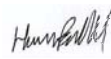


TECHNICAL NOTE – Preliminary Ecological Appraisal

DATE:	30 October 2020	CONFIDENTIALITY:	Restricted
SUBJECT:	Mold Road, Wrexham - Preliminary Ecological Appraisal		
PROJECT:	70075890	AUTHOR:	Huw Bramhall
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 Date: 2020.11.03 18:33:01

SUMMARY OF KEY CONSTRAINTS

WSP UK Ltd. (hereafter referred to as 'WSP') was commissioned by Welsh Assembly Government (WAG) to undertake a Preliminary Ecological Appraisal (PEA) of two plots of land on the Mold Road in Wrexham (hereafter collectively referred to as the Site). The brief was to identify any ecological constraints relevant to the demolition of all buildings and the clearance of both plots (centred on Ordinance Survey National Grid References SJ 32894 50892 and SJ 33021 50790), shown on Figure 1.

The PEA identified no designated sites or protected habitats considered to be at risk of impacts as a result of the proposed site clearance works. The PEA identified habitats suitable to support the following protected or notable species and species groups within and immediately adjacent to the Site: amphibians, including great crested newt (GCN) *Triturus cristatus*; nesting birds; hedgehog *Erinaceus europaeus*; and common reptiles, including common lizard *Zootoca vivipara* and slow worm *Anguis fragilis*.

In addition, one non-native invasive plant species, wall cotoneaster *Cotoneaster horizontalis* agg., was recorded on the Site.

The key constraints to the proposed clearance works on the Site in relation to the protected or notable species listed above are:

- If possible, GCN surveys of the pond approximately 15m to the east of the Site should be carried out prior to the commencement of works. However, works are expected to proceed in January/February 2021, prior to the GCN survey season, and must therefore proceed under a precautionary working method;
- Prior to demolition works, a pigeon nest observed on one building should be checked to confirm if in use. If currently in use, works will be postponed until the chick(s) fledge and the nest is disused. If the nest is not in use then works may proceed;
- Vegetation clearance should be conducted using a directional two stage cut under the supervision of an Ecological Clerk of Works (ECoW). Depending on the time of year, the ECoW will conduct suitable checks and supervision for the appropriate vulnerable species (groups);
- Any features suitable for use by amphibians, reptiles and hedgehog as refugia or hibernacula must not be dismantled during hibernation season. These features must be left undisturbed until these species become active in spring, and then dismantled under ECoW supervision; and
- The clearance and disposal of the wall cotoneaster should be conducted under a precautionary working method produced in consultation with an appropriately experienced contractor.

Further detail of the results and recommendations of the PEA are provided in this Technical Note. The key recommendation of the PEA is for the production of a stand-alone precautionary working method document for the proposed demolition and clearance works to provide sufficient details on the avoidance and mitigation measures for protected and notable species required to comply with relevant legislation, policy and advice received from Wrexham County Borough Council and Natural Resources Wales.

TECHNICAL NOTE – Preliminary Ecological Appraisal

INTRODUCTION

WSP UK Ltd. (WSP) were commissioned by Welsh Assembly Government (WAG) to undertake a Preliminary Ecological Appraisal (PEA) of two plots of land on the Mold Road in Wrexham, to identify any ecological constraints relevant to the demolition of all buildings and the clearance of both plots. The methodology and results of the PEA are presented in brief in this Technical Note, along with recommendations to enable compliance with relevant nature conservation legislation and planning policy. Supporting information is provided in Appendices A to D.

Background

Plot 1 was the plot of land at the corner of Mold Road and Crispin Lane, to the west of Wrexham General Railway Station, centred on Ordnance Survey (OS) National Grid Reference (NGR) SJ 32894 50892. Plot 2 was the former Countrywide Farm Stores site on Station Approach, north of Mold Road and east of Wrexham General Railway Station; centred on NGR SJ 33021 50790. The location of the two plots are shown on Figure 1 and hereafter will be collectively referred to as 'the Site'.

The current proposal for the Site is to demolish all existing buildings and to clear all existing vegetation within the boundaries of the Site. Proposals for future use of the Site following demolition and clearance are currently unknown.

METHODS

The PEA, including desk study, habitat survey and preliminary bat roost assessment, was undertaken by an ecologist with over eight years' experience conducting ecological appraisals (including numerous small urban developments) and who holds a bat survey licence granted by Natural Resources Wales (NRW).

Desk Study

The desk study was undertaken in August 2020 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. Due to the small size and anticipated minor extent of works affecting the Site, records of legally protected and notable species, including bat species, and statutory and non-statutory designated sites from within a 1 km radius of the Site was requested from Cofnod, the North Wales Environmental Information Service. Only records collected within the last ten years have been considered as part of this report. A summary of the desk study information provided by Cofnod is provided in Appendix A.

The Wrexham County Borough Council (WCBC) county ecologist (Broad (2020) Per Comm) and NRW (Ellis (2020) Per Comm) were consulted with regard to any information they may hold on the presence of great crested newts *Triturus cristatus* (GCN) within the pond adjacent to Plot 2, or any European Protected Species derogation licences pertaining to nearby developments.

Habitat Survey

An Extended Phase 1 habitat survey of the Site was carried out on 22nd August 2020. The survey covered the two plots comprising the Site, and the surrounding area up to 50 m where access was safe and agreed. Inaccessible surrounding habitats were assessed from a distance and using publicly available aerial photograph imagery.

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Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). A list of plant species was compiled (provided in Appendix B) to aid characterisation of the habitats recorded. Due to the restricted and largely sporadic nature of the vegetative cover on the Site, relative plant species abundance was not estimated for those habitats present. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019) and are also listed in Appendix B. Photographs of the Site are provided in Appendix C.

Target notes (TN) were made to provide information on specific features of ecological interest (e.g. a potential reptile refuge or bird's nest) or habitat features too small to be mapped. These are referred to in the results section of this document and listed in Appendix D.

Any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA) which were evident during the Phase 1 habitat survey were also recorded.

Protected Species Assessment

The potential for the Site to support legally protected and notable species was assessed using the desk study results combined with field observations made during the Phase 1 habitat survey. Where suitable habitat was recorded within the Site, the assessment also took into account the geographic distribution and habitat requirements of those species, and the connectivity of the Site to suitable habitat in the wider landscape. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups including: GCN (Gent and Gibson, 2003 and English Nature, 2001) and reptiles (Froglife, 1999 and Gent and Gibson, 2003).

PRELIMINARY BAT ROOST ASSESSMENT

A detailed external and internal inspection of all built structures on the Site was conducted alongside the habitat survey on 22nd August 2020. A visual inspection of the exterior of each structure was undertaken with the use of binoculars and a high-powered torch to identify potential bat roosting or access features, and evidence of use by bats such as droppings and staining (from fur oil and urine). A thorough internal visual inspection, where considered safe to access, was undertaken with the use of a high-powered torch. An endoscope was taken to site but not utilised due to a lack of suitable accessible features.

Each structure was assessed for its overall suitability to support roosting bats in line with the criteria set out in Table 2 below.

Table 2 – Bat Habitat Suitability Assessment Criteria adapted from Table 4.1 of The Bat Conservation Trust's Bat Surveys for Professional Ecologists, Good Practice Guidelines (Collins, 2016)

Suitability	Description - Roosting Habitats
Negligible	No potential roosting features identified, habitat unlikely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites are unlikely to be used on a regular basis or by larger numbers of bats (i.e.

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Suitability	Description - Roosting Habitats
	unlikely to be suitable for maternity or hibernation), due to the space, shelter, protection, appropriate conditions and/or suitable surrounding habitat present.
Moderate	A structure with one or more potential roost sites that could be used by bats, but due to their size, shelter, protection, conditions and surrounding habitat are unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Confirmed Roost	A structure confirmed as currently or historically supporting roosting bats through the observation of bats, evidence of use by bats (such as droppings) or the receipt of historic roost records.

Notes and Limitations

Every effort has been made to provide a comprehensive description of the Site, however, the following specific limitations apply to this assessment:

- The ecologist was accompanied on site by asbestos surveyors who advised that one small section of building P2-B2 had an asbestos cement roof and may have traces of asbestos dust inside. As a result, this section of the building was not accessed and viewed only from the neighbouring room. This is not considered to constitute a limitation to the survey as the room was small and a thorough inspection was possible from the doorway.
- Ecological survey data is typically valid for 18 months (CIEEM, 2019) unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management.
- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- The Phase 1 habitat survey was carried out over the period of a single day in August 2020, as such only a selection of all species that occur within the Survey Area will have been recorded. However, through use of desk study information to supplement site survey data, it is considered that an accurate assessment of the potential for the Site to support protected species or those of conservation concern was possible.

RESULTS

The Site was situated within an urban area of the town of Wrexham. The wider surroundings of the Site comprised extensive residential, commercial and light industrial developments, and a railway line running north-south between the two Plots. The surroundings were dominated by buildings and hard standing, with small areas of amenity grassland, formal planting and a corridor of scrub vegetation associated with the railway line. A narrow strip of woodland and a pond were noted to the east of Plot 2. Habitats within the Site and the surrounding 50m survey area are shown in Figures 2 and 3.

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Designated Sites

The desk study identified one statutory designated site partially within 1km of the Site. This was the Gatewen Marsh Site of Special Scientific Interest (SSSI), located approximately 750m to the west of the Site at its closest point. The SSSI is designated for its wetland habitats and botanical interest.

No other statutory or non-statutory designated sites for nature conservation were identified as part of the desk study.

The data provided by Cofnod did not include a list of recorded Habitats of Principal Importance (HPI) listed under Section 7 of the Environment (Wales) Act 2016 for the search area. However, it did include Phase 1 habitat types for some locations within 1km of the Site and this did not identify any habitats within the Site, or potential HPI within the immediate surroundings.

Habitat Survey

PLOT 1

Plot 1 was dominated by hard standing in the form of asphalt, concrete and gravelled areas, and a large metal and glass building (P1-B1, Appendix C – Photograph 1) (buildings are described further in the preliminary bat roost assessment section) in the southern half of the Plot. For ease of reference, Plot 1 is divided into three sections (P1-A, P1-B and P1-C) as shown in Figure 2. The habitats present in Plot 1 are also shown in Figure 2 and species lists for the sections are provided in Appendix B. Section P1-A contained only hard standing with no vegetation, although stumps of felled buddleja *Buddleja sp* were present.

The gravelled areas and cracks in the concrete areas to the north of the building in Section P1-B supported colonising vegetation (P1-TN1, Appendix C – Photograph 2). A range of species typical of disturbed ground and regenerating brown-field sites were recorded but the coverage was predominantly buddleja, brambles *Rubus fruticosus agg.* and grasses, including false oat-grass *Arrhenatherum elatius*. An area of gravel in the west of the Plot had the greatest variety of plant species (P1-TN2). The larger stands of buddleia and areas of encroaching bramble and rose *Rosa canina agg.* were mapped as scattered scrub in Figure 2.

The north west portion of the Plot, P1-C, was separated from the majority of the area by a concrete block wall approximately 2m tall (P1-TN5). This area encompassed two disused toilet blocks constructed of concrete blocks (P1-B2 and P1-B3, Appendix C – Photograph 3) associated with the neighbouring football ground. P1-C had clearly been disused for a longer period of time than the rest of the Plot. The vegetation here was more mature comprising dense scrub and occasional trees, including bramble, rose, traveller's joy *Clematis vitalba*, buddleja, ash *Fraxinus excelsior*, rowan *Sorbus aucuparia* silver birch *Betula pendula* and sycamore *Acer pseudoplatanus*. Extensive areas of dumped material was present throughout P1-C (P1-TN3, Appendix C – Photograph 4), some of which were largely covered by vegetation.

Immediately beyond the Plot boundary was an area of waste ground with a plant assemblage continuous with P1-C, covering a large bank to the north west, and flat gravel to the north. Beyond that, the 50m buffer around the Plot comprised the Wrexham Football Stadium and associated car parking, roads, residential buildings and the vegetated cutting of the railway to the east.

None of the habitats within Plot 1 were considered likely to qualify as HPI under Section 7 of the Environment (Wales) Act 2016.

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PLOT 2

Plot 2 was dominated by a large brick building (P2-B1, Appendix C – Photograph 7) (buildings are described further in the preliminary bat roost assessment section), with hard standing in the form of asphalt and concrete areas surrounding the main building. One smaller building (P2-B2) and a storage container (P2-B3) (Appendix C – Photograph 8) were present in the south east of the Plot. An area of unmanaged, introduced shrub planting was present in the south west corner of the Plot (Appendix C – Photograph 9). The habitats present in Plot 2 are shown Figure 3 and species lists for the Plot are provided in Appendix B.

Colonising vegetation was noted round the edges of the hard standing, and in any cracks (P2-TN1). A range of species typical of disturbed ground and regenerating brown-field sites were recorded but the coverage was predominantly buddleja and herb species including herb-robert *Geranium robertianum*, nettles *Urtica dioica*, bindweed *Calystegia sepium*, dandelions *Taraxacum officinale* agg. and Canadian fleabane *Erigeron canadensis*. The greatest variety of species was noted along the eastern boundary of the Plot (P2-TN3). An area of dumped material in the south east corner of the Plot was completely obscured by nettles and bindweed (P2-TN2, Appendix C – Photograph 10).

Lines of semi-mature trees were recorded around the outside of the east, north and west boundaries of the Plot. There were two individual trees on the southern boundary. Tree species present included ash, silver birch, elder *Sambucus nigra*, goat willow *Salix caprea* and sycamore. Beyond that, the 50m buffer around the Plot comprised a large commercial building and associated hard standing to the north with roads and other commercial buildings to the west and south. Using aerial photography images, a thin strip of woodland and a pond were identified to the east of the Plot but these were not visited during the survey.

None of the habitats within Plot 2 were considered likely to qualify as HPI under Section 7 of the Environment (Wales) Act 2016.

Non-native Invasive Plant Species

Five records of Japanese Knotweed *Fallopia japonica* and one record of Himalayan balsam *Impatiens glandulifera* were returned from within 1km of the Site within the last 10 years. Neither of these species were recorded on the Site. One plant species listed on Schedule 9 of the WCA was recorded during the habitat survey. This was wall cotoneaster *Cotoneaster horizontalis* agg. which was present within the area of introduced shrub in the south west corner of Plot 2.

Protected and Notable Species

The habitats recorded within the Site were considered suitable to support a limited number of protected or notable species groups detailed in Table 3 below. This excludes roosting bats which are the subject of the Preliminary Bat Roost Assessment section. The Site is considered unlikely to provide suitable habitat to support other protected or notable species.

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Table 3 – Protected Species Assessment

Ecological Constraint	Records from Desk Study	Suitable Habitat	Evidence
Nesting birds	Total of 24 records of birds from 16 different species. Six species were included within the subcategory of 'roof-nesting' birds provided by Cofnod	Buildings suitable for some of six 'roof-nesting' birds. Scrub vegetation, introduced shrub and trees suitable for relatively common urban bird species.	A pigeon <i>Columba</i> sp. nest, was noted within the roof structure of building P1-B1 (P1-TN4). Current use of the nest and the species was not confirmed.
Reptiles	Multiple records of common lizard <i>Zootoca vivipara</i> within 1km of the Site, the closest was adjacent to the railway line approximately 200m south of the Site. In addition, consultation with the WCBC county ecologist (Broad (2020) Per Comm) provided information that slow worms <i>Anguis fragilis</i> have been historically recorded on sites adjacent to the railway line within 1km of the Site.	Mixture of vegetation, hard standing and dumped material suitable for relatively common and widespread reptile species. In particular on Plot 1. Proximity of railway line, with embankments supporting suitable reptile habitats and providing connectivity to the wider landscape.	None.
Amphibians, including GCN	No records of amphibian species were returned within 1km of the Site. Wrexham and the adjacent Cheshire flood plain are however well documented to contain large meta-populations of GCN. Consultation with WCBC (Broad (2020) Per Comm) and NRW (Ellis (2020) Per Comm) yielded no records of GCN at the pond located to the east of Plot 2, or EPS derogation licence for GCN associated with a recent housing development immediately adjacent to that pond.	The survey identified a pond approximately 15m to the east of Plot 2. Plot 2 contained suitable terrestrial habitat for GCN and other amphibian species, including a pile of vegetated rubble (P2-TN2) that could be utilised as refugia and hibernacula within the core habitat of the pond (within 50m). The habitat between the pond and Plot 2 was also considered suitable for amphibians. Plot 1 was separated from the pond to the east of Plot 2 by approximately 190m, several roads and a railway. It was considered unlikely that amphibians utilising the pond would be present within Plot 1.	None
Hedgehog <i>Erinaceus europaeus</i>	Ten records from within 1km of the Site. Closest 117m north east.	Dense scrub vegetation and dumped materials on Plot 1. Introduced shrub on Plot 2.	None

Preliminary Bat Roost Assessment

A total of six buildings were recorded within the boundaries of the Site, three in each Plot. All six buildings were assessed as having negligible suitability to support roosting bats in accordance with best practice guidelines (Collins, 2016). A brief description and assessment of each building is provided in Table 4 below.

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Table 4 – Preliminary Bat Roost Assessment Results

Building Reference	Description	Suitable features and evidence of bats	Assessment
P1-B1	A large concrete block and glass walled building with a corrugated metal sheet roof and hipped ridges. Gaps through to the building's interior were noted where openings had been blocked up in the north-facing wall and over a rolling loading door in the west-facing elevation. Internally divided by blockwork and timber into multiple rooms over three floors. No roof void was present with internal spaces open to the metal beam roof structure and insulation panels fixed directly below the corrugated metal sheet roof (Appendix C, Photograph 5). Internal light levels varied as some windows were clear and others boarded. Building was located within an open urban setting with high levels of artificial lighting surrounding it and no direct connectivity with suitable bat foraging or commuting habitat.	Potential bat access points into the structure of the building. No suitable internal roosting features were noted. Although the roof structure was open, it was not considered suitable for bats to grip and roost on. No evidence of use by bats.	Negligible
P1-B2	Two single-storey buildings with concrete block walls and pitched roofs (where present). Metal roof trusses largely intact, along with some timber weather boarding, however the corrugated metal sheet roof was missing over majority of both structures. Internally, the buildings were open to the elements and as a result were damp and dilapidated (Appendix C, Photograph 6). Buildings were surrounded and partially overgrown by scrub vegetation which continued into the surroundings to the north and west.	Buildings lacked suitable roosting features, due to the loss of much of the roof. No suitable roosting features noted. No evidence of use by bats.	Negligible
P1-B3			
P2-B1	Large, single-storey, brick commercial unit, formerly with two pitched roof sections. Roof of main building had been removed prior to survey and the southern wall partially damaged/demolished. Brick cavity walls otherwise intact. Wall cavities were exposed from above. A flat-roofed extension to the western elevation was intact. This had a bitumen felt lining on the roof, and timber fascia boards tight to the brickwork. A flat-roofed extension on the southern elevation had glass walls and a corrugated metal sheet roof. Internally the main building had no ceiling and was open to the exposed, metal roof truss structure (Appendix C, Photograph 11). The flat-roofed section to the west contained a series of offices and storerooms, some of which had been partially dismantled to expose the wooden roof supports. The building was within an urban setting with artificial street lighting to the south but was adjacent to tree lines and semi-natural broadleaved woodland.	Bat access into the building possible through removed roof. Some suitable features between walls and roof timbers in the flat-roofed extension to the west created by recent demolition work. However, these features were inaccessible due to closed doorway between the open main building and the western extension. No evidence of use by bats.	Negligible
P2-B2	Single-storey brick building with a flat roof and lean-to section on the southern end. Flat roof was of chipboard, covered by a bitumen felt. Timber fascia board was tight against the brickwork. Brick cavity wall was rendered on the north, west and southern elevations. Metal concertina door was open at the time of survey.	Bat access into the building possible through the open doorway. No suitable roosting features recorded. No evidence of use by bats.	Negligible

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Building Reference	Description	Suitable features and evidence of bats	Assessment
	Lean-to section had a corrugated asbestos cement roof which was heavily overgrown with ivy. Internally the single open space had no roof void and the roof structure was exposed (Appendix C, Photograph 12). The remains of a large wasp's nest was noted. Unknown if wall cavity exposed from top. The lean-to section was viewed from the doorway but not accessed. Heavily cobwebbed and ivy growing under roof. The building was located adjacent to the semi-natural broadleaved woodland.		
P2-B3	Metal container. Well-sealed from the exterior.	No potential access points noted.	Negligible

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DISCUSSION AND RECOMMENDATIONS

Current proposals for the Site include the demolition of all buildings and the clearance of all vegetation within the Site boundaries. No proposals for future development are currently known. The proposals are considered have potential to impact upon ecological receptors that may be present within the Site itself and the immediate surroundings. The clearance of the Site is not considered likely to impact on any statutory or non-statutory designated sites.

The habitats present on the Site include scrub, trees, introduced shrub, buildings and hard standing with colonising vegetation. None of the habitats present are considered to qualify as HPI under Section 7 of the Environment (Wales) Act 2016.

As detailed in Table 3, the habitats recorded on the Site were considered suitable to support amphibians including GCN, nesting birds, reptiles and hedgehogs.

Plot 2 contained suitable terrestrial habitat for GCN and other amphibians, including piles of vegetated rubble that could be utilised as refugia and hibernacula that are within the core habitat of the pond (within 50m). The habitat between the pond and Plot 2 was also considered suitable for amphibians. Amphibians are not considered to be a constraint on Plot 1.

GCN are protected from killing, injury and disturbance¹ and their places of rest or shelter (occupied habitat) protected from damage or destruction under The Conservation of Habitats and Species Regulations 2017 (as amended) (hereafter referred to as the Habitats Regulations). Protection is also afforded under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural Resources Wales for certain purposes. GCN and common toad *Bufo bufo* are also listed as Species of Principal Importance (SPI) under Section 7 of the Environment (Wales) Act 2016

No records of GCN were returned by Cofnod from within 1km of the Site and consultation with the WCBC county ecologist (Broad (2020) Per Comm) and NRW (Ellis (2020) Per Comm) confirmed that neither held records of GCN at or close to the pond to the east of Plot 2. In addition, NRW confirmed that there is no record of a European Protected Species (EPS) derogation licence for GCN relating to a housing development which was constructed around the pond circa 2013. While this information indicates that GCN are likely absent from the recorded pond, in the absence of survey information it is not possible to definitively rule out the presence of GCN.

Due to the nature of the proposed works it is recommended that further survey to ascertain the presence or likely absence of GCN in the adjacent pond is undertaken prior to works commencing. This would then inform the requirements for mitigation and whether a EPS licence would be required to undertake the works. Surveys for GCN can be undertaken at suitable breeding ponds between March and June inclusive, depending on weather conditions.

However, it is anticipated that works to clear the Site will commence in January or February 2021. In consideration of the absence of records of GCN, the WCBC county ecologist and NRW confirmed that works could proceed on Plot 2 under a precautionary working method in the absence of further survey

¹ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

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information. A precautionary working method will be produced as a stand-alone document, and should include (but not be limited to) details of the following measures:

- Phasing the development so that the buildings were demolished with the more sensitive areas, notably the pile of dumped material in the south east corner of Plot 2 (P2-TN2), being retained until the surveys of the pond can be completed.
- A precautionary approach to completing demolition works, including supervision of certain works by an Ecological Clerk of Works (ECoW) who holds a GCN survey licence from NRW;
- A clear statement that works will stop immediately if one or more GCN are found during works, and a derogation licence sought from NRW to permit works to proceed lawfully;
- A biosecurity risk assessment; and
- A clear ecological compliance audit system.

Breeding birds, their nests and their contents are protected while active under the WCA. The WCA also confers partial protection on widespread reptile species, including protection against killing and injury. Hedgehogs are listed as SPI under Section 7 of the Environment (Wales) Act 2016. The following recommendations for precautionary measures relevant to species other than GCN are provided to enable the proposed clearance of the Site to proceed in accordance with the relevant legislation and policy, and should also be incorporated into the precautionary working method for the whole Site.

A pigeon nest was noted on the north west corner of building P1-B1 (P1-TN4) during the habitat survey. Pigeons can breed year-round. It is therefore recommended that the nest is checked by an appropriately experienced ecologist prior to works. If the nest is found to be active then a suitable buffer will be established and works affecting the nest or the buffer area will be postponed until the chicks fledge and the nest becomes disused. If the nest is found to be disused then works may proceed.

Clearance of the trees, scrub and shrub vegetation on the Site should be undertaken outside the bird nesting season (March to September inclusive). If clearance is required within this period then the vegetation should be checked by an appropriately experienced ecologist no more than 48 hours prior to clearance to check for birds' nests. If an active nest is identified, then it will be necessary to establish a works exclusion zone around the nest at an appropriate distance for the species concerned and works within that zone may not proceed until the chicks have fledged and the nest become disused.

The dense scrub, introduced shrub and piles of dumped materials, predominantly in the north west section of Plot 1 (P1-C) are considered suitable to provide shelter for reptiles and hedgehogs. As a result, clearance of these habitats has the potential to disturb or harm these species. It is recommended that these suitable habitats are cleared outside the reptile and hedgehog hibernation periods (October – April inclusive, weather-dependent) using a directional two stage cut, with hibernacula dismantled under the supervision of an ECoW.

If vegetation clearance is scheduled during the hibernation season, vegetation clearance works can proceed under the following measures:

- Vegetation above ground can be removed in one cut to a minimum of 150 millimetres;
- Vehicles and machinery must not be driven over areas of suitable reptile habitat prior to clearance;
- All areas must be searched ahead of vegetation clearance for suitable hibernacula features, which, if present, will be left in-situ until spring then dismantled under supervision of an ECoW; and;

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- Any suitable hibernacula features identified must not be dismantled during hibernation season as this would disturb and potentially kill any hibernating reptiles. Any hibernacula must be left undisturbed until reptiles become active in spring, and then dismantled under ECoW supervision.

One non-native invasive plant species was recorded during the habitats survey. Wall cotoneaster was recorded within the area of introduced shrub in the south west corner of Plot 2. This species is listed on Schedule 9 of the WCA and as such it is an offence to cause this species to grow in the wild. It is therefore recommended that the clearance and disposal of the wall cotoneaster is conducted under a precautionary method of works. The precautionary method of works should be produced in consultation with an appropriately experienced contractor.

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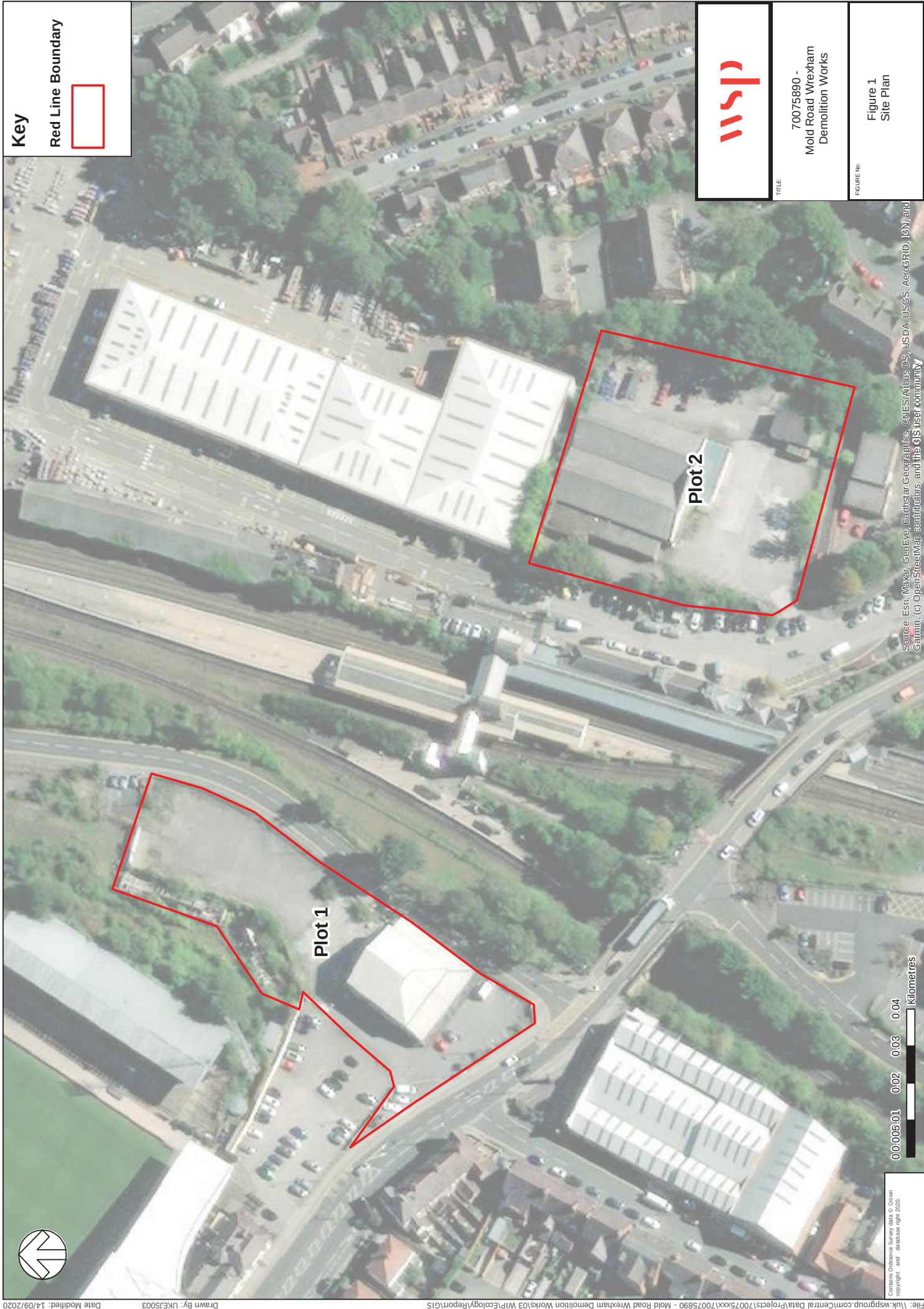
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TECHNICAL NOTE – Preliminary Ecological Appraisal

FIGURES



Key

Red Line Boundary



TITLE

70075890 -
Mold Road Wrexham
Demolition Works

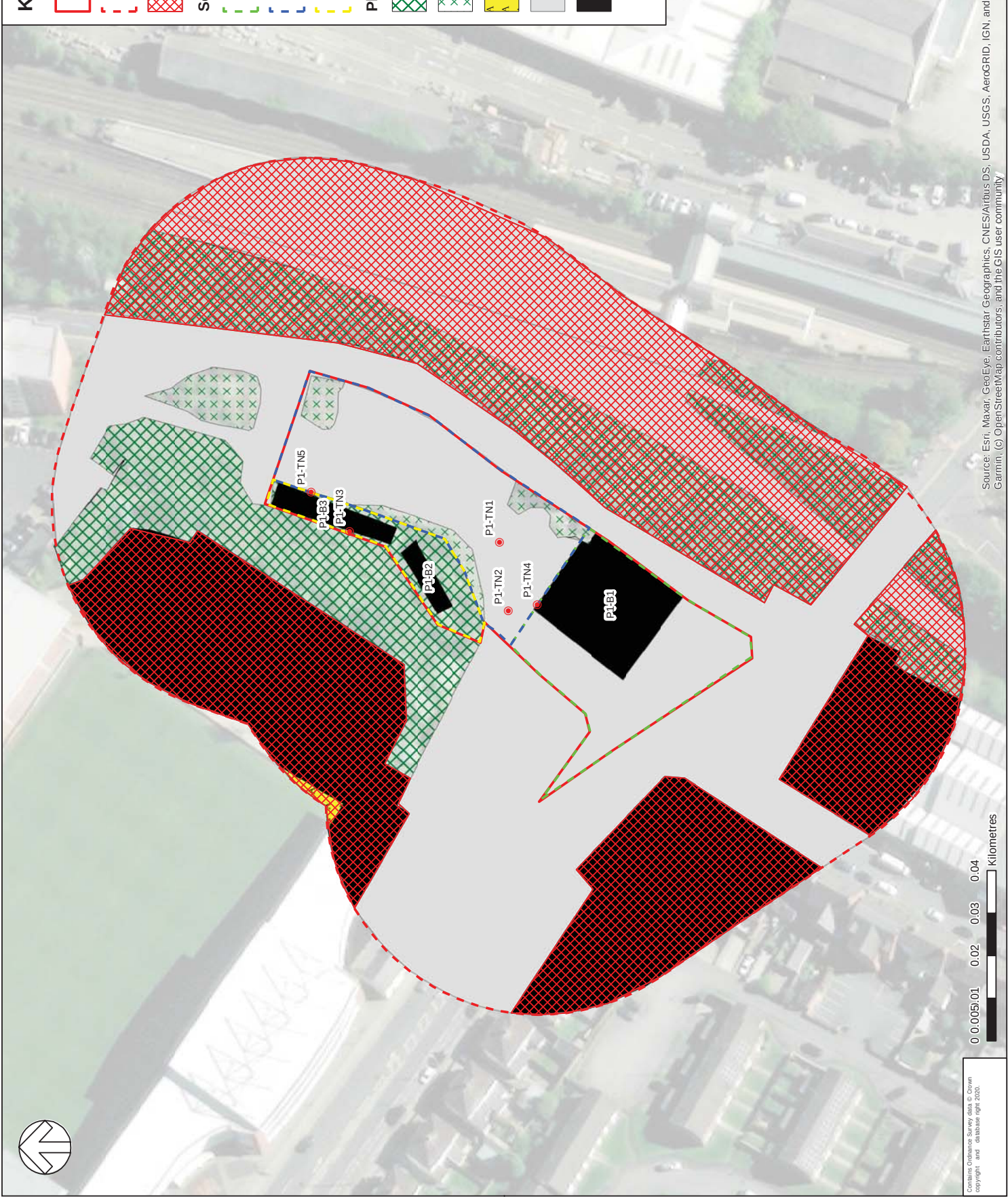
FIGURE NO:

Figure 1
Site Plan

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS user community

0.00 0.01 0.02 0.03 0.04 0.05 Kilometres

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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS user community

Key

- Plot 1 Red Line Boundary
- 50m Buffer
- Not Accessed

Sections of Plot:

- P1-A
- P1-B
- P1-C

Phase 1 Habitat

- Scrub - dense/continuous
- Scrub - scattered
- Amenity grassland
- Hard standing
- Buildings
- Target Note



TITLE

70075890 -
Mold Road Wrexham
Demolition Works

FIGURE NO:

Figure 2
Plot 1
Phase 1 Habitat Map

TECHNICAL NOTE – Preliminary Ecological Appraisal

APPENDIX A – DATA SEARCH RESULTS

Table A1 – Data Search Results

Scientific Name	Common Name	Distance and direction of closest record	Status ²
<i>Falco tinnunculus</i>	Kestrel	239m north	Bern, CITES, S7, UKBA, WBR
<i>Prunella modularis</i>	Dunnock	320m south	Bern, S7, UKBA
<i>Larus argentatus</i>	Herring Gull	504m north west	BDir2.2, S7, UKBR, WBR
<i>Acanthis cabaret</i>	Lesser Redpoll	506m south west	S7, UKBR, WBR
<i>Alcedo atthis</i>	Kingfisher	506m south west	BDir1, Bern, UKBA, WBA, WCA1.1
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	506m south west	BDir2.2, S7, UKBA, WBR
<i>Turdus pilaris</i>	Fieldfare	506m south west	BDir2.2, UKBR, WBA, WCA1.1
<i>Falco peregrinus</i>	Peregrine	793m north east	BDir1, Bern, CITES, WCA1.1
<i>Apus apus</i>	Swift	389, north east	UKBA, WBA
<i>Cinclus cinclus</i>	Dipper	728m south east	Bern, UKBA, WBA
<i>Sylvia communis</i>	Whitethroat	903m south west	WBA
<i>Anas platyrhynchos</i>	Mallard	506m south west	BDir2.1, UKBA, WBA
<i>Cygnus olor</i>	Mute Swan	506m south west	BDir2.2, UKBA, WBA
<i>Phoenicurus phoenicurus</i>	Redstart	506m south west	Bern, UKBA, WBA
<i>Larus fuscus</i>	Lesser Black-backed Gull	687m north west	BDir2.2, UKBA, WBA

² Bern - Bern Convention on the Conservation of European Wildlife and Natural Habitats; CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora; S7 - Environment (Wales) Act 2016 (Section 7); UKBA - RSPB UK Birds Amber List (not based on IUCN criteria); UKBR - RSPB UK Birds Red List (not based on IUCN criteria); WBA - RSPB Welsh Birds Amber List (not based on IUCN criteria); WBR - RSPB Welsh Birds Red List (not based on IUCN criteria); BDir1 - EU Birds Directive Annex 1; BDir2.1 - EU Birds Directive Annex 2.1; BDir2.2EU Birds Directive Annex 2.2; WCA1.1 - Wildlife & Countryside Act 1981 Schedule 1.1 (Birds which are protected at all times); WCA5 - Wildlife & Countryside Act 1981 Schedule 5 (Animals which are protected from killing and taking, possession, disturbance and sale); WCA8 - Wildlife & Countryside Act 1981 Schedule 8 (Plants which are protected); WCA9 - Wildlife & Countryside Act 1981 Schedule 9 (Non-native animals and plants which are established in the wild); LI - Locally Important within Denbighshire Vice County; INNS - Invasive Non-native Species; EPS - European Protected Species; HDir - EU Habitats Directive; RD2(UK) - Red Data Book listing for the UK not based on IUCN guidelines; LBAP – Local Biodiversity Plan for Wrexham.

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Scientific Name	Common Name	Distance and direction of closest record	Status ²
<i>Picus viridis</i>	Green Woodpecker	793m north east	Bern, WBA
<i>Hyacinthoides non-scripta</i>	Bluebell	687m north west	WCA8
<i>Reseda lutea</i>	Wild Mignonette	809m south west	LI
<i>Fallopia japonica</i>	Japanese Knotweed	507m south west	INNS, WCA9
<i>Impatiens glandulifera</i>	Himalayan Balsam	809m south west	INNS, WCA9
<i>Harmonia axyridis</i>	Harlequin Ladybird	171m north east	INNS
<i>Zootoca vivipara</i>	Common Lizard	194 m south	Bern, S7, WCA5
<i>Erinaceus europaeus</i>	Hedgehog	117m north west	Bern, S7
<i>Nyctalus noctula</i>	Noctule Bat	635m east	Bern, EPS, HDir, RD2(UK), S7, WCA5
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	635m east	Bern, EPS, HDir, RD2(UK), S7, WCA5
<i>Lutra lutra</i>	Otter	654m south west	Bern, CITES, EPS, HDir, RD2(UK), S7, WCA5, LBAP

TECHNICAL NOTE – Preliminary Ecological Appraisal

APPENDIX B – SPECIES LISTS

Table B1 – Species Lists for Plot 1

Common name	Latin name
P2-B - Hard standing with colonising vegetation and scattered scrub	
Buddleja	<i>Buddleja</i> sp.
Dog rose	<i>Rosa canina</i> agg.
Bramble	<i>Rubus fruticosus</i> agg.
False oat-grass	<i>Arrhenatherum elatius</i>
Canadian fleabane	<i>Conyza canadensis</i>
Wild carrot	<i>Daucus carota</i>
Elder	<i>Sambucus nigra</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Herb-Robert	<i>Geranium robertianum</i>
Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Rowan	<i>Sorbus aucuparia</i>
Traveller's Joy	<i>Clematis vitalba</i>
Evening primrose	<i>Oenothera</i> sp.
Purple Toadflax	<i>Linaria purpurea</i>
Mugwort	<i>Artemisia vulgaris</i>
Perforate St. John's-wort	<i>Hypericum perforatum</i>
A medick	<i>Medicago</i> sp.
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Dock	<i>Rumex</i> sp.
Ash	<i>Fraxinus excelsior</i>
Silver Birch	<i>Betula pendula</i>
Dogwood	<i>Cornus sanguinea</i>

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Common name	Latin name
Sycamore	<i>Acer pseudoplatanus</i>
Common Nettle	<i>Urtica dioica</i>
Spear Thistle	<i>Cirsium vulgare</i>
Colt's-foot	<i>Tussilago farfara</i>
Wall barley	<i>Hordeum murinum</i>
Prickly lettuce	<i>Lactuca serriola</i>
Common ragwort	<i>Jacobaea vulgaris</i>
P1-C – Dense scrub	
Buddleja	<i>Buddleja</i> sp.
Goat willow	<i>Salix caprea</i>
Dog rose	<i>Rosa canina</i> agg.
Bramble	<i>Rubus fruticosus</i> agg.
False oat-grass	<i>Arrhenatherum elatius</i>
Canadian goldenrod	<i>Solidago canadensis</i>
Wild carrot	<i>Daucus carota</i>
Elder	<i>Sambucus nigra</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Herb-Robert	<i>Geranium robertianum</i>
Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Rowan	<i>Sorbus aucuparia</i>
Traveller's Joy	<i>Clematis vitalba</i>
A medick	<i>Medicago</i> sp.
Dock	<i>Rumex</i> sp.
Ash	<i>Fraxinus excelsior</i>
Silver Birch	<i>Betula pendula</i>

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Common name	Latin name
Dogwood	<i>Cornus sanguinea</i>
Sycamore	<i>Acer pseudoplatanus</i>
Red clover	<i>Trifolium pratense</i>

Table B2 – Species Lists for Plot 2

Common name	Latin name
Introduced Shrub	
Buddleja	<i>Buddleja</i> sp.
Rose	<i>Rosa</i> sp.
Holly	<i>Ilex aquifolium</i>
Dogwood	<i>Cornus sanguinea</i>
Ash	<i>Fraxinus excelsior</i>
Silver Birch	<i>Betula pendula</i>
Sycamore	<i>Acer pseudoplatanus</i>
Maple species	<i>Acer</i> sp.
Pycnantha	<i>Pycnantha</i> sp.
Wall cotoneaster	<i>Cotoneaster horizontalis</i> agg.
Wilson's honeysuckle	<i>Lonicera nitida</i>
Bramble	<i>Rubus fruticosus</i> agg.
False oat-grass	<i>Arrhenatherum elatius</i>
Ivy	<i>Hedera helix</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Common toadflax	<i>Linaria vulgaris</i>
Hard standing with colonising vegetation	
Buddleja	<i>Buddleja</i> sp.
Ash	<i>Fraxinus excelsior</i>

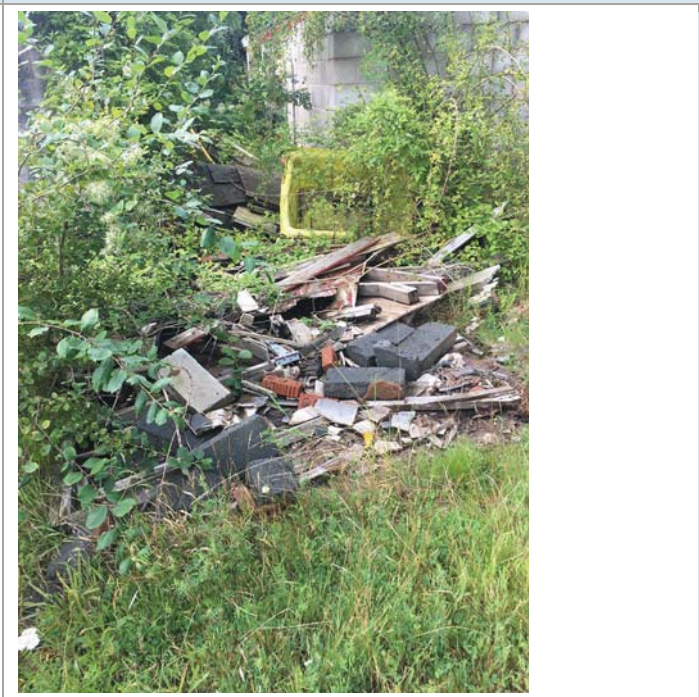
TECHNICAL NOTE – Preliminary Ecological Appraisal

Common name	Latin name
Sycamore	<i>Acer pseudoplatanus</i>
Silver Birch	<i>Betula pendula</i>
Elder	<i>Sambucus nigra</i>
Goat willow	<i>Salix caprea</i>
Bramble	<i>Rubus fruticosus</i> agg.
Canadian fleabane	<i>Erigeron canadensis</i>
Ivy	<i>Hedera helix</i>
Hedge Bindweed	<i>Calystegia sepium</i>
Nettle	<i>Urtica dioica</i>
Wild carrot	<i>Daucus carota</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Common toadflax	<i>Linaria vulgaris</i>
Herb Robert	<i>Geranium robertianum</i>
Garlic mustard	<i>Alliaria petiolata</i>
Cherry	<i>Prunus</i> sp.
Red valerian	<i>Centranthus ruber</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Hedge bedstraw	<i>Galium album</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Fat hen	<i>Chenopodium album</i> agg.
Prickly lettuce	<i>Lactuca serriola</i>
Timothy	<i>Phleum pratense</i> sens.lat.
A hellebore	<i>Helleborus</i> sp.

TECHNICAL NOTE – Preliminary Ecological Appraisal

APPENDIX C – PHOTOGRAPHS

Table C1 - Photographs

	
Photograph 1 – Building P1-B1	Photograph 2 – Scattered scrub and colonising vegetation in Plot 1, section P1-B.
	
Photograph 3 - Building P1-B3 surrounded by dense scrub vegetation	Photograph 4 – Dumped material in Plot 1, section P1-C (P1-TN3)

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Photograph 5 – Interior of Building P1-B1 showing exposed roof structure



Photograph 6 – Interior of Building P1-B2 showing missing roof and dilapidated condition



Photograph 7 – Building P2-B1 showing missing roof and broken wall



Photograph 8 – Buildings P2-B2 and P2-B3

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Photograph 9 – Area of introduce Shrub in south west corner of Plot 2.



Photograph 10 - Dumped material covered by nettles and bindweed – P2-TN2



Photograph 11 – Interior of Building P2-B1 showing missing roof, exposed roof structure and doorways leading to flat-roofed section to the west.



Photograph 12 – Interior of Building P2-B2 showing exposed roof structure.

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APPENDIX D – TARGET NOTES

Table D1 – Target Notes

Target Note Reference	Description
P1-TN1	Colonising vegetation around the edge and in all cracks in hard standing throughout the Plot.
P1-TN2	Area of gravel with a greater variety of plant species than the rest of the Plot.
P1-TN3	Dumped material surrounding buildings P1-B2 and P1-B3, comprising wood, masonry, furniture, soil, rubble and general rubbish.
P1-TN4	Pigeon nest noted on a metal beam within the roof structure of the north west corner of building P1-B1.
P1-TN5	Concrete block wall separating sections P1-B and P1-C. Approximately 2m tall. Several holes noted in the wall opening into the internal void in the blocks – open and exposed with no suitability for bats. Could be used by nesting birds. Wall partially obscured by overhanging vegetation.
P2-TN1	Colonising vegetation around the edge and in all cracks in hard standing throughout the Plot.
P2-TN2	Area of dumped material completely covered and obscured by nettles and bindweed.
P2-TN3	Strip along the edge of the Plot with a greater variety of plant species than the rest of the Plot.