	Lists	V	✉
Populus nigra 'Italica' (Lombardy-Poplar / Poplysen Lombardi)	SJ2962	27/09/2014	Jonathan Shanklin			Padeswood, cement works		D1587/002/01	LBAP[DEN, FLI, SNP]LI[VC52]	1	✉

Statutory Sites intersecting 1000m buffer	None
Wildlife Sites intersecting 1000m buffer	Flintshire 26SE01: Black Brook Plantation (809m)
NWWT Reserves intersecting 1000m buffer	None
RSPB Reserves intersecting 1000m buffer	None
RIGS intersecting 1000m buffer	None
Ancient Woodland intersecting 1000m buffer	31190: Ancient Semi Natural Woodland (872m)

Habitats intersecting 1000m buffer (Habitat at central point shown in red, if found)	**B.4:** Improved Grassland (69.37% / 2,179,179 sq.m), **J.3.6:** Buildings (10.12% / 317,789 sq.m), **J.1.1:** Arable (5.02% / 157,706 sq.m), **B.2.2:** Semi-improved Neutral Grassland (2.94% / 92,375 sq.m), **I.2.2:** Spoil (1.62% / 50,883 sq.m), **A.1.1.2:** Planted Broad-leaved Woodland (1.61% / 50,584 sq.m), **NA:** Not Accessed Land (1.57% / 49,284 sq.m), **J.1.2:** Amenity Grassland (1.38% / 43,371 sq.m), **A.2.1:** Dense Scrub (1.26% / 39,539 sq.m), **J.1.5:** Gardens (0.36% / 11,379 sq.m), **A.1.1.1:** Semi-natural Broad-leaved Woodland (0.28% / 8,940 sq.m), **J.4:** Bare Ground (0.23% / 7,329 sq.m), **J.3.7:** Track (0.11% / 3,427 sq.m), **G.1:** Standing Water (0.11% / 3,360 sq.m), **B.5:** Marshy Grassland (0.09% / 2,950 sq.m), **A.1.2.2:** Planted Coniferous Woodland (0.07% / 2,204 sq.m), **F.1:** Swamp (0% / 132 sq.m)

Important Issues

1. Usage of the above information is governed by Cofnod's **Terms and Conditions of Data Release**, which can be downloaded here.
2. Records shown in **bold** typeface are sensitive species records, and **must not be released into the public domain**. A public version of this report is also available and this can be released into the public domain. In the public version the resolution of sensitive species grid references are reduced and site names and comments are removed.
3. Past records of presence of a habitat or species do not guarantee continued occurrence; absence of records does not imply absence of a species, merely that no records are held at Cofnod; Cofnod cannot guarantee the accuracy of supplied data; copyright of records remains with the original recorder.

Notes

Mobile Species: Cofnod uses a search system which reports species (usually high priority or protected species) within a specified search radius or buffer. Where required a search will also include high priority 'Mobile Species', such as bats, otters, amphibians and certain invertebrates, which lie outside the specified search radius. These species are highlighted on the report with **(Mobile)** next to the distance. They have been selected as 'Mobile Species' as their territory (possibly due to foraging activity or life cycle) could intersect with the search radius. The list of 'Mobile Species', invasive non-native species and species categories used in Cofnod's reporting system can be found at www.cofnod.org.uk/Enquiries under the 'Species Categories' tab.

1km Records: Records with 4 figure grid references are displayed as 1km squares on any relevant maps. They are highlighted with (1km) next to the distance.

Distances: Where searches specify a single or multiple grid reference, the distance from each record to the grid reference will be shown in the 'Distance (m)' column (except in public versions of reports as referred to above). Distances are highlighted in red where records fall within 50m of the grid reference. Distances are measured from the search location to the centre point of a record's grid square.

Grid References: Click on any grid references within the report to view them on an interactive map on Cofnod's website.

Sites: As well as designated and non-statutory Wildlife Sites, NWWT and RSPB reserves are shown. Where they are within 50m of the search location, they are highlighted in red. Where further information is available for a site, the name will appear as a link which you can click on to visit an external website. Wildlife Sites which remain unconfirmed by the relevant Local Authority are given 'Candidate' status and are displayed with the (c) suffix. The following reasons for candidate status apply: 1. Anglesey and Flintshire Wildlife Sites were identified by survey but have not been formally confirmed. 2. Conwy and Gwynedd Wildlife Sites were identified by survey and air photos and remain candidate until evaluated using selection criteria.

Habitats: Habitats shown are from the Habitat Survey of Wales (1979 to 1997) using the Phase 1 survey methodology. The habitat at the search location is shown in red. Habitats are ordered in descending size order, with the area and percentage cover of each habitat within the search radius shown in brackets.

Dataset ID: All species records within the reports include Dataset ID codes. Click on the link to find the relevant Metadata from the **Data We Hold** page on Cofnod's website (www.cofnod.org.uk/DataWeHold). The number below the Dataset ID is the individual record ID. Please quote this if you need more information on a specific record.

'V' Column: Record Verification Level. The following abbreviations apply: **1:** Unassessed, **2:** Unconfirmed, **3:** Considered Correct by Cofnod, **4:** Considered Correct by Expert. Dataset Categories and Record Verification Levels are explained in more detail within Cofnod's policy on Data Quality, available from our website.

✉ column: - Click on the red envelope icon next to a record to send us an email if you think there is a problem with a record, or if you would like more information about it.

Maps: This report should be used in conjunction with any relevant maps, where these are supplied. Where a Phase 1 Habitat map has been supplied, this illustrates habitats mapped by NRW as part of their Habitat Survey of Wales 1979 to 1997. A separate key is also supplied.

Raptor Data: Please note that while we hold Wales Raptor Study Group data for North East Wales we are only permitted to release it to a limited number of trusted partners. We can provide contact details if you would like to contact the Raptor Study Group directly to request species information.

Abbreviations Used:

Status Lists: **ANG** - Anglesey County Council Local Biodiversity Action Plan, **BA** - Protection of Badgers Act, **BDir1** - EU Birds Directive Annex 1, **BDir2.1** - EU Birds Directive Annex 2.1, **BDir2.2** - EU Birds Directive Annex 2.2, **Bern** - The Bern Convention on the Conservation of European Wildlife and Natural Habitats, **Bonn** - The Bonn Convention on the Conservation of Migratory Species of Wild Animals, **CITES** - Convention on International Trade in Endangered Species, **CON** - Conwy County Borough Council Local Biodiversity Action Plan, **DEN** - Denbighshire County Council Local Biodiversity Action Plan, **EPS** - European Protected Species, **FLI** - Flintshire County Council Local Biodiversity Action Plan, **GWY** - Gwynedd County Council Local Biodiversity Action Plan, **HDir** - EU Habitats Directive, **RD1(UK)** - Red Data Book listing for the UK based on IUCN guidelines, **RD2(UK)** - Red Data Book listing for the UK not based on IUCN guidelines, **S42** - Natural Environment and Rural Communities Act 2006 (Section 42), **SNP** - Snowdonia National Park Local Biodiversity Action Plan, **UKBA** - UK Amber listed birds (not based on IUCN criteria), **UKBAP** - UK Biodiversity Action Plan Priority Species, **UKBR** - UK Red listed birds (not based on IUCN criteria), **VC52** - Locally Important within Vice-County 52: Anglesey, **WBA** - Welsh Amber listed birds (not based on IUCN criteria), **WBR** - Welsh Red listed birds (not based on IUCN criteria), **WCA1.1** - Wildlife & Countryside Act 1981 Schedule 1.1, **WCA1.2** - Wildlife & Countryside Act 1981 Schedule 1.2, **WCA5** - Wildlife & Countryside Act 1981 Schedule 5, **WCA8** - Wildlife & Countryside Act 1981 Schedule 8, **WRE** - Wrexham County Council Local Biodiversity Action Plan
Site Types: **AW** - Ancient Woodland Sites, **WS** - Wildlife Sites

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APPENDIX 2 - Target Notes and Photographs

Target notes	Description	Plate
1	SJ 2932 6226 Eastern boundary stream, fringed to both the east and west by broad-leaved woodland	No Photograph
3	Gnarly oak tree with moderate to high bat roost potential	
4	Gnarly mature ivy-covered oak tree with moderate/high bat roost potential	
5	Round Corrugated Building/Structure	No Photograph

6	Industrial Storage area	
7	Single stand of Japanese knotweed on spoil mound near TN5	
8	Railway cabin with bat roost potential	

9	Location of two great crested newt individuals, recorded from beneath rubber belt	

2. Survey Wider Area August 2015

2.1 Phase 1 Habitat Survey Method

Previous ecological surveys within the Site have confirmed the presence of great crested newts which has both UK full protection from the Wildlife and Countryside Act 1981 (as amended) and European full protection from the Conservation of Habitats and Species Regulations 2010. Under this legislation it is an offence to:

- intentionally kill, injure or take a great crested newt;
- intentionally damage, destroy or obstruct access to any structure or place used by great crested newt for shelter or protection; and
- intentionally disturb a great crested newt whilst it is occupying a structure or place used for shelter or protection.

It has been agreed with Hanson Aggregates that a habitat management plan will be developed to enhancement the Site for biodiversity, most notably for great crested newts. Although great crested newts breed within waterbodies, they have a largely terrestrial existence, and therefore enhancement of suitable terrestrial habitat within the Site is prudent, as well as waterbodies.

To provide information of the management plan, a Phase 1 Habitat survey was undertaken by an AECOM ecologist on 6th August 2015. The habitats on the periphery of the cement works, except the active farm and private residential properties in the north, and the unused landfill area in the south-west, were walked, and the habitats present were recorded on a field map. Reporting and mapping of results followed the standard Phase 1 Habitat survey methodology (Joint Nature Conservation Committee, 2010) and is illustrated in the form of a Phase 1 Habitat map (see Figure 1). Site photographs are provided as Appendix 1. It should be noted that the survey is not intended to provide a comprehensive list of flora, rather it is intended to characterise the habitats present and to allow opportunities for habitat management and enhancement to be determined.

Whilst undertaking the Site walkover, casual records were also made of any non-native, controlled species as listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), such as Japanese knotweed (*Fallopia japonica*), and any faunal species observed, birds and mammals.

2.2 Phase 1 Habitat Survey Results

The AECOM ecologist walked largely around the edge of the Site and mapped the habitats immediately adjacent to the cement works (Figure 1).

2.2.1 Woodland

The cement works itself consists of several buildings, car parks, storage tanks and containers, along with spoil heaps, road network, bare ground and areas of amenity grassland, ornamental plantings and some scattered trees. The trees include Lombardy poplar (*Populus nigra* 'Italica') and silver birch (*Betula pendula*). The works are bordered by broad-leaved plantations, which includes silver birch, sycamore (*Acer pseudoplatanus*), Norway maple (*Acer platanoides*), oak (*Quercus* sp.), ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), alder (*Alnus glutinosa*), poplar (*Populus* sp.) and rowan (*Sorbus aucuparia*), with a small number of conifers, like Scots pine (*Pinus sylvestris*) (Photograph 1).

There are scattered trees and scrub along some of the field boundaries to the south-east, and species present include silver birch, hawthorn, blackthorn and willow (*Salix* sp.). There are hedgerows in the north of the Site which includes the species hawthorn, blackthorn, hazel (*Corylus avellana*), beech (*Fagus sylvatica*) and Leyland cypress (*Cupressocyparis leylandii*).

2.2.2 Grassland

There is a farm in the north-west of the Site with associated fields of improved grassland, used for sheep grazing. There are also several improved grassland fields in the north-east, intersected by hedgerows with scattered trees, and a field of improved grassland in the south-west of the Site (Photograph 2).

Semi-improved grassland is common in the south of the Site with a man-made mound of semi-improved grassland immediately to the south of the cement works and fields of semi-improved to the south-east of the Site. There is also a semi-improved grassland strip along the side of the railway in the east of the Site.

Species included within the semi-improved grassland are cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), vetch (*Vicia* sp.), yarrow (*Achillea millefolium*), bird's-foot trefoil (*Lotus corniculatus*), kidney vetch (*Anthyllis vulneraria*), common centaury (*Centaurium erythraea*), red clover (*Trifolium pratense*), selfheal (*Prunella vulgaris*), oxeye daisy (*Leucanthemum vulgare*), common knapweed (*Centaurea nigra*), common figwort (*Scrophularia nodosa*), colt's-foot (*Tussilago farfara*), creeping cinquefoil (*Potentilla reptans*), perforate St John's-wort (*Hypericum perforatum*), with rosebay willowherb (*Chamerion angustifolium*), common nettle (*Urtica dioica*), common ragwort (*Senecio jacobaea*), creeping thistle (*Cirsium arvense*), spear thistle (*Cirsium vulgare*) and meadowsweet (*Filipendula ulmaria*) (Photograph 3). Although the mound to the south of the cement works is relatively short, the semi-improved grassland fields in the south-east are typically >1m in height, and are so overgrown they are developing into stands of tall ruderals (Photograph 4 and 5).

2.2.3 Waterbodies

There are several waterbodies within the Site, including the two waterbodies (one lagoon and one pond) in the south of the Site which are surrounded by reedbeds, comprising common reed (*Phragmites australis*) and reedmace (*Typha latifolia*), and there is also a stand of tall ruderals south of the lagoon (Photograph 6-8). Other ponds within the Site include the pond within the woodland associated with the eco-centre (Photograph 9), and the two ponds within the pastures to the south-east of this pond (Photograph 10). There are also several ponds in the south-east of the Site, and at least some of these, appeared to be dry or at least very shallow, including the two ponds within the semi-improved grassland fields and another pond in the plantation woodland, south-east of these waterbodies.

2.2.4 Running Water

There is a small brook which flows from the cement works north passed the lagoon, and this is used to move water between the cement works and the lagoon. The brook is heavily shaded by a strip of plantation woodland. The brook is culverted to the east of the cement works, where it passes around the eastern side of an operational area.

2.2.5 Miscellaneous

There is an unused landfill area in the south-west corner of the Site which has filled up with rainwater, and there is a section of reedbed to the east of the waterbody (Photograph 11). This landfill area was not surveyed; it has been the subject of a research study by Edge Hill University and the outcome is that it is being developed as a nature area.

There is an area on the east side of the Cement Works where it is proposed to construct a new cement mill. This area was surveyed in detail for a planning application.

2.2.6 Invasive Plants

No casual records of invasive species listed under Section 9 of the Wildlife and Countryside Act 1981 (amended) were recorded during the survey, and thus there are no additional invasive species recorded on Site to what has been recorded before during the previous ecological surveys.

2.3 Casual Records

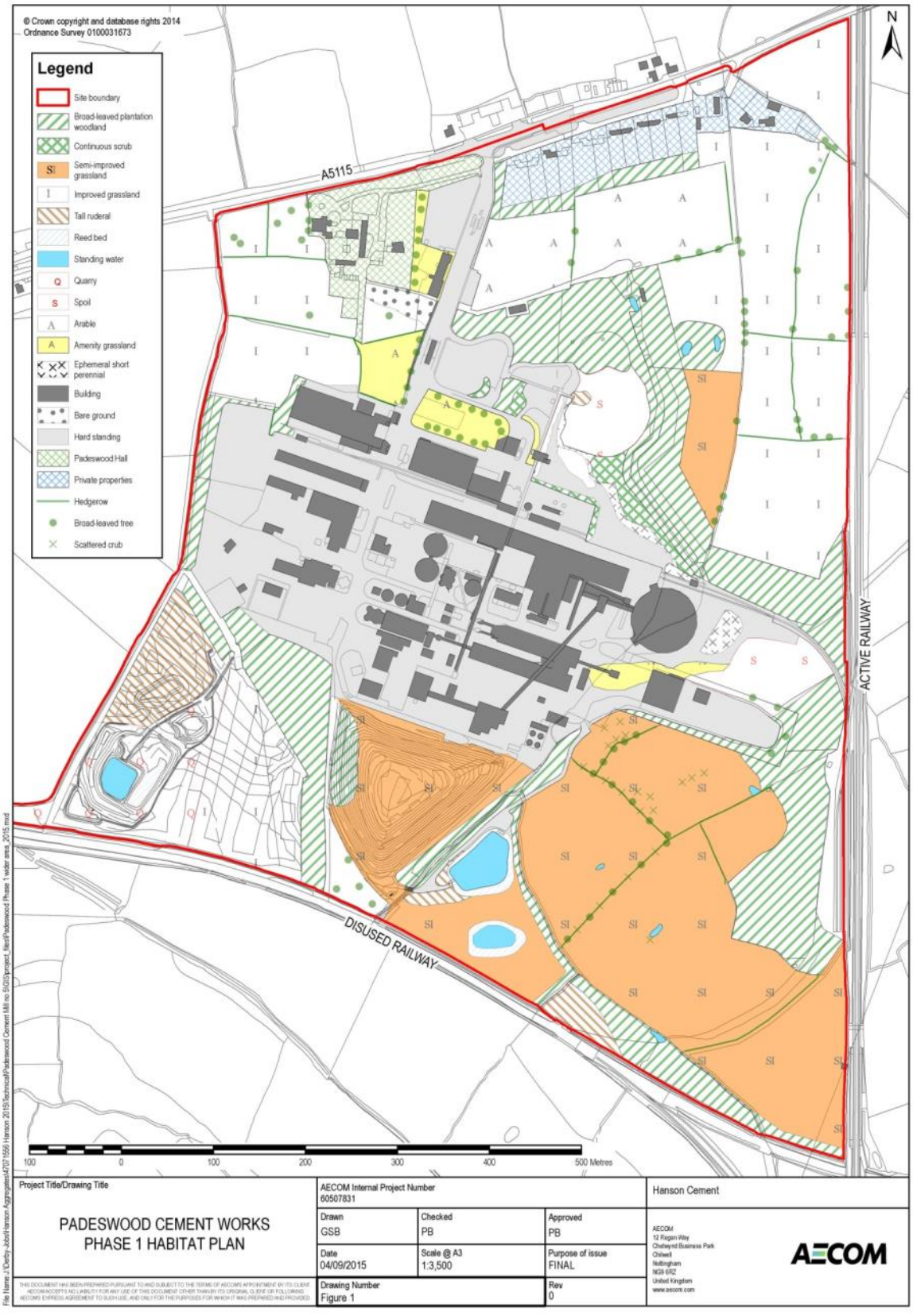
A pair of peregrine falcon (*Falco peregrinus*) were observed flying around the tower within the cement works, and consultation with site staff revealed that peregrines are believed to be nesting in one of the tall tower buildings (as they have done for at least 6 years).

2.4 References

Department for Communities and Local Government (2012) *National Planning Policy Framework*. Published on the Department for Communities and Local Government website: http://www.communities.gov.uk/

Joint Nature Conservation Committee. (2010) *Handbook for Phase 1 habitat survey*. *A technique for environmental audit*. JNCC, Peterborough

FIGURE 1 - Phase 1 Habitat Map


© Crown copyright and database rights 2014
Ordnance Survey 0100031673
Legend
Site boundary
Broad-leaved plantation woodland
Continuous scrub
Semi-improved grassland
Improved grassland
Tall ruderal
Reed bed
Standing water
Quarry
Spoil
Arable
Amenity grassland
Ephemeral short perennial
Building
Bare ground
Hard standing
Padeswood Hall
Private properties
Hedgerow
Broad-leaved tree
Scattered crub
A5115
ACTIVE RAILWAY
DISUSED RAILWAY
N
100 0 100 200 300 400 500 Metres
Project Title/Drawing Title
PADESWOOD CEMENT WORKS
PHASE 1 HABITAT PLAN
AECOM Internal Project Number
60507831
Hanson Cement
Drawn
GSB
Checked
PB
Approved
PB
Date
04/09/2015
Scale @ A3
1:3,500
Purpose of issue
FINAL
Drawing Number
Figure 1
Rev
0
AECOM
12 Regan Way
Chetwynd Business Park
Chilwell
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United Kingdom
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AECOM

APPENDIX 1 - Photographs

Photograph 1: Plantation woodland typical within the Site

Photograph 2: Improved grassland in the south of the Site

Photograph 3: Semi-improved grassland in the south of the Site

Photograph 4: Mound of semi-improved grassland south of the cement works

Photograph 5: Overgrown semi-improved grassland (establishing into tall ruderals) in south of the Site

Photograph 6: Reedbed around lagoon south of the cement works

Photograph 7: Lagoon and pond south of the cement works

Photograph 8: Pond south-east of lagoon in south of the Site

Photograph 9: Pond next to the eco-centre in the north of the Site

Photograph 10: Heavily shaded, drying out pond south-east of the eco-centre in the north of the Site

Photograph 11: Unused landfill area in the south-west corner of the Site

3. BAT DATA

Table 1: July Activity Survey Results

Project Name	Padeswood		**Surveyors**	EN & LS
Survey Location	Padeswood		**Rain (0-5)**	0
Date	31/07/2015		**Wind (0-7)**	0
Start	20:50		**Temperature**	14°c
Sunset	21:11		**Cloud Cover (0-5)**	2
Finish	22:45		**Weather description**	Still; no wind
Time	**Transect Point**	**Species**	**No. of bats**	**Transect Point**
21:29		Pipistrelle 45	1	Foraging
22:02		Pipistrelle 55	1	Brief pass
22:05		Pipistrelle 45	1	Foraging
22:20		Pipistrelle 45 *Myotis* species	2	Foraging
22:30		Noctule	1	Brief pass

Table 2: August Bat Activity Survey Results

Project Name	Padeswood		**Surveyors**	EN & LS
Survey Location	Padeswood		**Rain (0-5)**	0
Date	17/08/15		**Wind (0-7)**	1
Start	20:15		**Temperature**	21°c
Sunset	20:36		**Cloud Cover (0-5)**	4
Finish	22:15		**Weather description**	
Time	**Transect Point**	**Species**	**No. of bats**	**Description of behaviour**
21:13		Pipistrelle 45	1	Foraging
21:19		Pipistrelle 45	1	Brief pass
21:26		Pipistrelle 45	1	Foraging
21:30		Pipistrelle 45	1	Brief pass
22:13		Pipistrelle 45	1	Brief pass
21:30		Pipistrelle 45	1	Brief pass
22:19		Pipistrelle 55	1	Brief pass

Table 3: Results of the July/August Automated Detector Survey

Night	Sunset	Species	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 00:00	00:00 - 01:00	01:00 -02:00	02:00 - 03:00	03:00 - 04:00	04:00 - 05:00	05:00 - 06:00	Sunrise	Total number per night	Number of bats per night
31/07/2015	21:11	Pip45		5	1		2				12		05:28	20	40
		Pip55		4		1	3		6	4				18	
		Myotis					1				1			2	
01/08/2015	21:07	Pip45				7	3	2	2	1	1		05:30	16	31
		Pip55			2	3	3	5	1					14	
		Myotis			1									1	
02/08/2015	21:06	Pip45			8	6	15	6	4				05:32	39	71
		Pip55			2	5	7	4	1					19	
		Myotis			1							1		2	
		Noctule			3	3	2	2	1					11	
03/08/2015	21:04	Pip45				2	1						05:33	3	11
		Pip55					6	1						7	
		Myotis												0	
		Noctule					1							1	
04/08/2015	21:02	Pip45			1	1	1	9	2				05:35	14	20
		Pip55					1	2						3	
		Myotis				1								1	
		Noctule				1	1				1			3	

Table 4: Results of the August Automated Detector Survey

Location 1															
Night	**Sunset**	**Species**	**20:00-21:00**	**21:00-22:00**	**22:00 - 23:00**	**23:00-00:00**	**00:00-01:00**	**01:00-02:00**	**02:00-03:00**	**03:00-04:00**	**04:00-05:00**	**05:00-06:00**	**Sunrise**	**Total number per night**	**Number of bats per night**
17/08/2015	20:36	Pip45		3	19	11	1	1			1		05:57	36	42
		Noctule		1										1	
		Pip55				1								1	
		Bigbat					1							1	
		Pip				3								3	
18/08/2015	20:34	Pip45		1	1		1	2					05:59	5	12
		Pip55		2	1									3	
		Pip							1		1			2	
		Bigbat								1				1	
		Serotine				1								1	
19/08/2015	20:32	Pip45					2	2	5			1	06:00	10	12
		Pip55						1						1	
		Pip							1					1	
20/08/2015	20:29	Pip45		2	1	1	1	2	1	4	1		06:02	13	24
		Pip55		2	1	1		2	1					7	
		Pip			1									1	
		Noctule	1	1										2	
		Serotine			1									1	
21/08/2015	20:27	Pip45	No bats recorded										06:04		
		Pip													
		Noctule													
		Myotis													

Appendix B – Confidential Badger Appendix

Although the badger is not a rare mammal over most of Wales, it benefits from specific legal protection under the provisions of the Protection of Badgers Act 1992. It is widely known that badgers have been the victims of persecution and cruelty over many years. It is unlawful, with certain exceptions, to wilfully kill, injure, take or possess a badger, or attempt to do so. It is also an offence to intentionally or recklessly disturb or interfere (obstruct, destroy, damage or disturb) with a badger sett, with certain exceptions.

DESK STUDY

Methods

Records of protected and notable species and locally and nationally designated sites were requested from North Wales Environmental Information service (COFNOD) for a 1 km search area from the boundary of the proposed development (the centre of which is approximately OSGRSJ 2925 6230) and records provided included badgers.

Results

Records were provided with grid references accurate to four figures; there were records from adjoining 1 km squares but not from the square within which the Proposed Development is situated.

FIELD SURVEY

Methods

The badger survey was undertaken at the same time as the Phase 1 in June 2015. The survey was based on the standard approach detailed in the Mammal Society publication Surveying Badger (Harris, Cresswell & Jeffries, 1989). This involved searching for field signs associated with badger including setts, daybeds, runs, foraging activity, latrines and footprints. Other signs searched for included scratching posts near the sett, and badger hairs.

For this appendix, sett entrances were categorised using a standard method of categorisation as follows:

- Category A - Well Used: Entrances free from litter and showing recent signs of excavations;
- Category B - Partly Used: Entrances with some leaf litter and debris around the hole but also showing some signs of recent diggings; and
- Category C - Disused: Entrances with debris and leaf litter partially obscuring the hole with no recent signs of digging

The survey was updated on the 27th April 2017; the previous location was checked and a walkover undertaken along the wooded corridor on the west side of the watercourse. Setts, if any present, on the other side of the watercourse being beyond any effects from the proposed development.

Results

During the Phase 1 survey in June 2015, a 2-entrance sett (Category B/C) was recorded in the woodland towards the south east of the Proposed Development and a well-used path at the base of the slope along the watercourse. No other setts or field signs were observed. It was considered that further setts could be present within the unsearched woodland belt to the east of TN1.

The survey undertaken in April 2017 re-found the sett recorded in 2015. There was no sign of badger activity at either entrance, although they remain open and could be being used by rabbits. There was evidence of a path across the watercourse but this was not well defined and may reflect the disused status of the sett. No other activity or setts were recorded in the woodland strip alongside the west side of the watercourse. A single hole however was recorded in a large pile of material next to a disused concrete tower outside and approximately 40m to the north of the proposed development. The hole was in the open approximately 2 m up on the south east

side of the pile. There was no signs of use by badger, the shape was not convincingly badger and could be being used by rabbit or fox.

ASSESSMENT OF EFFECTS

Badger setts can change status quite quickly; become more or less active or become disused. New setts can also appear. The Proposed Development area itself is generally unsuitable for a badger sett being largely bare/sparsely vegetated ground often compacted with concrete bases.

Construction

The badgers sett recorded in 2015 appears in April 2017 to be disused and no other setts were recorded along the west side of the watercourse. A hole was recorded in a large spoil pile in the north of the proposed development but no evidence of use by badger was found and could easily be rabbit or fox. Based on the current status of badger in the area, the proposed development would have no effect on any setts. .

Whilst no setts have been recorded that could be affected by the proposed development, badgers could wander through the area and could come to harm if they fall into open excavations or ingest chemicals used during construction. The construction phase of the Proposed Development would include several measures including a requirement to cover any open excavations overnight or provide a means of egress; ladder or slope the ends of the excavation. On this basis, a negligible effect on the conservation status of badger is likely.

Badgers could also come to harm from site vehicles, however, it is anticipated that most vehicle movements would be during the day and thus avoid risk to badgers.

Operational Phase

Once operational, there would be little risk to badgers. Light and noise is not expected to be significantly different that that already experienced, in which case if there are badgers in the woodland, they will be habituated to the current conditions. There would be little risk to badgers from the train movements, as the speed within the confines of the works would be very low.

SUMMARY

A small badger sett was found within the woodland strip to the east of the Proposed Development in June 2015. This sett when visited in April 2017 appears to be disused and no other setts were found in the woodland west of the watercourse. A hole was recorded in a large spoil tip within the north of the proposed development but is likely to be rabbit or fox; no signs of any use by badgers being noted.

Badgers would not appear to represent a constraint currently to the proposed development

Measures would howeverbe taken during construction to avoid any harm coming to badgers that may wander through the area.