
Kronospan East Warehouse
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 extension of a commercial warehouse facility (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 and directly adjacent to the Site currently consists of a warehouse, reception building, roads, footways and ornamental planting.

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.

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">• Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 ('the Ramsar Convention)• Convention on the Conservation of European Wildlife and Natural Habitats 1979 ('the Bern Convention)• UNESCO convention on the protection of the World Cultural and Natural Heritage (1972)
National
<ul style="list-style-type: none">• The Conservation of Habitats and Species Regulations 2017 (as amended)

<ul style="list-style-type: none"> • The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 • The Wildlife and Countryside Act 1981 (as amended) • Environment (Wales) Act 2016 • The Environment Act 2021 • Countryside and Rights of Way Act 2000 • Protection of Badgers Act 1992 • Hedgerow Regulations 1997 • Natural Environment and Rural Communities (NERC) Act 2006 • Natural England Policies on European Protected Species¹; • ‘Birds of Conservation Concern 4’ (Stanbury et al., 2021)²; • The UK Post – 2010 Biodiversity Framework³; • The Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed.)⁴; • Planning Policy Wales (PPW11, 2021) • The Nature Recovery Plan for Wales • BS 42020:2013 Biodiversity – Code of Practice for Planning and Development • Biodiversity Net Gain. Good practice principles for development⁵
Local
<ul style="list-style-type: none"> • Wrexham Unitary Development Plan 1996 – 2011 • Emerging Wrexham Local Development Plan (2013 - 2028) - Deposit Plan (March 2018)⁶ • Wrexham Biodiversity Action Plan⁷ • Wrexham Local Planning Note No. 32: Biodiversity and Development 2011

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 statutory lists of priority species and habitats in England under Section 41 (England) of the Natural

¹ <https://www.gov.uk/government/news/new-licensing-policies-great-for-wildlife-great-for-business>

² 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>.

³ <https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/>.

⁴ Collins et al. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd edition, BCT: London.

⁵ <https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/>

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

⁶ 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.

⁷ <https://www.wrexham.gov.uk/sites/default/files/2020-05/lpg-32e.pdf>

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 website⁸. 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 Cofnod⁹ 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 Inventory¹⁰ 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) in order to determine any features of nature conservation interest in the wider area.

⁸ <http://lle.gov.wales>

⁹ <https://www.cofnod.org.uk/Home>

¹⁰ <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 13th January 2022 by Mr K. Love, a suitably qualified and experienced ecologist. The survey followed the methodology outlined in the UK Habitat Classification Use Manual (V1.1) (UKHab, 2020¹¹) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM), Technical Guidance Series *Guidelines for Preliminary Ecological Appraisal – Version 2* (CIEEM, 2017¹²).
- 2.2.2 The survey covered land within the redline area. The extent of the Site is detailed in **Figure 1**, habitats located within the Site and wider survey area is 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.

Bat Roost Aerial Climbing Inspection

- 2.2.5 A further assessment of two trees, TN1 within and TN2 adjacent to the Site with potential bat roost potential was conducted. This involved an initial ground level inspection with binoculars to confirm the potential roost features noted during the Extended habitat survey on 13th January 2022. This was followed by aerial climbing inspection, assisted by licenced tree climbers using an endoscope under direction of the ecologist who remained at ground level with the endoscope wireless camera. The ecologist Mr D Foy operated as an accredited agent of Andrew Logan of Avian Ecology who is a level 2 licenced bat surveyor (Class Licence Registration Number: 2015-14699-CLS-CLS).

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.

¹¹ 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

¹² 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 shows the Site does not form part of, or sit adjacent to, any statutory designated site for nature conservation.
- 3.1.2 Four internationally designated sites are located within 10km and further four nationally designated sites are located within 5km of the Site. The closest site, Chirk Castle and Parkland SSSI is located approximately 818m 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 > 1,000m² 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; NNR: National Nature Reserve; LNR: Local Nature Reserve; SAC: Special Area of Conservation

Site Name	Designation	Distance and Direction from Site	Description
Chirk Castle and Parkland	SSSI	818m 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 tree. 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	SAC	965m north east	Designated features: <ul style="list-style-type: none"> • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation. • Atlantic salmon <i>Salmo salar</i> • Floating water-plantain <i>Luronium natans</i> • Sea lamprey <i>Petromyzon marinus</i> • Brook lamprey <i>Lampetra planeri</i> • River lamprey <i>lampetra fluviatilis</i> • Bullhead <i>Cottus gobio</i> • Otter <i>Lutra lutra</i>
River Dee	SSSI	965m north 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	2.48km south east	Former colliery now supporting a variety of habitats including woodland, stream and grassland.
Nant-Y-Belan and Pynela Woods	SSSI	2.73km north east	Significant area of semi-natural woodland in an area largely affected by replanting with conifers and non-native hardwoods.
Johnstown Newt Sites	SAC	6.85km north east	Designated for its GCN population.
Berwyn and South Clwyd Mountains	SAC	5.9km south west	Features of interest <ul style="list-style-type: none"> • Hen harrier (breeding) • Red kite (breeding) • Merlin (breeding) • Peregrine (breeding) • Golden plover (breeding) • Short eared owl (breeding)
Berwyn	SPA	9.18km west	Features of interest <ul style="list-style-type: none"> • Blanket bog • Plants in crevices in base-rich rocks • Dry heath • Dry grasslands and scrublands on chalk or limestone • Wet mires ('quaking' surfaces)

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 A total of three Wildlife Sites are located within 2km of the Site the closest Coed Y Camlas/Canal Woods Wildlife Site located approximately 420m 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	420m 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</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	1.46km 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 scrub with black knapweed <i>Centaurea nigra sp.</i> and nettles <i>Urtica dioica sp.</i> are frequent.
Bolas Dingle	Wildlife Site	1.74km north east	No information available.

3.2 Priority habitats

3.2.1 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 within or adjacent the Site include hedgerows and lowland deciduous woodland. The MAGIC and Lle website provided information on priority habitats within 2km of the Site as presented **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
Wood pasture and parkland	NERC S.41, EW S.7, UKBAP, LBAP	600m south east
Lowland mixed deciduous woodland	NERC S.41, EW S.7	1km 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 areas restored ancient woodland was located within 550m west, ancient woodland 1km west was present to the west and a number of veteran trees 575m south of the Site.

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 was dominated by hardstanding roads and walkways, with limited areas of amenity grassland and a brick building towards the south east of the Site.

3.4.3 A number of hedgerows were present within the Site two consisted of cypress *Cupressus sp.* approximately 3 m high and 2 m wide. Two circular ornamental hedgerows were present towards the south of the Site approximately 0.5 m in height and width.

- 3.4.4 Three trees were present within the Site including a mature oak *Quercus sp* tree (TN1) which has since been felled, and two semi-mature ornamental trees which remain.

3.5 Protected and Notable Species

Birds

- 3.5.1 A total of 1217663 recent records of birds were provided by Cofnod, of these 13 species are listed on Schedule 1 of the Wildlife and Countryside Act.
- 3.5.2 The Site is dominated by hardstanding and areas of amenity grassland which does not offer suitable habitat for significant breeding bird populations or wintering bird populations. The suitable nesting habitat is limited to the hedgerows, building and trees within the Site which are considered unlikely to support nesting Schedule 1 species.

Bats

- 3.5.3 A total of fourteen records of bat were returned consisting of five species; brown long eared bat *Plecotus auritus*, Whiskered/Brandt's *Myotis mystacinus/ Myotis brandti*, Natter's bat *Myotis nattereri*, Daubenton's *Myotis daubentonii* and greater horseshoe *Rhinolophus ferrumequinum*. The nearest record was a greater horseshoe located approximately 1.89km south west from the Site.

Bat Habitat Suitability

- 3.5.4 In line with the guidance provided in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed)¹³, the habitats within the Site have negligible foraging value for bats as the Site and directly adjacent land is dominated by hardstanding and in many places well-lit limiting commuting/foraging potential for bat species. The habitats in the wider areas such as woodlands 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 some bat roost potential and foraging and commuting opportunities.

Bat Roost Potential

- 3.5.5 One mature oak tree within the Site (TN1) and one mature oak adjacent to the Site, but separated by a road, (TN2) were initially determined to have bat roost potential from a ground level assessment undertaken during the extended habitat survey. Following the aerial inspection, the oak tree within the Site (TN1) was determined to offer negligible bat roost potential as all features were open and heavily exposed. The mature oak tree (TN2) adjacent to the Site was determined to offer moderate bat roost potential due to the presence of multiple sheltered cavities and rot holes.
- 3.5.6 It is understood that the oak tree within the Site offering negligible bat roosting potential (TN1) has since been felled and no trees with bat roosting potential remain within the Site.
- 3.5.7 The building within the Site had no features suitable for use by roosting bats and was therefore classified as offering negligible bat roost potential.

Badger

- 3.5.8 A total of seven records of badger *Meles meles* were returned by Cofnod, including field signs and roadkill. The nearest record returned was roadkill located adjacent to the east of the Site.

¹³ <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition>

- 3.5.9 No suitable habitat was present within the Site for sett creation or suitable habitat for foraging and commuting.
- 3.5.10 It is considered highly unlikely that badgers utilise the Site or the Kronospan facility due to the high levels of disturbance and unsuitable habitats present for commuting, foraging and sett creation. Badgers could be present in the suitable habitats within the wider area such as hedgerows and woodlands. No further survey or specific mitigation is required for badgers.

Otter and Water Vole

- 3.5.11 Six records of otter were returned by Cofnod, the closest record located approximately 363m south of the Site.
- 3.5.12 No records of water vole *Arvicola amphibius* were returned within 2km of the Site.
- 3.5.13 No suitable habitats were present within the Site for either species. A number of watercourses such as the River Dee and Llangollen canal are present within the wider area that could offer suitable habitat for either species. However with the Site located within the active Kronospan manufacturing plant with no suitable habitats present for either species.
- 3.5.14 It is considered that otter and water vole are absent from the Site and therefore not discussed further.

Hazel Dormouse

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

Amphibians and Reptiles

- 3.5.18 Five records of GCN and three records of both common frog *Rana temporaria* and common toad *Bufo bufo* were returned by Cofnod. The closest record for GCN located 670m south west of the Site and the closest record for common frog and common toad located 250m east of the Site, respectively. A review of Ordinance Survey mapping and aerial imagery did not identify any ponds within 250m of the Site.
- 3.5.19 No ponds or suitable terrestrial habitats were present within or immediately surrounding the Site. The Site itself is dominated by hardstanding and therefore considered unsuitable for amphibians or reptiles (breeding, dispersal, foraging and hibernation) and are not considered further within this assessment.

Other notable Species

- 3.5.20 A number of records were returned for other notable species including polecat *Mustella putorius*, hare *Lepus europaeus* and hedgehog *Erinaceus europaeus* within 2km of the Site.
- 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, including those mentioned above. 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, 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 Phase 1 habitat survey.

4 DISCUSSION

- 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)¹⁴.
- 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 818m west; this site was designated for its habitat of interest as were five of the other statutory designated sites. Three of the sites were designated for of species of interest such as GCN, fish populations and breeding birds such as hen harrier and merlin. These species of interest are unlikely to frequent the hardstanding areas dominating the Site and immediate surroundings.
- 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, reasons for the sites designations 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 hardstanding and modified species poor grassland. In the wider context of the Site is located with the active Kronospan facility which was also dominated by hardstanding and buildings. The amenity grassland proposed to be removed offers limited ecological value.
- 4.3.2 Standard good practice pollution prevention and runoff control measures will be set in place as part of the construction phase, protecting adjacent habitats and habitats in the wider area from the risk of indirect effects.

¹⁴CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester

4.4 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 Depending on the timing of construction, there is potential for breeding birds present within the two semi-mature trees on Site likely to be affected by the construction of the development, as well as within ornamental hedgerows.
- 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-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 amount and nature of suitable habitat and the availability of optimum habitat in the wider area.

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 One oak tree (TN2) adjacent to the Site had bat roost features with moderate bat roost potential. The three trees present within the Site however had negligible bat roost potential.
- 4.4.8 TN2 is separated from the Site by a road and will be protected throughout works ensuring no damage to individual bats or their roosts.

Foraging and Commuting bats

- 4.4.9 The habitats within the site provide little value for foraging and commuting bats due to the habitats present and the high levels of lighting at the existing Kronospan facility.
- 4.4.10 It is considered that any proposed lighting will not result in significant increases to the lighting beyond baseline conditions.

Invasive Non-native Species

- 4.4.11 No invasive species were recorded within the Site.
- 4.4.12 Should any new area of invasive species be encountered or suspected on Site, prior to or during construction, the advice of a suitably qualified ecologist should be sought and the appropriate measures taken.

5 SUMMARY – ECOLOGY PRIORITY MATRIX

5.1.1 An Ecological Assessment was undertaken for the proposed warehouse facility development located within the existing Kronospan wood product manufacturing plant in Chirk, Wrexham.

5.1.2 **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 hardstanding and modified grassland which are of low value to wildlife, supporting little species diversity.
	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 the ditches within and off Site.
Birds	Constraints & Opportunities	f. Hardstanding on site provides limited opportunities for breeding birds. g. Mature trees adjacent and within the Site offer nesting potential.
	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. One tree outside of the Site offers moderate roosting bat potential
	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).
Invasive Non-native Species	Constraints & Opportunities	l. No invasive non-native species were recorded on or adjacent to the Site during the survey.
	Legislative Compliance – WCA**	m. 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.

Legislative Compliance Key

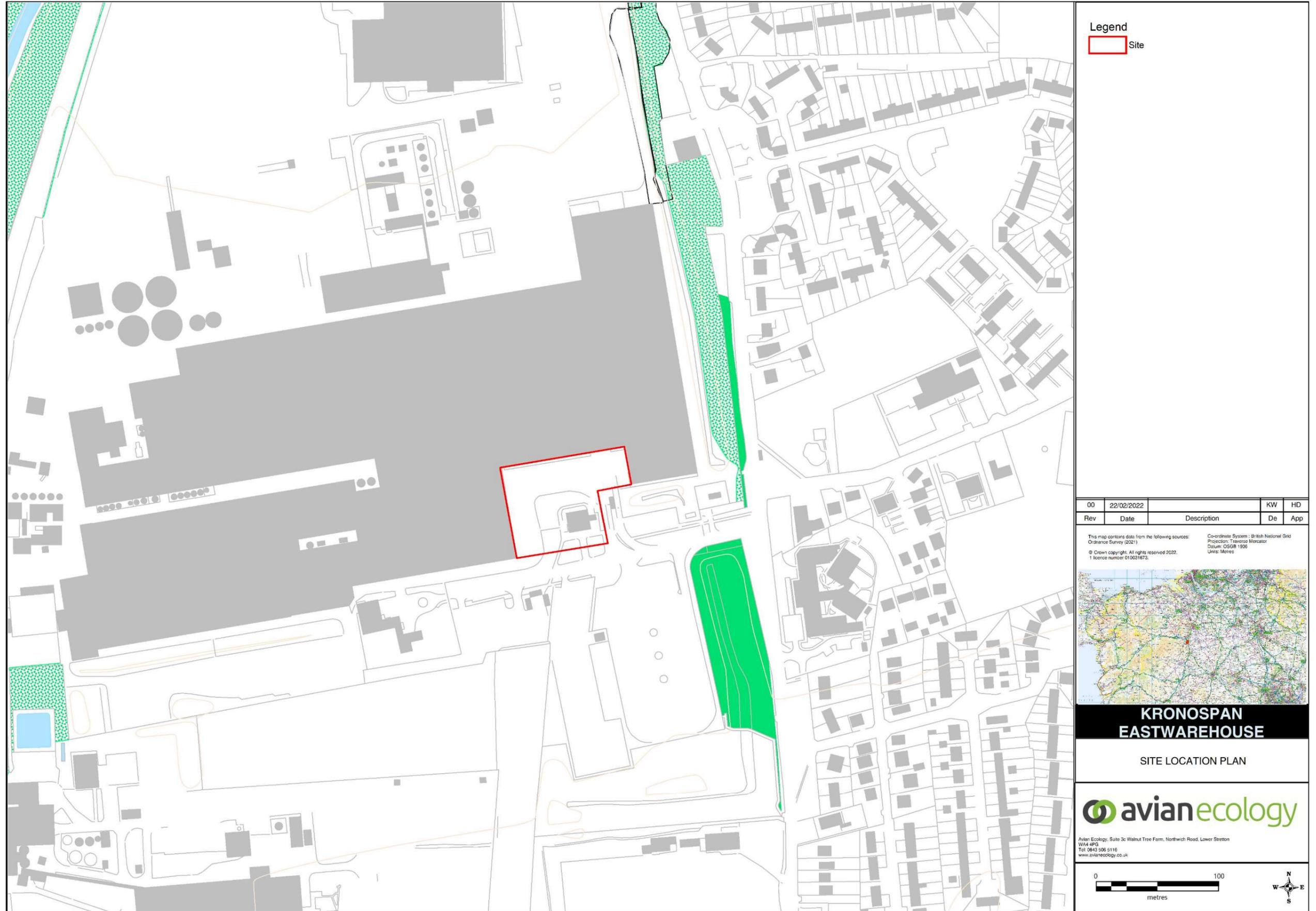
* The Hedgerows Regulations 1997

**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	KW	HD
00	22/02/2022			

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Co-ordinate System : British National Grid
 Projection: Transverse Mercator
 Datum: OSGB 1996
 Units: Metres



**KRONOSPAN
 EASTWAREHOUSE**

SITE LOCATION PLAN



Avian Ecology, Suite 3c Walnut Tree Farm, Northwich Road, Lower Stretton
 W44 4PG
 Tel: 0843 506 8116
 www.avianecology.co.uk

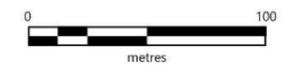
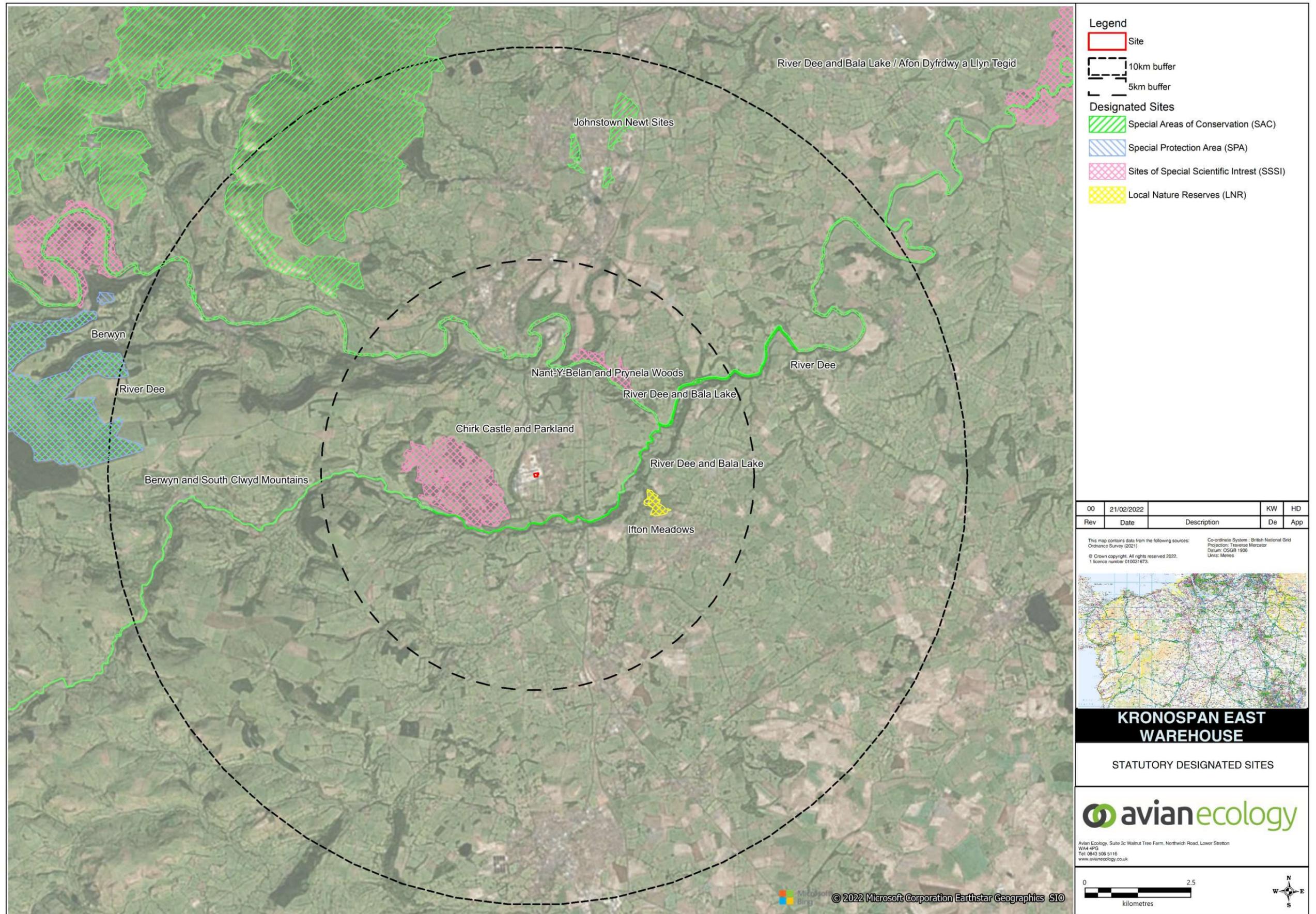


Figure 2: Statutory Designated Sites



Legend

- Site
- 10km buffer
- 5km buffer

Designated Sites

- Special Areas of Conservation (SAC)
- Special Protection Area (SPA)
- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserves (LNR)

Rev	Date	Description	KW	HD
00	21/02/2022			

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**KRONOSPAN EAST
WAREHOUSE**

STATUTORY DESIGNATED SITES



Avian Ecology, Suite 3c Walnut Tree Farm, Northwich Road, Lower Stretton
 WA4 4PG
 Tel: 0843 506 8116
 www.avianecology.co.uk

0 2.5
kilometres

Figure 3: Non-Statutory Designated Sites

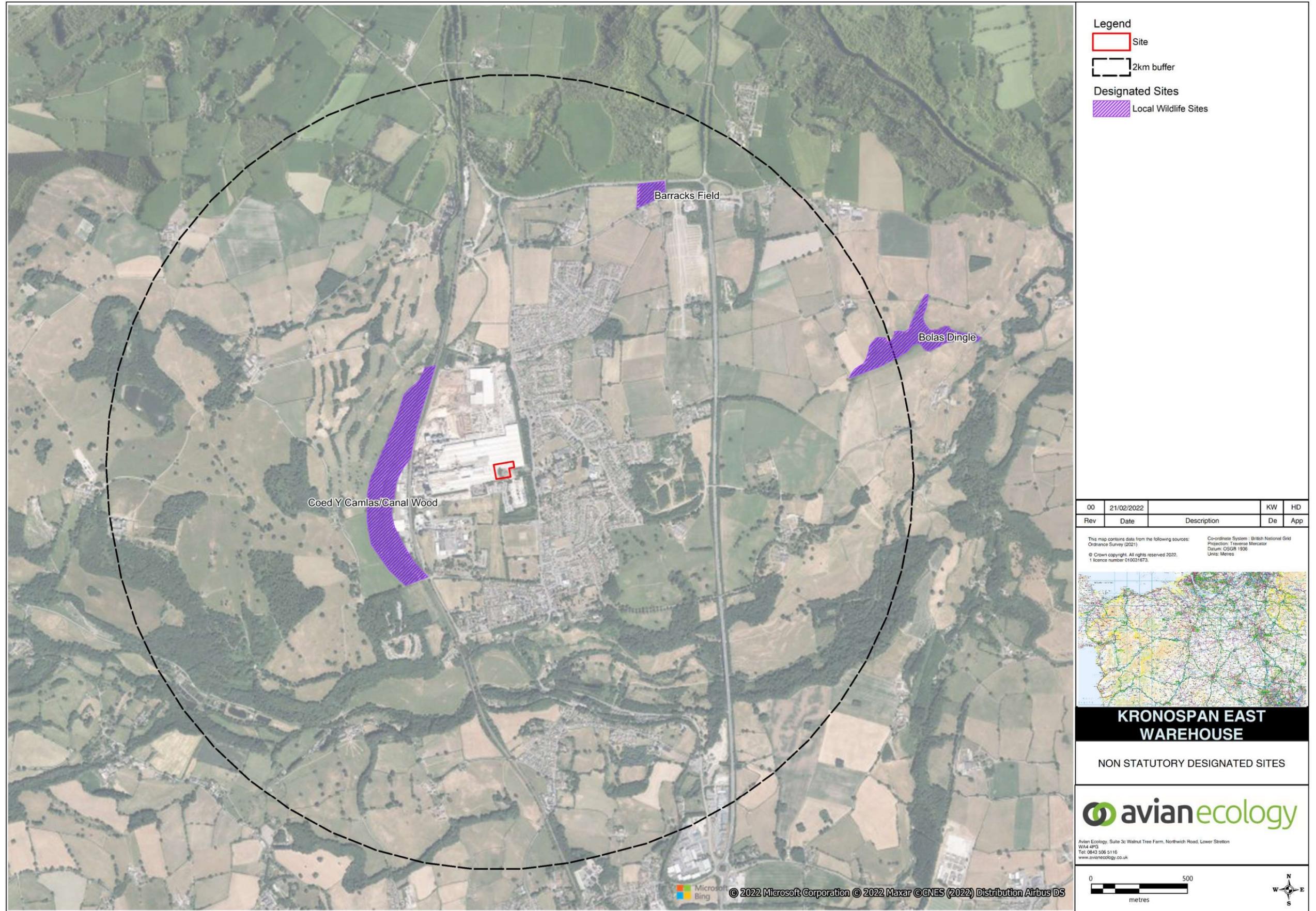


Figure 4: Habitat Plan



Appendix 1: Photographs

Photographs



Photo 1: Example of Cypress hedgrows within the Site.



Photo 2: Mature oak (TN1). It is understood this has since been felled.



Photo 3: View of the reception building within the Site



Photo 4: Modified grassland in the middle of the Site.



Photo 5: View showing amenity grassland and semi-mature trees within the Site.



Photo 6: Mature Oak (TN2) outside of the Site and separated by a road.

