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**Kronospan Engineering Stores**  
on behalf of Axis PED  
Ecological Assessment Report



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# 1 INTRODUCTION

## 1.1 Background

1.1.1 This report has been prepared by Avian Ecology Ltd. on behalf of Kronospan Limited, to provide an assessment of ecological effects in relation to the proposed construction of a commercial warehouse facility used for storing engineering equipment (hereafter referred to as the 'Site'). The Site is located within the existing Kronospan wood product manufacturing plant in Chirk, Wrexham, LL14 5NT.

1.1.2 The objectives of the assessment are to:

- Provide baseline information on the current habitats and ecological features both within the Site and immediate surrounding area;
- Identify the proximity of any designated sites for nature conservation interest and provide an assessment of any potential effects the proposed development may have on these;
- Identify the presence or potential presence of any protected species or habitats and provide an assessment of any potential effects the proposed development may have on these; and,
- Outline requirements for further pre-construction checks and / or mitigation measures, if required, and provide an outline of proposed habitat enhancements, if applicable.

1.1.3 The report is based on a desk-based review of existing ecological information and an Extended habitat survey of the Site undertaken in January 2022.

## 1.2 Site Overview

1.2.1 The Site, as shown by the red line boundary in **Figure 1**, is located within the current Kronospan wood product manufacturing plant. The existing area within the Site predominately consists an area of bare ground used for equipment storage, with a line of tree and scrub additionally present. The habitats directly adjacent to the Site currently consist of warehouse, roads, scrub, woodland and pasture field.

1.2.2 In the wider area, the village of Chirk lies directly to the east and the Llangollen canal to the west. The surrounding landscape is dominated by habitats typical of the rural agricultural landscape such as agricultural land and pockets of woodland. Bryniau Clwyd a Dyffryn Dyfrdwy, an Area of Outstanding Natural Beauty, lies 445m west of the Site and incorporates an area of parkland and ancient woodlands at the Chirk Castle Estate, which is located 350m south-west and owned by the National Trust.

## 1.3 Legislative Framework, Planning Policy and Guidance

1.3.1 Reference has been made to the following key pieces of legislation, planning policy and guidance listed in **Table 1.1** below.

**Table 1.1: Key legislation, planning policy and guidance.**

International
<ul style="list-style-type: none"><li>• Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 ('the Ramsar Convention)</li><li>• Convention on the Conservation of European Wildlife and Natural Habitats 1979 ('the Bern Convention)</li><li>• UNESCO convention on the protection of the World Cultural and Natural Heritage (1972)</li></ul>

National
<ul style="list-style-type: none"> <li>• The Conservation of Habitats and Species Regulations 2017 (as amended)</li> <li>• The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</li> <li>• The Wildlife and Countryside Act 1981 (as amended)</li> <li>• Environment (Wales) Act 2016</li> <li>• The Environment Act 2021</li> <li>• Countryside and Rights of Way Act 2000</li> <li>• Protection of Badgers Act 1992</li> <li>• Hedgerow Regulations 1997</li> <li>• Natural Environment and Rural Communities (NERC) Act 2006</li> <li>• ‘Birds of Conservation Concern 5’ (Stanbury et al., 2021)<sup>1</sup>;</li> <li>• The UK Post – 2010 Biodiversity Framework<sup>2</sup>;</li> <li>• The Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed.)<sup>3</sup>;</li> <li>• Planning Policy Wales (PPW11, 2021)</li> <li>• The Nature Recovery Plan for Wales</li> <li>• BS 42020:2013 Biodiversity – Code of Practice for Planning and Development</li> <li>• Biodiversity Net Gain. Good practice principles for development<sup>4</sup></li> </ul>
Local
<ul style="list-style-type: none"> <li>• Wrexham Unitary Development Plan 1996 – 2011</li> <li>• Emerging Wrexham Local Development Plan (2013 - 2028) - Deposit Plan (March 2018)<sup>5</sup></li> <li>• Wrexham Biodiversity Action Plan<sup>6</sup></li> <li>• Wrexham Local Planning Note No. 32: Biodiversity and Development 2011</li> </ul>

1.3.2 The ‘UK Post-2010 Biodiversity Framework’ succeeds the UK Biodiversity Action Plan (UK BAP) and ‘Conserving Biodiversity – the UK Approach’. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work and are therefore considered within this report in the context of the objectives of the Biodiversity Framework. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. UK BAPs formed the basis for

<sup>1</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747. Available online at <https://britishbirds.co.uk/content/status-our-bird-populations>.

<sup>2</sup> <https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/>.

<sup>3</sup> Collins et al. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3<sup>rd</sup> edition, BCT: London.

<sup>4</sup> <https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/>

<sup>9</sup> <https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/>

<sup>5</sup> This plan has not yet been adopted, however is at a late stage of preparation and weight should be given to nature conservation policies within this emerging plan.

<sup>6</sup> <https://www.wrexham.gov.uk/sites/default/files/2020-05/lpg-32e.pdf>

statutory lists of priority species and habitats in England under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006 and in Wales under Section 7 of the Environment (Wales) Act 2016, and so are also relevant in the context of this legislation.

- 1.3.3 This report is provided in accordance with the provisions of British Standard 42020:2013 Biodiversity: *Code of practice for planning and development*.

## 2 METHODOLOGY

### 2.1 Desktop Study

2.1.1 A desktop study was undertaken to identify any known existing features or species of ecological importance within the study area (as defined below).

2.1.2 The desk study included a review of relevant policy and guidance and sought to identify any statutory designated sites for nature conservation through a review of the Natural Resource Wales, JNCC, Multi Agency Geographic Information for the Countryside (MAGIC) websites and Lle Geo-Portal website<sup>7</sup>. A 5km search radius surrounding the Site boundary was adopted for all statutory designated sites, extending to 10km for International protected sites.

2.1.3 The search for statutory designated sites included the following:

- Internationally Designated Sites:
  - Special Protection Areas (SPA) and potential SPA;
  - Ramsar Wetlands of International Importance (Ramsar) and proposed Ramsar; and,
  - Special Protection Areas (SAC) and possible SAC
- Nationally designated Sites:
  - Sites of Special Scientific Interest (SSSI);
  - National Nature Reserve (NNR); and,
  - Local Nature Reserve (LNR)

2.1.4 The locations of statutory designated sites are provided in **Figure 2**.

2.1.5 Biological records data on non-statutory designated sites and records of protected and notable species was requested from Cofnod<sup>8</sup> the local record centre for North Wales. A 2km search radius was used from the Site boundaries. The locations of all non-statutory designated sites located within 2km of the Site are provided in **Figure 3**.

2.1.6 Throughout this report only recent records of notable species have been used, defined as those dating within the last 10 years.

2.1.7 The Ancient Woodland Inventory was accessed through MAGIC to determine the presence and location of ancient woodland blocks recorded on the inventory, and the Woodland Trust Ancient Tree Inventory<sup>9</sup> was consulted for locations of individual ancient or veteran trees.

2.1.8 Reference was also made to Ordnance Survey maps of the wider area and online aerial images ([www.google.co.uk/maps](http://www.google.co.uk/maps)) in order to determine any features of nature conservation interest in the wider area.

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<sup>7</sup> <http://lle.gov.wales>

<sup>8</sup> <https://www.cofnod.org.uk/Home>

<sup>9</sup> <https://ati.woodlandtrust.org.uk/>

## 2.2 Field Survey

### *Extended Habitat Survey*

- 2.2.1 An Extended habitat survey of the Site was undertaken on the 13<sup>th</sup> January 2022 by Mr K. Love BSc (Hons), a suitably qualified and experienced ecologist. The survey followed the methodology outlined in the UK Habitat Classification Use Manual (V1.1) (UKHab, 2020<sup>10</sup>) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM), Technical Guidance Series *Guidelines for Preliminary Ecological Appraisal – Version 2* (CIEEM, 2017<sup>11</sup>).
- 2.2.2 The survey covered land within the redline area. The extent of the Site is detailed in **Figure 1**, with habitats located within the Site and wider survey area provided in **Figure 4**.
- 2.2.3 Habitats were mapped and described using a series of ‘target notes’ (TNs).
- 2.2.4 The survey was extended to include the additional recording of specific features indicating the presence, or likely presence, of protected species, invasive species and other species of conservation significance.

## 2.3 Limitations of survey

- 2.3.1 An Extended habitat survey does not constitute a detailed botanical survey of faunal species list or provide a full protected species survey but, enables competent ecologists to ascertain an understanding of the ecology of the site in order to:
- Broadly identify the nature conservation value of a site and assess the significance of any potential impacts on habitat/species recorded; and/or,
  - Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site (if any).
- 2.3.2 The Extended habitat survey was undertaken in January 2022 and therefore outside the optimal period for botanical surveys (approximately April to September) limiting the number of species that can be accurately identified. However, the habitat types could still be accurately classified. Therefore, due to the limited range of habitat types present within the Site, the timing of the surveys is not considered to represent a significant constraint.

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<sup>10</sup> Butcher, B., Carey, P., Edmonds, R., Norton, L., and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at [www.ukhab.org](http://www.ukhab.org)

<sup>11</sup> CIEEM (2017) Guidelines for Preliminary Ecological Appraisal – Second Edition - <https://cieem.net/resource/guidance-on-preliminary-ecological-appraisal-gpea/>

### 3 BASELINE

#### 3.1 Designated Sites for Nature Conservations

##### *Statutory Designated Sites*

- 3.1.1 A review of MAGIC identified the Site does not form part of, or is situated adjacent to, any statutory designated site for nature conservation.
- 3.1.2 Four internationally designated sites are located within 10km and a further four nationally designated sites are located within 5km of the Site. The closest site, Chirk Castle and Parkland Site of Special Scientific Interest (SSSI) is located approximately 438m south-west from the Site.
- 3.1.3 SSSI Impact Risk Zones (IRZ) are publicly accessible for SSSI in England only, however the Site does lie within a SSSI IRZ in relation to the River Dee SSSI and the proposed development is considered to fall within the assessment category for Water Supply due to a net additional gross internal floorspace is > 1,000m<sup>2</sup> and being a development requiring its own water supply. Therefore, the Local Authority should consult the relevant statutory conservation organisation(s) on the potential for impacts to the River Dee SSSI.
- 3.1.4 Statutory designated sites are summarised in **Table 3.1** below, and locations are shown in **Figure 2**.

**Table 3.1: Statutory Designated Sites for Nature Conservation**

SSSI: Site of Special Scientific Interest; LNR: Local Nature Reserve; SAC: Special Area of Conservation; SPA: Special Protection Area

Site Name	Designation	Distance and Direction from Site	Description
Chirk Castle and Parkland	SSSI	438m south-west	Designated for being one of the best examples of ancient wood pasture and parkland in Wales. It contains a large number of veteran and ancient trees. It is also of interest for the important invertebrates that the trees support. Breeding roosts of lesser horseshoe bat <i>Rhinolophus hipposideros</i> are present within the castle buildings.
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid	SAC	970m south-east	Designated features: <ul style="list-style-type: none"> <li>Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation.</li> <li>Atlantic salmon <i>Salmo salar</i></li> <li>Floating water-plantain <i>Luronium natans</i></li> <li>Sea lamprey <i>Petromyzon marinus</i></li> <li>Brook lamprey <i>Lampetra planeri</i></li> <li>River lamprey <i>lampetra fluviatilis</i></li> <li>Bullhead <i>Cottus gobio</i></li> <li>Otter <i>Lutra lutra</i></li> </ul>
Afon Dyfrdwy (River Dee)	SSSI	970m south-east	Designated for its range of river habitat types and saltmarsh transition habitats. Supports a diverse flora community including populations of floating water plantain, slender hare's-ear <i>Bupleurum tenuissimum</i> , sea barley <i>Hordeum marinum</i> and hard-grass <i>Parapholis strigose</i> . Also important for animal species such as otter, salmon, bullhead, brook lamprey, river lamprey, sea

			lamprey, club-tailed dragonfly <i>Gomphus vulgatissimus</i> and other aquatic invertebrates.
Lfton Meadows	LNR	2.77km east	Former colliery now supporting a variety of habitats including woodland, stream and grassland.
Nant-Y-Belan and Pynela Woods	SSSI	3.00km north-east	Significant area of semi-natural woodland in an area largely affected by replanting with conifers and non-native hardwoods.
Berwyn a Mynyddoedd De Clwyd / Berwyn and South Clwyd Mountains	SAC	5.84km north-west	Features of interest <ul style="list-style-type: none"> <li>• Hen harrier <i>Circus cyaneus</i> (breeding)</li> <li>• Red kite <i>Milvus milvus</i> (breeding)</li> <li>• Merlin <i>Falco columbarius</i> (breeding)</li> <li>• Peregrine <i>Falco Peregrinus</i> (breeding)</li> <li>• Golden plover <i>Pluvialis apricaria</i> (breeding)</li> <li>• Short eared owl <i>Asio flammeus</i> (breeding)</li> </ul>
Johnstown Newt Sites	SAC	7.06km north-east	Designated for its great crested newt (GCN) <i>Triturus cristatus</i> population.
Berwyn	SPA	8.88km west	Features of interest <ul style="list-style-type: none"> <li>• Blanket bog</li> <li>• Plants in crevices in base-rich rocks</li> <li>• Dry heath</li> <li>• Dry grasslands and scrublands on chalk or limestone</li> <li>• Wet mires ('quaking' surfaces)</li> </ul>

### **Non-statutory Designated Sites**

- 3.1.5 A review of data provided by Cofnod indicates the Site is not within any non-statutory designated sites.
- 3.1.6 Coed Y Camlas/Canal Woods Wildlife Site is the only Wildlife Site located within 2km of the Site, located approximately 145m west from the Site.
- 3.1.7 Non-statutory designated sites are summarised in **Table 3.2** below, and locations are shown in **Figure 3**.

**Table 3.2: Non-statutory Designated Sites for Nature Conservation**

Site Name	Designation	Distance and Direction from Site	Description
Coed Y Camlas/Canal Woods	Wildlife Site	145m west	Semi-natural broad-leaved woodland on embankments either side of the canal. The canopy is dominated by sycamore <i>Acer pseudoplatanus</i> , but ash <i>Fraxinus excelsior</i> is abundant and sessile oak <i>Quercus petraea</i> and birch <i>Betula sp.</i> are frequent. In the understorey hawthorn <i>Crataegus monogyna</i> is frequent with hazel <i>Corylus sp.</i> , elder <i>Sambucus sp.</i> and elm <i>Ulmus Ulex sp.</i>

Barracks Field	Wildlife Site	1.64km north-east	Tall coarse semi-improved neutral grassland dominated by cock'sfoot <i>Dactylis glomerata</i> , with abundant tall oat grass <i>Arrhenatherum elatius</i> and scattered gorse <i>Ulex sp.</i> scrub, black knapweed <i>Centaurea nigra sp.</i> and nettles <i>Urtica dioica sp.</i>
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## 3.2 Priority habitats

3.2.1 No habitats of Principal Importance (also known as priority habitat) under Section 7 of the Environment (Wales) Act 2016 (S7), Section 42 of the NERC Act 2006 (NERC) and/or listed on the UKBAP are located within the Site. Review of the MAGIC and Lle websites, together with information sourced from Cofnod and the extended habitat survey, identified six priority habitats within 2km of the Site boundary. Such habitats are presented in **Table 3.3** below. Where numerous records of a particular habitat were recorded, only the closest record to the Site has been provided, in order to provide context for the Site and surrounding area.

**Table 3.3: Priority Habitats**

Priority habitat name	Designation	Distance from site
Ponds	NERC S.41, EW S.7, UKBAP, LBAP	25m west
Hedgerow	NERC S.41, EW S.7, UKBAP, LBAP	100m south-east
Wood pasture and parkland	NERC S.41, EW S.7, UKBAP, LBAP	705m south-east
Traditional orchard	NERC S.41, EW S.7, UKBAP, LBAP	868m north-east
Rivers	NERC S.41, EW S.7, UKBAP, LBAP	970m south-east
Lowland mixed deciduous woodland	NERC S.41, EW S.7, UKBAP, LBAP	985m south

### Key

**NERC S.41:** Natural Environment and Rural Communities (NERC) Act Section 41

**EW S.7:** Environment (Wales) Act Section 7

**UKBAP:** UK Biodiversity Action Plan Priority Habitat

**LBAP:** Wrexham Local Biodiversity Action Plan Priority Habitat

## 3.3 Ancient and Irreplaceable habitats

3.3.1 No ancient woodland, veteran trees or other potentially irreplaceable habitats such as peaty soils were identified within or in close proximity to the Site. In the wider area, restored ancient woodland was located within 158m west, with ancient semi natural woodland located 666m west and plantation on an ancient woodland site positioned 505m south-west. A number of notable, veteran and ancient trees are located approximately 335m south-west in the Coed Y Camlas/Canal Woods LWS and 475m south-east along Station Avenue/Rhodfa'r Orsaf. Many notable, veteran and ancient trees representing a diverse range of species are located west of the Site in parkland and woodland associated with the National Trust owned Chirk Castel Estate.

## 3.4 Habitat Survey

3.4.1 This section should be read in conjunction with the Phase 1 Habitat Plan presented as **Figure 4**, with photographs presented in **Appendix 1**.

- 3.4.2 The Site is dominated by bare ground with exposed soil that is used for outdoor equipment storage (Photograph 1). Three small areas of hardstanding that contain shipping containers and a relocatable temporary building are present and used for additional storage (Photograph 2).
- 3.4.3 The north, west and south Site boundaries comprise earth banks, with the eastern Site boundary partly comprised of fencing that is associated with an adjacent residential building. A dense line of cypress *Cupressus* sp. trees averaging approximately 10m tall are located along the northern earth bank (Photograph 3). This earth bank contains grass along the northern bankside and bramble *Rubus* sp. scrub along the southern bank base (Photograph 3). The northern, grass-dominated bankside is adjacent to a hardstanding road that provides access to the Site along the southern boundary of the Kronospan wood product manufacturing plant. The earth bank along the southern Site boundary comprises bare soil and grass (Photograph 4), whilst the earth bank at the western Site boundary is dominated by bramble scrub and scattered immature birch *Betula pendula* trees (Photograph 5).
- 3.4.4 The western Site boundary is adjacent to a small neighbouring block of woodland dominated by immature birch that contains scattered hawthorn. An artificial pond (P1) that is also located approximately 25m west of the Site boundary. The pond could not be accessed at the time of survey; however, it was observed from distance from the Site's western earth bank. The pond perimeter contains metal-wire fencing, immature birch trees and bramble scrub (Photograph 6).

## 3.5 Protected and Notable Species

### **Birds**

- 3.5.1 A total of 515 recent records of birds were provided by Cofnod, including 91 species. Of these, 12 species are listed on Schedule 1 of the Wildlife and Countryside Act. These include barn owl *Tyto alba*, brambling *Fringilla montifringilla*, crossbill *Loxia curvirostra*, fieldfare *Turdus pilaris*, goshawk *Accipiter gentilis*, green sandpiper *Tringa ochropus*, hobby *Falco subbuteo*, kingfisher *Alcedo atthis*, osprey *Pandion haliaetus*, peregrine, red kite and redwing *Turdus iliacus*. No bird records were returned within the Site itself.
- 3.5.2 Fourteen Red List species and 29 Amber List species were returned in the data search, as well as 17 species listed under Section 7 of the Environment (Wales) Act 2016.
- 3.5.3 The Site is dominated by bare soil which does not offer suitable habitat for significant breeding bird populations or wintering bird populations. The suitable nesting habitat is limited to the line of cypress trees and bramble scrub within the Site, which is considered unlikely to support nesting Schedule 1 species, but may support a common assemblage of breeding birds

### **Bats**

- 3.5.4 A total of sixteen records of bat were returned consisting of seven species categories; brown long eared bat *Plecotus auritus*, whiskered/Brandt's *Myotis mystacinus/ Myotis brandti*, whiskered, Natter's bat *Myotis nattereri*, Daubenton's bat *Myotis daubentonii*, lesser horseshoe *Rhinolophus hipposideros* and greater horseshoe *Rhinolophus ferrumequinum*. The nearest record was a lesser horseshoe located approximately 1.6km south-west from the Site.

### Bat Habitat Suitability

- 3.5.5 In line with the guidance provided in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed)<sup>12</sup>, the habitats within the Site have negligible foraging value for bats as the Site and directly

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<sup>12</sup> <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition>

adjacent land is dominated by bare soil and hardstanding and in many places well-lit limiting commuting/foraging potential for bat species. The habitats in the wider areas such as woodlands, semi-improved fields and linear features including waterways and hedgerows such as the River Dee and Llangollen canal (and associated green linear features) are considered likely to provide greater foraging and commuting opportunities.

#### Bat Roost Potential

- 3.5.6 During the extended habitat survey, no suitable bat roost features were identified on any trees or structures within or directly adjacent to the Site. All trees and structures are therefore classified as offering negligible bat roost potential.
- 3.5.7 Review of MAGIC identified one granted European protected species application (England) for bats within 2km of the Site. This licence permitted for the destruction of a resting place for common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and whiskered bat in 2019 (case reference: 2019-42527-EPS-MIT).

#### **Badger**

- 3.5.8 A total of 14 records of badger *Meles meles* were returned by Cofnod during the last ten years, including field signs and roadkill. The nearest record returned was a latrine located in woodland 715m south-west of the Site.
- 3.5.9 Earth banks and bramble scrub provide suitable habitat for sett excavation within the Site; however, presence of badger is considered unlikely due to high disturbance levels associated with human activity at the Kronospan facility. Foraging and commuting opportunities are also limited by perimeter fencing around the Kronospan plant, which may restrict badger access into the Site.
- 3.5.10 Badgers could be present in suitable habitats within the wider area such as hedgerows and woodlands.

#### **Otter and Water Vole**

- 3.5.11 Six records of otter were returned by Cofnod, the closest record located approximately 363m south-west of the Site in the Llangollen Canal. The majority of records were returned in the River Ceiriog approximately 1km south of the Site.
- 3.5.12 No records of water vole *Arvicola amphibius* were returned within 2km of the Site. Seventeen historical records from 1996-2009 were returned in the wider area, with recordings mostly recorded along the Llangollen Canal and River Ceiriog.
- 3.5.13 No suitable habitats were present within the Site for either species. A number of watercourses such as the River Dee, River Ceiriog and Llangollen Canal are present within the wider area that could offer suitable habitat for both species. However, with the Site located within the active Kronospan manufacturing plant, and with no suitable habitats present for either species, it is considered that otter and water vole are absent from the Site and therefore not discussed further.

#### **Hazel Dormouse**

- 3.5.14 No records of hazel dormouse *Muscardinus avellanarius* were returned within 2km of the Site.
- 3.5.15 The bare soil, hardstanding and line of trees are considered to offer negligible opportunities for hazel dormouse. There is limited suitable habitat containing shrub food sources within or immediately adjacent to the Site.
- 3.5.16 Hazel dormice are therefore considered likely to be absent from the Site and therefore are not discussed further within this report.

### ***Amphibians and Reptiles***

- 3.5.17 Five records of GCN, smooth newt *Lissotriton vulgaris* and palmate newt *Lissotriton helveticus* were returned by Cofnod, with the closest records for all three species located 652m south-west of the Site. Three records of common frog *Rana temporaria* and a single common toad *Bufo bufo* record were also returned with the closest records located 652m south-west and 1.35km north-east of the Site, respectively.
- 3.5.18 A single common lizard *Zootoca vivipara* record was returned 2km west. Two slow-worm *Anguis fragilis* records were returned within 2km of the Site, with the closest record 755m south-east.
- 3.5.19 A single pond (P1) that is surrounded by suitable terrestrial habitat is present immediately west of the Site. The Site itself is mostly dominated by bare soil, with high levels of human disturbance present. However, bramble scrub within and adjacent to the Site does provide some opportunities for amphibians and reptiles, as well as rubble/equipment piles that provide areas of refuge. Open areas exposed to ground-level sunlight may also provide reptile basking opportunities, however such open areas are more suitable within vegetated habitats and therefore are limited within the Site. Due to lack of vegetation present, the majority of Site is considered unfavourable for breeding, dispersal, foraging and hibernation.

### ***Other notable Species***

- 3.5.20 A number of records were returned for other notable species including polecat *Mustella putorius*, brown hare *Lepus europaeus* and hedgehog *Erinaceus europaeus* within 2km of the Site, although the Site itself is considered unsuitable for these species.
- 3.5.21 The habitats within the Site are not considered to be of a floristic or structural quality which could support significant assemblages of invertebrates or other notable species. Other notable species are not considered further within this assessment.

### ***Invasive Non-native Species***

- 3.5.22 Records returned by Cofnod included four invasive non-native species in the wider 2km search area. These included Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera*, Canada goose *Branta canadensis* and American mink *Neovison vison*.
- 3.5.23 No invasive non-native species were noted during the extended habitat survey.

## 4 DISCUSSION

### 4.1 Overview

- 4.1.1 This section seeks to identify the potential for effects on protected and notable habitats and species. The Site's proximity to statutory and non-statutory designated sites and potential effects on their qualifying interests is discussed. Measures are proposed for the protection of sensitive habitats and species throughout the construction phase of development and recommendations are made for further pre-construction surveys and mitigation.
- 4.1.2 Consideration of ecological impacts and subsequent effects arising from the development has been undertaken with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' (CIEEM, 2018)<sup>13</sup>.
- 4.1.3 This section also provides sufficient information for the Local Planning Authority to have regard to the Habitats Regulations where required.

### 4.2 Designated Sites for Nature Conservation

- 4.2.1 The Site does not form part of any statutory designated site for nature conservation. It is however located within a SSSI Impact Risk Zone in relation to the River Dee SSSI, and the proposed development type does meet the criteria whereby the Local Authority should consult the relevant statutory conservation organisation. The desktop study identified four internationally designated sites located within 10km and a further four nationally designated sites located within 5km of the Site.
- 4.2.2 The nearest site identified was Chirk Castle and Parkland SSSI located 438m south-west; this site was designated for its habitats of interest as were five of the other statutory designated sites. Three of the sites were designated for supporting species of interest such as GCN, fish populations and breeding birds (e.g., hen harrier and merlin). Such fish and breeding bird species will not occur within the Site due to the unsuitable habitats present. Although GCN may frequent the Site and immediate surroundings, due to the presence of suitable habitat found adjacent, such a potential population is spatially separated from Johnstown Newt Sites SAC and unlikely to be part of the SAC metapopulation.
- 4.2.3 The proposed development will not result in any direct or indirect effects on habitats or species of any statutory designated sites due to the separation distances involved and the nature of the proposed development. Indirect effects will similarly be avoided through the implementation of standard good practice drainage management and pollution prevention and runoff control measures during the construction and operation of the proposed development.

### 4.3 Habitats and Flora

- 4.3.1 The Site is comprised predominantly of bare ground, with areas of bramble, modified grassland and a line of cypress trees located on earth banks. In the wider context, the Site is located within the active Kronospan facility which is dominated by hardstanding and buildings.
- 4.3.2 The earth bank containing a line of cypress trees and bramble that is proposed to be removed offers limited ecological value.

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<sup>13</sup>CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester

- 4.3.3 Standard good practice pollution prevention and runoff control measures will be set in place as part of the construction phase, protecting adjacent habitats in the wider area, including the nearby pond (P1), from the risk of indirect effects.

## 4.4 Protected and Notable Species

### ***Birds***

- 4.4.1 All wild birds, their nests and eggs are, with few exceptions, protected under the Wildlife and Countryside Act 1981 (as amended). Schedule 1 of the Act, confers special protection with increased penalties for certain species. All nesting birds are also listed as priority species within the *Wrexham Biodiversity action plan*.
- 4.4.2 There is potential for breeding birds to be present within the line of cypress trees and scrub, which are proposed to be removed during construction of the development.
- 4.4.3 In order to avoid impacts to nesting birds and to ensure compliance with the provisions of the Wildlife and Countryside Act 1981 (as amended), it is recommended that any Site clearance or vegetation removal takes place outside of the bird breeding season (March to August inclusive). If vegetation works are necessary during the breeding season, suitable nesting habitat should be hand-searched by a suitably experienced ecologist prior to works commencing. Only when the ecologist is satisfied that no offence will occur under the legislation will works be permitted to proceed.
- 4.4.4 No species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are considered likely to nest within the Site due to the limited quantity and nature of suitable habitat present, and the large amount of higher quality habitat available in the wider area. Following the proposed mitigation measures outlined above, no bird species potentially breeding within the Site are considered likely to be impacted by the proposed development. Any potential disturbance to breeding birds adjacent to the Site as a result of the proposed development is likely to be temporary in nature and restricted to species immediately adjacent to the Site. Such potential disturbance is unlikely to be considerable as breeding birds in these habitats are likely to be frequently subject to high levels of human activity and noises associated with the Kronospan facility.

### ***Bats***

- 4.4.5 All species of British bat are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are further protected under the Habitats Regulations. The Act and Regulations make it an offence to:
- kill, injure or take any wild bat;
  - damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection; and
  - intentionally or recklessly disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection.
- 4.4.6 Eight bat species in the UK are also listed as species of principal importance for the purpose of conserving biodiversity under Section 7 of the Environment (Wales) Act 2016. All species of bats are also listed within the *Wrexham Biodiversity Action Plan*.

### **Roosting Bats**

- 4.4.7 No suitable bat roost features were identified on any trees or urban buildings within or directly adjacent to the Site. All trees and urban buildings are therefore classified as offering negligible bat roost potential and it is considered roosting bats will not be impacted as a result of the Scheme.

### Foraging and Commuting bats

- 4.4.8 The habitats within the Site provide little value for foraging and commuting bats due to the low-quality habitats present and the high levels of lighting at the existing Kronospan facility.
- 4.4.9 It is considered that any proposed lighting will not result in significant increases to the lighting beyond baseline conditions, and therefore there will be no impacts to foraging and commuting bats as a result of the Scheme.

### **Badger**

- 4.4.10 Badgers and their setts are protected under the Protection of Badgers Act 1992. Under the Act it is an offence to: wilfully kill, injure, take, possess or cruelly ill-treat a badger; to attempt to do so: or intentionally or recklessly interfere with a sett.
- 4.4.11 Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or destroyed. Where an activity is likely to result in an offence under the Protection of Badgers Act 1992 a licence from Natural Resources Wales is required.
- 4.4.12 No evidence of badger presence was observed during the habitat survey; however, the neighbouring scrub and woodland habitat is considered suitable for badgers. On-Site earth banks have some suitability for badger sett excavation, however due to the high levels of disturbance associated with the Kronospan facility and perimeter fencing present, no badgers are likely to be present. If the Site is left undisturbed for a continuous period of time, then badgers are more likely to enter the Site. Construction of the proposed development will not result in disturbance or destruction of any badger sett or obstruct access to setts. Once constructed, the proposed development will not sever potential commuting routes used by badgers, with suitable habitats adjacent to the Site being retained and protected as part of the proposed development. It is therefore considered that there will be no impacts to badger as a result of the Scheme.
- 4.4.13 Due to the presence of suitable habitat within and adjacent to the Site in form of earth banks, scrub and woodland, as well as the highly mobile nature of badgers, a pre-construction badger check is recommended to confirm the continued absence of badger setts within the proposed development area and within 30m of the Site boundaries (were accessible) before commencement of works. If a sett is found, suitable advice will be sought from the project ecologist to ensure necessary protection, avoidance or mitigation measures are in place before works proceed.

### **Amphibians & Reptiles**

- 4.4.14 Great crested newt (GCN) and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Habitats Regulations. The Act and Regulations make it an offence to:
- kill, injure or take great crested newts;
  - damage, destroy or obstruct access to any place that a great crested newt uses for shelter or protection; and,
  - intentionally or recklessly disturb a great crested newt while it is occupying a structure or place that it uses for shelter or protection.
- 4.4.15 Common reptile species namely the common lizard, slow-worm, grass snake *Natrix helvetica* and adder *Vipera berus* are protected against killing, injuring and sale under the Wildlife & Countryside Act 1981 (as amended). Common toad, GCN and widespread reptile species (common lizard, slow worm,

grass snake and adder) are listed as priority species under Section 7 of the Environment (Wales) Act 2016 and UK BAP.

- 4.4.16 The majority of the Site offers negligible terrestrial habitat (being bare soil) for amphibian and reptile species; however, boundary habitats consisting of scrub and woodland do provide some potential as foraging habitat and also in providing places of shelter and refuge. Rubble piles associated with equipment storage may also provide further areas of refuge. Reptiles may also utilise open areas adjacent to vegetation for basking purposes. The neighbouring pond located west of the Site (P1) increases the suitability of neighbouring terrestrial habitats as it itself has potential to support amphibian and reptile species, including GCN.
- 4.4.17 Due to suitable habitats present west of the Site, as well as GCN records in the wider area, environmental DNA (eDNA) surveys in line with Biggs *et al.*, 2014<sup>14</sup> are planned to determine presence/absence of GCN in the neighbouring pond (P1) within 250m of the Site (**Figure 5**). Such surveys are scheduled between mid-April and 30th June 2022, which is the optimum eDNA survey period. Results of the survey will be submitted to Wrexham County Borough Council during the determination period for the application.
- 4.4.18 As a precautionary measure, Reasonable Avoidance Measures (RAMs) will also be implemented. If the proposed development is consented and the mitigation (RAMs) implemented, the favourable conservation status of amphibian and reptile species potentially present will be maintained.
- 4.4.19 The RAMs include provision for a tool-box talk, phased vegetation clearance and watching brief by an Ecological Clerk of Works (ECoW) to minimise risk of accidental harm to individual amphibians and reptiles when working in potentially suitable habitats (such as scrub and wooded areas).

#### ***Invasive Non-native Species***

- 4.4.20 No species of invasive non-native plant listed under Schedule 9 of The Wildlife & Countryside Act 1981 (as amended), or the Invasive Alien Species (Enforcement and Permitting) Order 2019 were recorded on-Site during the extended habitat survey. It is an offence to plant or otherwise cause to grow in the wild species listed within Schedule 9; this includes allowing the species to grow/spread, spreading the species or transferring polluted ground material from one area to another.
- 4.4.21 Any waste and soil containing invasive non-native plant species listed under Schedule 9 of The Wildlife & Countryside Act 1981 (as amended) is also classed as controlled waste and as such must be disposed of safely at a licensed landfill site according to the Environmental Protection Act (Duty of Care) Regulations 1991.
- 4.4.22 If any invasive plant species are encountered on-Site or immediately surrounding the Site prior to or during construction, the advice of a suitably qualified ecologist should be sought and the appropriate measures taken to eradicate the species/control the spread should be implemented, and if necessary, suitable biosecurity measures will be employed to prevent the accidental introduction or spread of such species during or after construction.

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<sup>14</sup> Biggs J., Ewald N., Valentini A., Gaboriaud C, Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P and Dunn F (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.

## 5 SUMMARY – ECOLOGY PRIORITY MATRIX

5.1.1 **Table 5.1** summarises the ecological constraints and opportunities associated with the development and makes recommendations for pre-construction survey work and/or mitigation measures as required.

**Table 5.1: Ecological Constraints and Opportunities**

Feature		Details
Statutory and Non-statutory Designated Sites for Nature Conservation	Constraints & Opportunities	a. No direct or indirect impacts upon this or any other statutory or non-statutory designated sites are anticipated by virtue of lack of functional linkages, implementation of good practice measures and the restricted scale and nature of the proposed development.
	Protection Measures	b. Standard measures to ensure runoff control and pollution prevention will be implemented; these measures will safeguard statutory and non-statutory designated sites in the wider area. c. Subsequently no impacts on non-statutory designated sites for nature conservation are anticipated.
Habitats & Flora	Constraints & Opportunities	d. The main habitats within the Site which will be affected by the proposals comprise bare soil and an earth bank that contains a line of cypress trees, modified grassland and bramble scrub. As such habitats are of limited size or of low value to wildlife, little species diversity is supported.
	Protection Measures	e. Pollution prevention measures will be implemented to prevent pollution and run-off occurring during the construction and specific control measures will be implemented to protect waterbodies off-Site.
Birds	Constraints & Opportunities	f. Bare ground and hardstanding on-Site provide limited opportunities for breeding birds. g. Scrub and mature trees adjacent and within the Site offer nesting potential for a common breeding bird assemblage.
	Legislative Compliance – WCA**	h. Vegetation clearance works to suitable nesting bird habitats should be undertaken outside of the bird breeding season (01 March to 31 August inclusive). If vegetation works are necessary during the breeding season, suitable nesting habitat should be searched by a suitably experienced ecologist prior to works commencing. Only when the ecologist is satisfied that no offence will occur under the legislation will works be permitted to proceed.
Bats	Constraints & Opportunities	i. No structures or trees with the potential to support roosting bats will be impacted as a result of the Scheme. j. Foraging and commuting opportunities are limited within the Site due to low quality habitats present. The proposed development is therefore not likely to impact local foraging and commuting bat populations.
	Legislative Compliance – WCA**, HR***	k. Any lighting required during construction and/or operation should be directed away from woodland and scrub (further information is provided in Lighting in the UK, Bats and the Built Environment Series, Bat Conservation Trust and Institute for Lighting Engineers).
Badger	Constraints & Opportunities	l. No badger setts have been identified on Site. Earth banks, scrub and neighbouring woodland habitats provide suitable opportunities for badger.

Feature		Details
	Legislative Compliance – PBA***	<p>m. A pre-construction survey will be undertaken to check current status of badgers within and surrounding the Site</p> <p>n. Suitable protection, avoidance or mitigation measures will be implemented to ensure legislative compliance, if required, such as the implementation of buffer zones.</p> <p>o. Precautionary good practice measures will be adopted during construction to protect badgers and other wildlife such as covering open excavations overnight and securing stored materials.</p>
Amphibians	Constraints & Opportunities	<p>p. The habitats within the Site are of low value to amphibians including GCN. GCN could however be present in on-Site scrub habitat and rubble refugia, as well as in the wider area, including habitats adjacent to the Site such as woodland, scrub and a single pond (P1).</p> <p>q. Potentially suitable habitat adjacent to the Site will be retained and protected as part of the development. Works involving potential scrub and a line of tree clearance are required on-Site to facilitate the development.</p>
	Legislative Compliance - WCA*, HR**	<p>r. Pollution prevention measures will be implemented to prevent pollution and run-off occurring during the construction, and specific control measures will be implemented to protect the watercourses off-Site.</p> <p>s. Environmental DNA surveys will be undertaken between April and June 2022 to determine GCN presence at the neighbouring pond (P1) west of the Site.</p> <p>t. Works affecting suitable habitat (such as the proposed scrub and tree clearance) to be undertaken under Reasonable Avoidance Measures (RAMs) on a precautionary basis.</p>
Reptiles	Constraints & Opportunities	<p>u. If reptiles are present, it is likely that they will utilise the boundary habitats, which will largely be retained and protected as part of the development.</p> <p>v. Potentially suitable habitat for reptiles on-Site may include scrub and wooded areas. Works involving potential scrub and a line of tree clearance are required on-Site to facilitate the development.</p>
	Legislative Compliance - WCA*	<p>w. Precautionary - Works affecting suitable habitat (if required) to be undertaken under Reasonable Avoidance Measures (RAMs).</p>
Invasive Non-native Species	Constraints & Opportunities	<p>x. No invasive non-native species were recorded on or adjacent to the Site during the survey.</p>
	Legislative Compliance – WCA**	<p>y. If any invasive species are encountered onsite or immediately surrounding the Site prior to or during construction, suitable biosecurity measures will be implemented to prevent the inadvertent introduction or spread of such species.</p>

#### **Legislative Compliance Key**

\* The Hedgerows Regulations 1997

\*\*Wildlife & Countryside Act 1981 (as amended)

\*\*\*The Conservation of Habitats and Species Regulations 2017 (as amended)

\*\*\*\*Protection of Badgers Act 1992

Figure 1: Site Location Plan



Legend  
 Site

Rev	Date	Description	De	App
00	16/03/2022		KW	HD

This map contains data from the following sources:  
 Ordnance Survey (2021)  
 © Crown copyright. All rights reserved 2022.  
 Licence number 010021675.

Co-ordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Metres



**KRONOSPAN ENGINEERING STORES**

SITE LOCATION PLAN



Avian Ecology, Suite 3c, Walnut Tree Farm, Northwich Road, Lower Stretton  
 WA4 4PQ  
 Tel: 0845 506 5116  
 www.avianecology.co.uk



**Figure 2: Statutory Designated Sites**

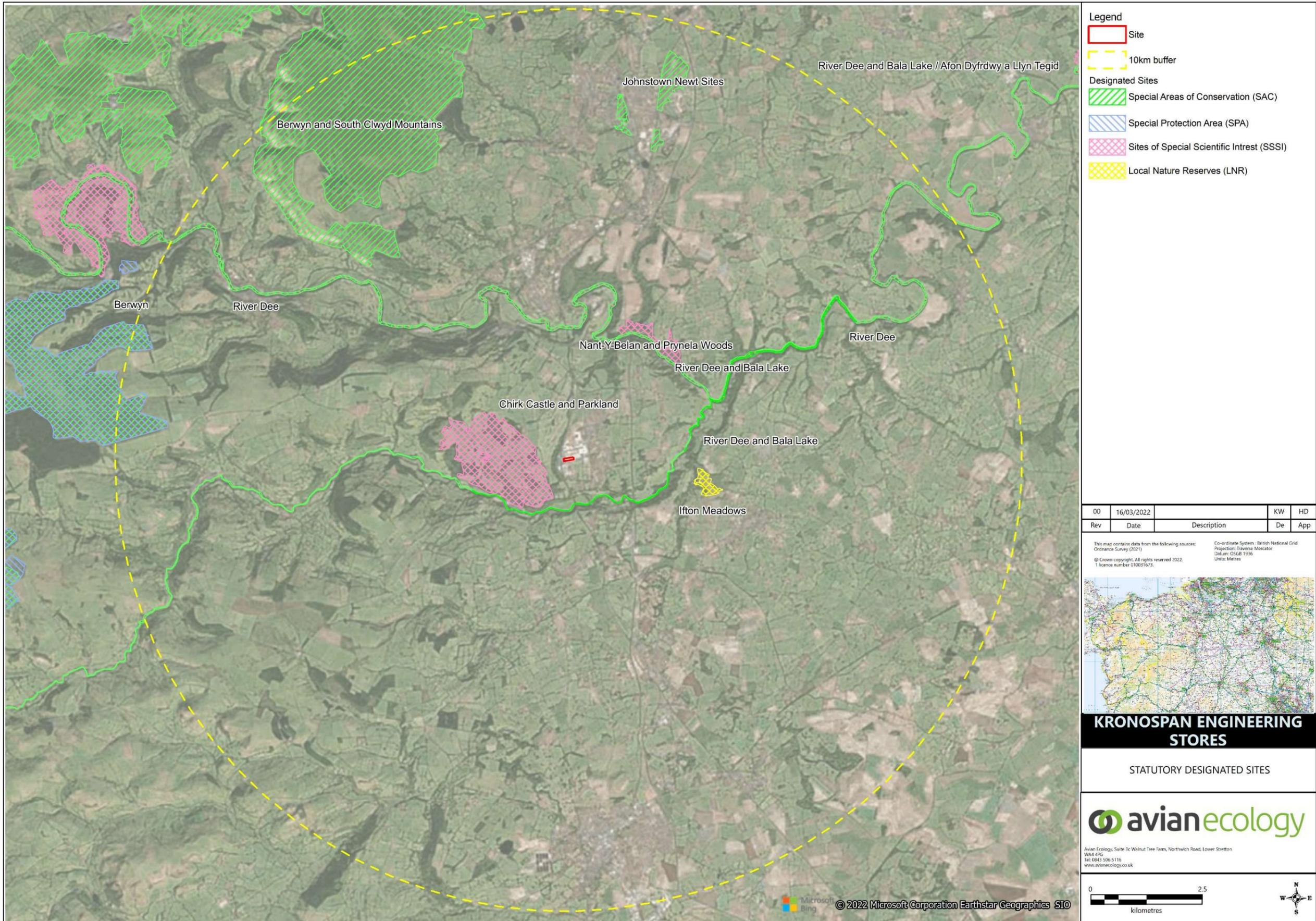


Figure 3: Non-Statutory Designated Sites

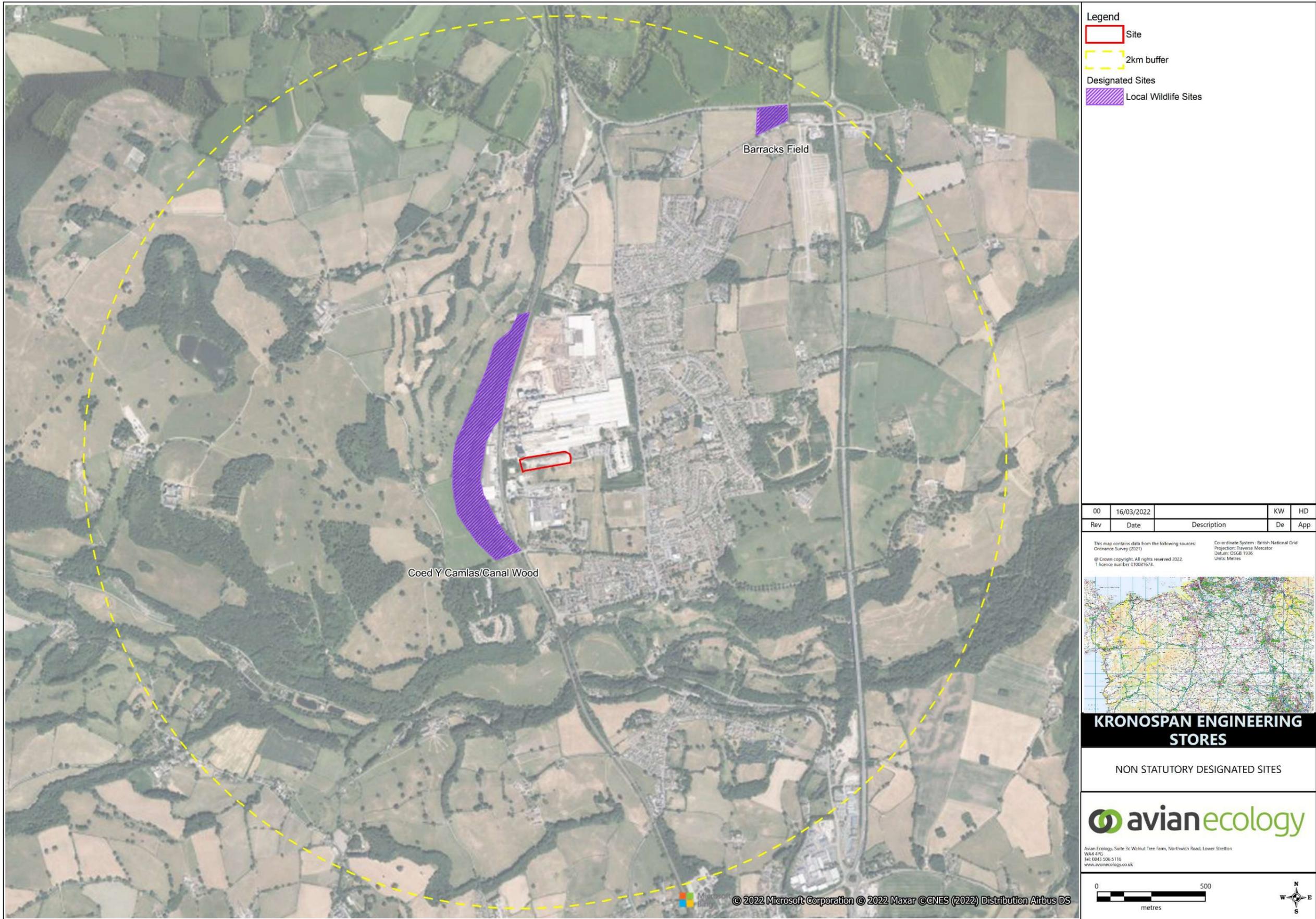


Figure 4: Habitat Plan

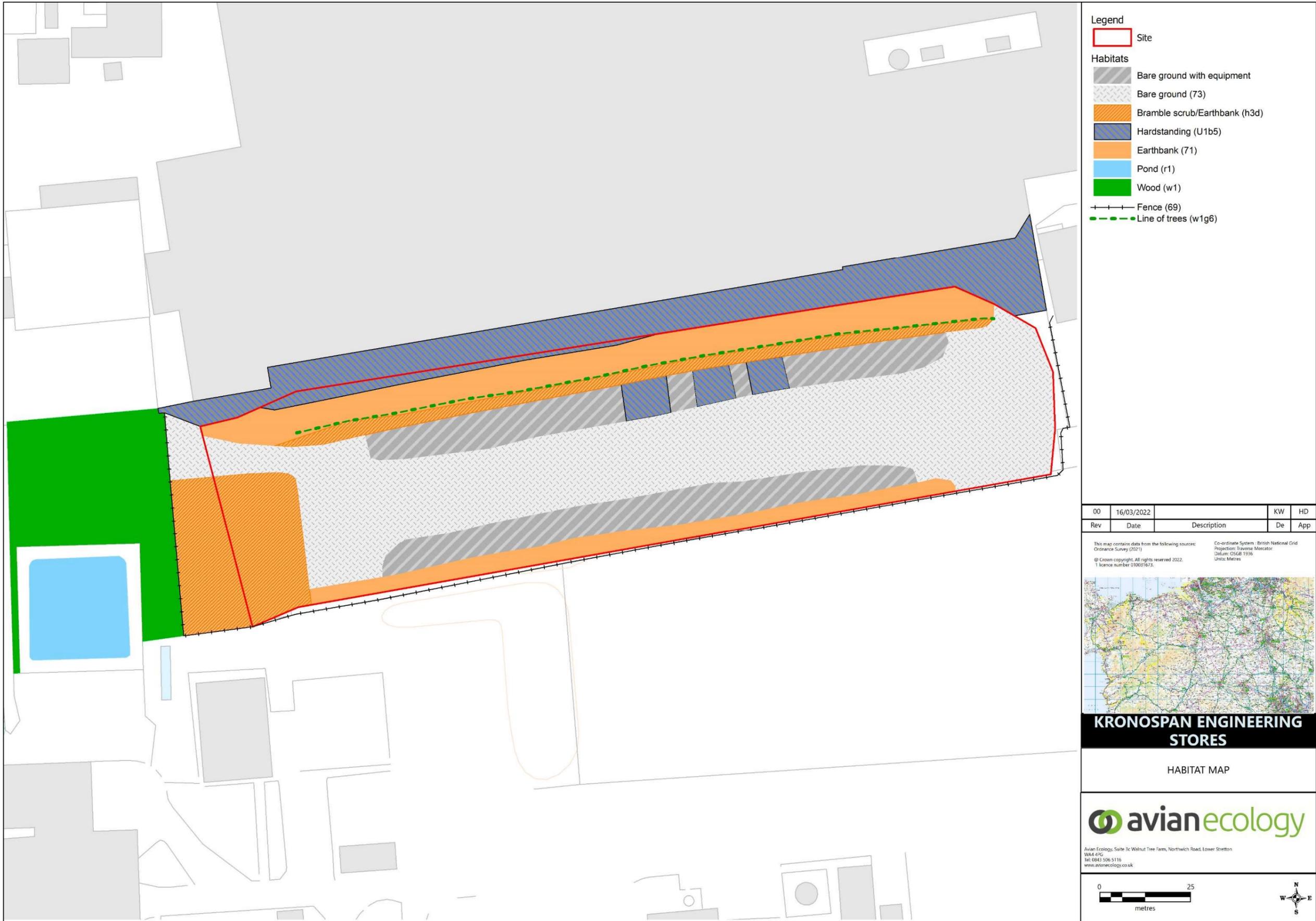
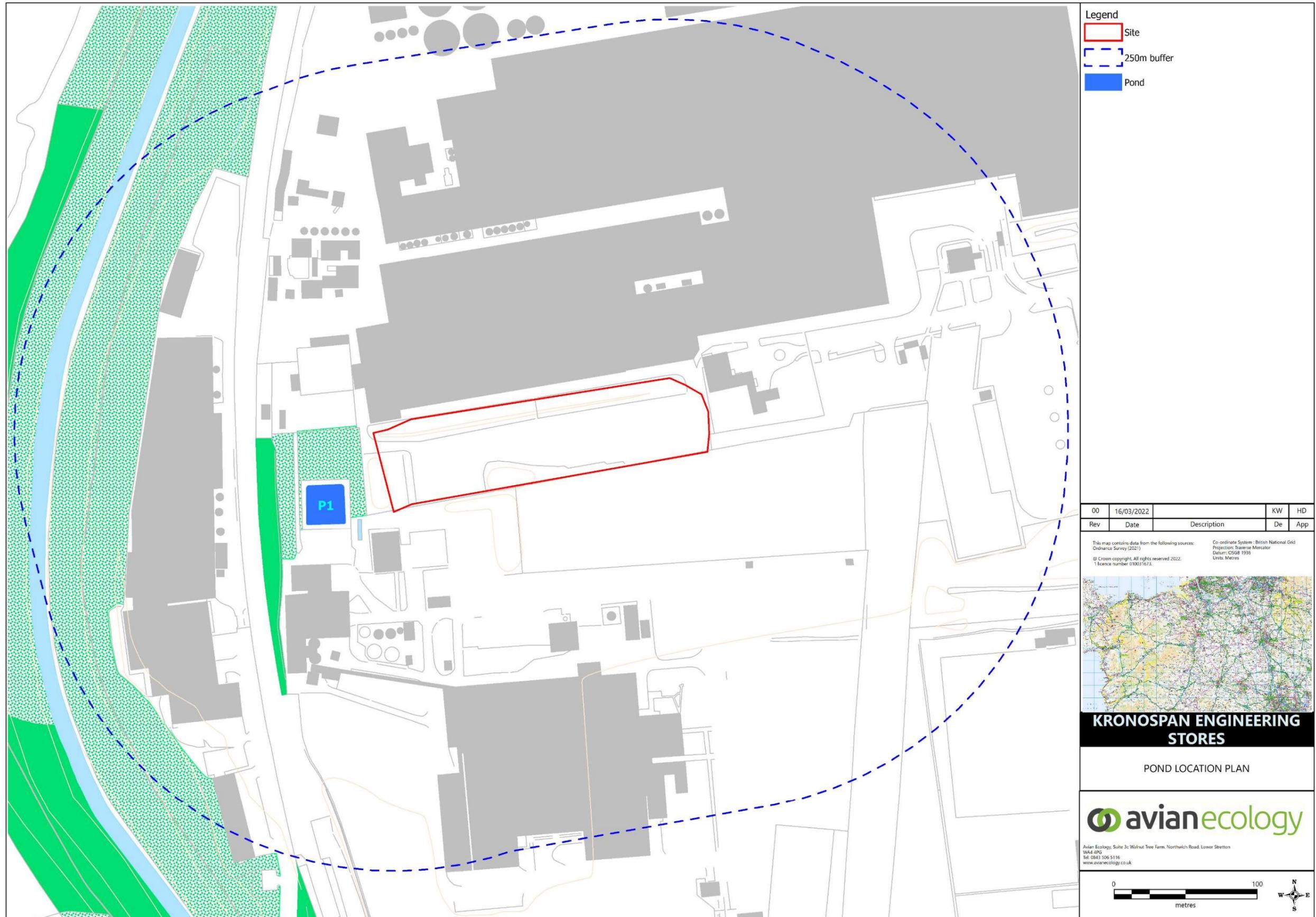


Figure 5: Pond Location Plan

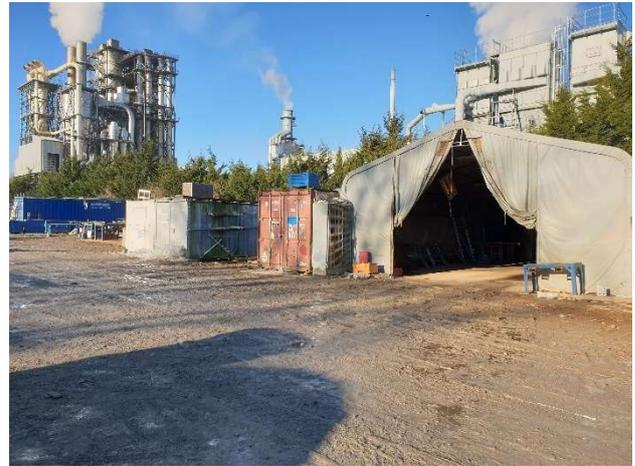


# Appendix 1: Photographs

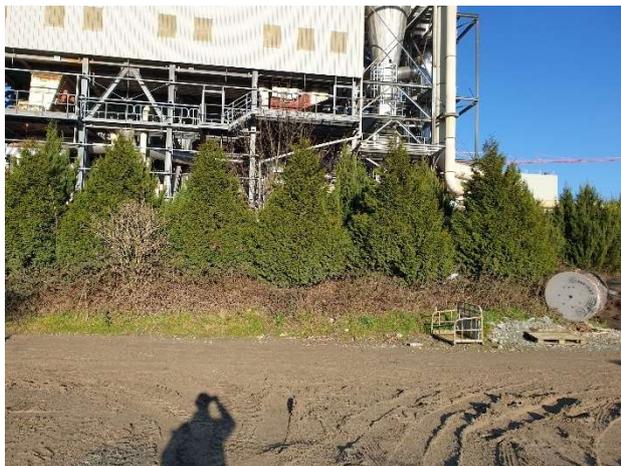
## Photographs



**Photo 1:** View from the eastern Site boundary detailing bare ground used for outdoor equipment storage.



**Photo 2:** A small area of hardstanding used for storing containers and a relocatable temporary building.



**Photo 3:** A line of cypress trees located on an earth bank within the Site. Pictured on the southern bankside is bramble scrub. Modified grassland is present on the northern bankside.



**Photo 4:** An earth bank composed on bare soil and grass that is located along the southern Site boundary. Pictured also is on-Site equipment storage.



**Photo 5:** Bramble scrub with scattered birch trees located on an earth bank west of the Site.



**Photo 6:** P1-A pond surrounded by woodland, scrub and fencing that was not accessed at the time of survey. Situated 25m west of the Site.