



University of Kent, Canterbury Campus

PRELIMINARY ECOLOGICAL APPRAISAL

UNIVERSITY OF KENT DISPOSAL SITES





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LEGISLATION AND POLICY CONTEXT

EXECUTIVE SUMMARY

As part of the emerging Canterbury Local Plan review, Avison Young, on behalf of the University of Kent (UoK), have requested provision of Environmental Consultancy Services to support the delivery of a planning and disposal strategy. The planning and disposal strategy is aimed at surplus land within UoK's ownership in and around its Canterbury Campus (hereafter referred to as the 'Proposed Development'). It comprises plans for disposal of three separate land parcels adjacent to the retained main campus, alongside proposals for an access road (the 'Access Road Site') within the main campus. These land parcels will hereafter be referred to collectively as the 'Site', with the three individual sites referred to as Site B, Site C and Site D and collectively as the 'Disposal Sites'.

The desk study identified ten designated sites within the national site network within 10km of the Disposal Sites. Three Sites of Special Scientific Interest (SSSI), a single National Nature Reserve (NNR), and two Local Nature Reserves (LNR) were identified within 2km of the Disposal Sites. Five non-statutory designated sites (Local Wildlife Sites (LWS)) were also identified within 2km of the Disposal Sites with Blean Pastures being located within the boundary of Site B. The proximity of the designated sites within the national site network, the closest lying approximately 200m to the west of Site B, necessitates a Habitat Regulations Assessment screening exercise to determine whether the Proposed Development would lead to significant adverse effects on them.

Suitable habitat is present within the disposal sites for protected and notable species and further survey is recommended for bats, badger, hazel dormouse, otter, water vole, breeding birds (focussing on farmland bird species), reptiles, great crested newt, notable plants and invertebrates.

Retention of important habitats, including those within Blean Pastures LWS in Site B and habitats of principal importance (HPI) more widely, is recommended. Where HPI are to be removed, compensatory habitat creation would be required to offset losses and achieve biodiversity net gain.

Implementation of recommendations within this report for avoidance, mitigation and enhancement measures would allow development of the Disposal Sites to proceed in compliance with relevant biodiversity legislation and planning policy, although it should be noted that the findings of further surveys will likely highlight further such requirements.

1. INTRODUCTION

1.1. PROJECT BACKGROUND

- 1.1.1. As part of the emerging Canterbury Local Plan review, Avison Young, on behalf of the University of Kent (UoK), have requested provision of Environmental Consultancy Services to support the delivery of a planning and disposal strategy. The planning and disposal strategy is aimed at surplus land within UoK's ownership, in and around its Canterbury Campus (hereafter referred to as the 'Proposed Development'). It comprises plans for disposal of three separate land parcels adjacent to the retained main campus, alongside proposals for an access road (the 'Access Road Site') within the main campus. These land parcels will hereafter be referred to collectively as the 'Site', with the three individual sites referred to as Site B, Site C and Site D and collectively as the 'Disposal Sites'.
- 1.1.2. The proposed Disposal Sites are associated with UoK landholdings in Canterbury (approximate grid reference: TR130602). The University's landholdings extend to 230ha of land within and around its campus in Canterbury. Approximately 125ha of this land has been identified for disposal for the purposes of non-university development. The remaining 105ha is to be retained and will continue to be used as the University's main campus, for Higher Education purposes.
- 1.1.3. Land within the boundaries of Site B-D and an area of 100m either side of the proposed Access Road Site to Site B-D (which falls within the main campus) comprised the focus of this Preliminary Ecological Appraisal (PEA) and this is collectively referred to as the 'Survey Area'. The Survey Area is to the north of the city of Canterbury, the surrounding area being made up of urban residential areas, scattered trees/ornamental planting, agricultural fields and woodland, including ancient woodland.
- 1.1.4. The Blean Primary School which is located to the west of the Access Road Site was not assessed for this PEA due to it being an operational school. However, the habitats are expected to be mainly buildings, hardstanding and grassland and would be expected to be similar to the habitats recorded within the Access Road Site. The Blean Primary School will be surveyed in due course when a planning application is progressed.

1.2. ECOLOGICAL BACKGROUND

- 1.2.1. A baseline ecological review was undertaken as part of an earlier feasibility study. This comprised a walkover of the Sites noting features of ecological interest, classification of habitats and a desk study of protected and notable species records, designated sites and habitats. This PEA builds upon this data, which was incorporated into the University of Kent Canterbury Campus Framework Masterplan (2018).
- 1.2.2. The Survey Area is within and adjacent to the current extent of UoK buildings. Earlier PEAs of the UoK Campus and surrounding land holdings were produced in February 2018 (Biodiversity by Design/Studio Engleback, 2018) and May 2021 by WSP (WSP, 2021). The results of these surveys are discussed where relevant in this PEA.

1.3. SCOPE OF REPORT

- 1.3.1. The UoK commissioned WSP to complete an updated PEA of the UoK's proposed land Disposal Sites. The brief was:

- To provide baseline ecological information about the Survey Area and a surrounding study area with particular reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
- To provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
- If necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.

1.3.2. The PEA is for use by UoK to inform the design of the Proposed Development. It is based on the site plans and scheme information described in Section 1.1. Any future variations in the Proposed Development may result in the need to update the appraisal.

1.3.3. It is not usually appropriate to submit a PEA in support of a planning application (CIEEM, 2017). As the scheme progresses to planning application stage, the PEA should be superseded by, or appended to, an EclA report for submission with a planning application. This should include an evaluation of the importance of ecological features and assessment of the significance of effects.

1.4. RELEVANT LEGISLATION AND POLICY

1.4.1. The appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. These are listed below. The context and applicability of each item is explained as appropriate in relevant sections of the report and additional details are presented in Appendix A.

- The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations);
- The Wildlife and Countryside Act 1981 (as amended) (WCA);
- Countryside Rights of Way Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006 (England);
- The Protection of Badgers Act 1992;
- The Hedgerow Regulations 1997;
- The National Parks and Access to the Countryside Act 1949;
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017;
- The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012);
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011);
- UK Biodiversity Action Plan (UKBAP)¹;
- The National Planning Policy Framework (NPPF) 2019 (Ministry of Housing Communities & Local Government, February 2019); and
- The Canterbury District Local Plan until 2031 (Canterbury City Council, 2017).

¹ The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

2. METHODS

2.1. OVERVIEW

- 2.1.1. This appraisal has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017), and Joint Nature Conservation Committee (JNCC, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013 (British Standards Institute, 2013).
- 2.1.2. This PEA is based on the following data sources:
- An ecological desk study, including previous PEA reports from 2018 and 2021;
 - A habitat survey; and
 - A protected/notable species assessment.

2.2. DESK STUDY

- 2.2.1. The desk study was undertaken in January 2025 to review existing ecological baseline information (Table 1). In addition, freely available aerial photography was consulted to show Site habitats and the local context. The scope of the data collection was proportionate to the potential impacts of the proposed scheme.
- 2.2.2. The ecological desk study was carried out by a graduate ecologist with a qualifying CIEEM membership and a Basic level of competence in ecological assessment (CIEEM, 2021), assisted by an associate member of CIEEM who is 'Capable' in carrying out ecological assessments and desk studies of this type.
- 2.2.3. The findings of the desk study have been incorporated within Section 3 of this report and are shown in Figures 1a, 1b, 1c, and 2.

Table 1 - Desk Study Data Sources

Source	Record Type	Search Area*
Kent & Medway Biological Records Centre	Protected and priority species	2km
Kent & Medway Biological Records Centre	Bat species	5km
Kent & Medway Biological Records Centre	Non-statutory site ²	1km
Natural England	Statutory sites designated under national legislation i.e. Local Nature Reserves	2km

² An area without protection by the law, designated at a local level and protected by local and national policy (as defined in BSI (2013) Biodiversity Code of Practice BS42020).

Source	Record Type	Search Area*
	(LNR), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI)	
Natural England	Statutory sites designated at the international level (also including sites classified under international conventions): national site network sites: Special Protection Area (SPA), Special Area of Conservation (SAC), potential SPA (pSPA) and candidate SAC (c.SAC); and Ramsar and potential Ramsar sites.	10km
Natural England	International statutory sites (SAC) designated for bats	30km
Natural England Priority Habitat Inventory ³	Habitats of Principal Importance (HPI) ⁴	500m
Natural England Woodpasture & Parkland BAP Priority Habitat dataset (provisional)	Woodpasture & Parkland HPI	500m
Natural England Open Mosaic Habitat (OMH) dataset (draft)	OMH HPI	500m
Natural England (Ancient Woodland Inventory) ⁵	Semi-natural ancient woodland and ancient replanted woodland	500m
Woodland Trust Ancient Tree Inventory ⁶	Ancient, veteran and notable trees	250m
MAGIC ⁷ – 1:10,000, accessed January 2025	Waterbodies and watercourses and their direction of flow	500m
MAGIC	Protected Species Licencing	2km

* Search radius distances are from the site boundary (see Figure 3.2).

³ Inventories of UKBAP habitats which mostly align with Habitats of Principal Importance.

⁴ Habitats listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, that are of principal importance for the conservation of biodiversity in England.

⁵ The ancient woodland inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

⁶ Map of ancient, veteran, and notable trees; accessed: <https://ati.woodlandtrust.org.uk/>

⁷ Department for Environment Food and Rural Affairs (DEFRA) – Mutli-Agency Geographical Information for the Countryside (MAGIC) database.

2.3. HABITAT SURVEY

- 2.3.1. A UK Habitat (UKHabs) survey was undertaken of Disposal Site B, C and D, and Access Road Site on 25th-26th November 2024. Each Site and where possible adjacent area to the Site boundary was surveyed. The weather during the survey was overcast and dry, however conditions prior to the survey were wet and windy.
- 2.3.2. The habitat survey was carried out by one member of CIEEM, who is Accomplished (CIEEM, 2021) in undertaking PEAs including surveys of sites containing similar habitat types.
- 2.3.3. Habitats were described and mapped following the standard UK Habitat classification methodology (Butcher *et al.*, 2020 and UKHab Ltd, 2023). Where appropriate, consideration was given to whether habitats qualify or could qualify as a 'Habitat of Principal Importance' (HPI) following habitat descriptions published by BRIG (JNCC, 2011) and The UK Habitat Classification Habitat Definitions Version 2.0 (UKHab Ltd, 2023), and whether they could classify as irreplaceable habitats, following the National Planning Policy Framework (NPPF) (Ministry of Housing Communities & Local Government, 2024) definition⁸. At the same time, habitat classification and habitat condition assessment were carried out following the methodology in Defra's Statutory Biodiversity Metric⁹. The overall condition is presented in the Results section of this PEA report. The results of this condition assessment will be used to inform BNG assessment for the Site.
- 2.3.4. A list of plant species was compiled, with relative plant species abundance estimated using the DAFOR scale¹⁰. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019).
- 2.3.5. Habitats were marked on a paper base map and mobile mapping tablet and were subsequently digitised using a Geographical Information System (GIS). The smallest area to be mapped was approximately 0.25 ha (50m x 50m), which was selected as a suitable scale to sample the range of different vegetation types present.

2.4. PROTECTED SPECIES ASSESSMENT

- 2.4.1. The suitability of the Survey Area to support legally protected and notable species was assessed based on the desk study results combined with field observations made during the habitat survey. 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: birds (Gilbert *et al.*, 1998 and Bibby *et al.*, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001);

⁸ Irreplaceable habitats are defined in the NPPF as habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, considering their age, uniqueness, species diversity or rarity, including ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.

⁹ The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.

¹⁰ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

reptiles (Froglife, 1999 and Gent and Gibson, 2003); bats (Collins, 2023 and Mitchell-Jones, 2004); badger (Harris *et al*, 1991); hazel dormouse *Muscardinus avellanarius* (English Nature, 2006); otter *Lutra lutra* (Chanin, 2003); water vole *Arvicola terrestris* (Dean *et al*, 2016) and invertebrates (Drake *et al*, 2007 and Kirby, P, 2001).

2.5. NOTES AND LIMITATIONS

2.5.1. Every effort has been made to provide a comprehensive description of the Survey Area; however, the following specific limitations apply to this assessment:

- Ecological survey data is typically valid for up to 18 months unless otherwise specified (CIEEM, 2019), 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. To overcome this limitation, this PEA supplements desk study information with field survey evidence.
- The survey was completed outside the optimal survey season for UK habitat survey, generally accepted to be from April-September (inclusive). Botanical surveys are seasonally limited, and throughout the spring and summer period certain species will be more or less evident at different times (i.e. depending on the flowering season). However, it is considered that sufficient information was gathered to enable an assessment of the habitat types present, given that two previous habitat surveys have been completed on the same Survey Area.
- The habitat survey was carried out over the period of two days, as such only a selection of all species that occur within the Site 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 or priority species or habitats was possible.
- The habitat map (Figure 3.1, 3.2, 3.3 and 3.4) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats.
- Assessment of suitability for protected and priority species do not confirm that a species is present or absent, unless otherwise stated, and do not exclude the possibility of other protected or priority species being subsequently encountered. Recommendations are made where further surveys are needed to determine the baseline or mitigation requirements.

3. RESULTS AND EVALUATION

3.1. DESIGNATED SITES

STATUTORY SITES

- 3.1.1. The desk study identified 12 statutory nature conservation sites within 10km of the Survey Area, six of international importance, four of national importance, and two of local importance. A description of the international sites are detailed in Table 2 below and a description of national and local sites are detailed in Table 3 and Table 4; they are shown in Figure 1a and Figure 1b respectively.

Table 2 - Statutory designated sites of international importance

Site Name	Designation	Size (ha)	Distance and orientation	Description
Blean Complex	SAC	523.5	214m west of the Site	Broadleaved deciduous woodland. Hornbeam <i>Carpinus betulus</i> coppice occurs interspersed with pedunculate oak <i>Quercus robur</i> stands and introduced sweet chestnut <i>Castanea sativa</i> . Great woodrush <i>Luzula sylvatica</i> is locally dominant in the woodland, and the characteristic greater stitchwort <i>Stellaria holostea</i> is found in more open patches. The stands have traditionally been managed as coppice and are one of the British strongholds for the heath fritillary butterfly <i>Mellicta athalea</i> .
The Swale	SPA/ Ramsar	6509.9	4.3km northwest	The Swale (estuary) comprises of extensive intertidal mudflats. It contains the largest expanse of grazing marsh in Kent, which provides important feeding and roosting grounds for many waterbirds, areas of saltmarsh bordering the intertidal mudflats, several patches of littoral rock providing suitable habitat for mussel beds, and the large areas of intertidal mudflats which provides extensive roosting sites for large populations of waterbirds, particularly during the winter for duck and wader species. Designated as a SPA for the presence of large waterbirds and breeding bird assemblages, dark-bellied Brent goose <i>Branta bernicla bernicla</i> , and dunlin <i>Calidris alpina alpina</i> .
Stodmarsh	SAC/SPA/ Ramsar	566.0	4.4km southeast	A wetland in the Stour valley contains a wide range of habitats including open water, extensive reedbeds, scrub and

Site Name	Designation	Size (ha)	Distance and orientation	Description
				alder <i>Alnus glutinosa</i> which together support a rich flora and fauna. The vegetation is a southern eutrophic flood plain hosting a number of rare plants. The invertebrate fauna is varied, and several scarce moths have been recorded in recent years. The site is a designated SPA due to its diverse breeding bird assemblages, presence of bittern <i>Botaurus stellaris</i>, gadwall <i>Anas strepera</i>, hen harriers <i>Circus cyaneus</i>, shoveler <i>Anas clypeata</i> and other water bird assemblages. Designated as a SAC for the presence of Desmoulin's whorl snail, <i>Vertigo moulinsiana</i> (S1016). Part of this site is a National Nature Reserve.
Tankerton Slopes and Swalecliffe	SAC	13.1	Tankerton Slopes 5.7km north Swalecliffe 5.6km north	Tankerton Slopes is composed of London Clay and support tall herb communities dominated by hog's fennel <i>Peucedanum officinale</i> (nationally rare), and some areas of neutral grassland dominated by meadow barley <i>Hordeum secalinum</i>, false oat-grass <i>Arrhenatherum elatius</i> and red fescue <i>Festuca rubra</i>. Associated herbs include spiny restharrow <i>Ononis spinosa</i>, smooth tare <i>Vicia tetrasperma</i>, grass-leaved vetchling <i>Lathyrus nissolia</i> and dyer's greenweed <i>Genista tinctoria</i> (locally scarce). Designated as a SAC for the presence of Fisher's estuarine moth <i>Gortyna borelii lunata</i> (S4035)
Thanet Coast & Sandwich Bay	SPA / Ramsar	1881.3	Two sections within 10km of the Disposal Sites • 5.72km north of Site D • 8.4km north east	A large proportion of the site is intertidal consisting of large areas of intertidal mud and sand flats, with shingle and rocky shores, saltmarsh habitats, lagoons and intertidal shingle habitats. Terrestrial habitats within the SPA, consist of improved and unimproved grassland, with some arable land all important habitat for golden plover to roost and feed. The intertidal reef, together with the mudflats and sandflats which characterise the remainder of the coastline in North East Kent, provide valuable feeding grounds and roosting areas at low water for wintering waders including turnstone <i>Arenaria interpres</i>. In summer, shingle

Site Name	Designation	Size (ha)	Distance and orientation	Description
				provides an important breeding habitat for little terns <i>Sterna albifrons</i>. Designated as a SPA for the presence of golden plover <i>Pluvialis apricaria</i>, little tern and turnstone.
Outer Thames Estuary	SPA	392,451.8	5.97km north of Site D	The SPA is divided into three discreet areas: the outer estuary of the Thames (including Kent and Essex coastal waters); the Suffolk and south Norfolk coastal waters; and an offshore area further northeast. The site crosses the 12 nautical mile boundary and therefore lies partly in territorial and partly in offshore waters. The SPA consists of areas of shallow and deeper water, high tidal current streams and a range of mobile sediments. Large areas of mud, silt and gravelly sediments form the deeper water channels, including the port approaches to London. The site is designated for red-throated diver <i>Gavia stellate</i>, common tern <i>Sterna hirundo</i> and little tern <i>Sternula albifrons</i>

Table 3 - Statutory designated sites of national importance

Site Name	Designation	Size (ha)	Distance and orientation	Description
Church Woods, Blean	SSSI	66.1	200m west	Lowland broadleaved, mixed and yew woodland. Good canopy and understory cover with high diversity of species. Dominated by oak sp. Presence of young trees and dead wood could provide a range of habitats for invertebrates. Good population of heath fritillaries present.
Blean Woods	NNR	508.4	220m west	A large area of semi-natural broadleaved woodland containing several hectares of ancient replanted and semi-natural woodland.
West Blean and Thornden Woods	SSSI	55.6	224m east of the Site	A complex (7 sections) of lowland broadleaved, mixed, and yew <i>Taxus baccata</i> woodland. Old or moderately aged sweet chestnut coppice with occasional oak <i>Quercus</i>

Site Name	Designation	Size (ha)	Distance and orientation	Description
				and birch <i>Betula</i> are present. Good cover of ground flora, including; bluebell <i>Hyacinthus non-scripta</i> , wood anemone <i>Anemone nemorosa</i> and heather <i>Calluna vulgaris</i> . Old and dead trees are present which support a wide range of invertebrates including wood ants <i>formica</i> sp.
Ellenden Wood	SSSI	32.4	1.89 km northwest of Site	An ancient woodland site contains several uncommon woodland types. Sessile oak <i>Quercus petraea</i> and beech <i>Fagus sylvatica</i> predominates on the acidic sandy soils in the central and eastern parts of the wood. Hornbeam with pedunculate and sessile oak occurs on the clay soils of the western valley. Other types are also present including small plantations of sweet chestnut coppice. The wood has a diverse flora with over 250 higher plants and 300 fungi present. Large numbers of insects including three nationally rare species have been recorded. The area also supports a diverse breeding bird community.

Two statutory designated sites of local importance, LNRs, were also identified by desk study.

3.1.2. Table 4 below provides a description of each of these sites and they are shown in Figure 1b.

Table 4 - Statutory designated sites of local importance

Site Name	Designation	Size (ha)	Distance and orientation	Description
Tyler Hill Meadow	LNR	0.8	10m south of the Site.	A complex of lowland deciduous woodland, unimproved neutral grassland and scattered scrub habitats. Supporting birds, plants and invertebrates. 11 species of butterfly, common lizard <i>Zootoca vivipara</i> and slow-worm <i>Anguis fragilis</i> have have been recorded.
Whitehall Meadows	LNR	11.6	2km south of Site	Two sections 6.32 and 5.31 ha. The sections are separated by the Great Stour River and the Chatham Main Line. Dominated by neutral and wet grassland. Bats, snails, common reptiles, and numerous species of insects have been recorded.

NON-STATUTORY SITES

3.1.3. The desk study identified five non-statutory nature conservation sites, designated as Local Wildlife Sites (LWS) within 1km of the Survey Area. They are described in Table 5 below and shown in Figure 1c. Blean Pastures LWS lies within Site B with Tyler Hill Pastures LWS and Little Hall and Kemberland Woods and Pasture directly adjacent to Sites D.

Table 5 - Non-statutory designated sites

Site Name	Designation	Size (ha)	Distance and orientation	Description
Blean Pastures	LWS	15.9	Within and adjacent to west side of Site B	Comprising ecologically important grassland habitat
Tyler Hill Pastures	LWS	5.3	10m south of the Site.	Comprising ecologically important grassland habitat
Little Hall and Kemberland Woods and Pasture	LWS	26.3	500m southeast of the Site	Comprising woodland (some ancient) and grassland habitat
Blean Woods, Harbledown to Dunkirk	LWS	130.5	650m southwest of the Site	Comprising woodland habitat
Clowes Wood and Marley Wood	LWS	230.5	700m north of Site D	Comprising woodland habitat

OTHER HABITATS OF CONSERVATION IMPORTANCE

- 3.1.4. Ancient semi-natural and plantation woodland was identified within the Survey Area and within 500m of the boundary. Two parcels are located within site B and one is adjacent to the east of site B. The location of these is shown in Figure 2.
- 3.1.5. HPis mapped by Natural England were identified within the desk study area including lowland mixed deciduous woodland, traditional orchard and wood-pasture and good quality semi-improved grassland. Lowland mixed deciduous woodland priority habitat was identified within Site B, which is also mapped as ancient woodland. Lowland mixed deciduous woodland is also located adjacent to Site B to the East and to the northeast of site D.

3.2. HABITAT SURVEY

OVERVIEW

- 3.2.1. The UK habitat types were identified and are described below. They are mapped in Figure 3.1-3.4 and are listed in Tables 6-9 along with areas in hectares or length for linear features. A description of the dominant and notable species, the composition and management of each habitat is provided below. Alpha-numeric codes used in this section cross-refer to the UK habitat codes (Butcher et al. 2023).

Table 6 - Site B UK habitat areas

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Other lowland mixed deciduous woodland - w1f	3.49ha	A large section of mature mixed deciduous woodland is found in the south of Site B with oak, hazel <i>Corylus avellana</i>, yew, birch, holly <i>Ilex aquifolium</i>, elder <i>Sambucus nigra</i>, beech and ash <i>Fraxinus excelsior</i>, with hawthorn <i>Crataegus monogyna</i>, bramble <i>Rubus fruticosus</i> and dog rose <i>Rosa canina</i> present on the woodland edge. This woodland is mapped as ancient woodland within MAGIC. A second section of woodland strip going from south to north, which is interlinked with the southern woodland. This woodland consists of frequent mature oak and often hazel, goat willow <i>Salix caprea</i>, and hawthorn. The woodland also contains a wet ditch (R1). A third smaller section of woodland is present at the north of the site next to the building. This small woodland consist of pussy willow <i>Salix discolor</i>, oak, bramble and field maple <i>Acer campestre</i>.	Yes	Yes
Other woodland, mixed broadleaved – w1h5,	2.5ha	A newly planted broadleaved woodland is present in the southwest of Site B, with frequent pedunculate oak, hazel, hawthorn, holly, willow <i>Salix</i> sp. and hornbeam.	No	No
Mixed scrub – h3h	1.02ha	An area of fenced in mixed scrub is present with the modified grassland area to the west of Site B. It is made up of frequent blackthorn <i>Prunus spinosa</i>, bramble, nettle <i>Urtica dioica</i>, holly, birch, oak and hawthorn. A section of scrub is also present along the southern section of Site B between the university field and the arable field. This section consists of bramble, spear thistle <i>Cirsium vulgare</i>, broadleaved dock <i>Rumex obtusifolius</i>, yarrow <i>Achillea millefolium</i>, nettle, field maple, oak and pussy willow.	No	No
Bramble scrub –h3d	0.37ha	Bramble scrub is present to the north of Site B.	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Modified grassland – g4	15.55ha	Modified grassland is present in the east and west of Site B, containing frequent perennial rye grass <i>Lolium perenne</i> , occasional spear thistle, creeping thistle <i>Cirsium arvense</i> , common nettle and cleavers <i>Galium aparine</i> .	No	No
Other cereal crops- g4	41.68ha	Arable land is present across large sections of Site B.	No	No
Buildings- u1b5	0.22ha	A barn and associated farm buildings are present within t the northern section of Site B.	No	No
Artificial unvegetated, unsealed surface -u1c	0.29ha	Bare ground is present in the north east of the Site B along the farmhouse buildings.	No	No
Other rivers and streams- r2b	R1 –736m R2 – 676m R3 – 43m	A stream runs through the woodland to the south (R2), and diverts north along the second woodland (R1), and east (R3) outside the red line boundary.	No	No
Species-rich native hedgerow with trees - h2a5, 33	HT3 –465m	Central hedgerow with mature trees composed of frequent hawthorn, willow <i>Salix</i> sp., dog rose, ivy <i>Hedera helix</i> , pedunculate oak and ash. Bramble and ivy are also present in the hedgerow. A dry ditch runs along the hedgerow.	No	No
	HT5 –320m	Hedgerow with mature trees located to the western section of Site B, with frequent oak, ash, hawthorn, field maple, and occasional dog rose, bramble and birch.	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Species-rich native hedgerow -h2a5	H5 – 301m	Long hedgerow along the northern road consisting of holly, field maple, hazel, bramble, dogwood <i>Cornus sanguinea</i> and oak.	No	No
	H7 –340m	Hedgerow in the centre of Site B which runs along the crab and winkle way, consisting of holly, bramble, hawthorn, ash, oak, ivy and field maple.	No	No
	H8 –182m	Small hedgerow on the southwestern part of Site B with frequent hawthorn, bramble and dog rose.	No	No
	H9 –160m	Hedgerow consisting of frequent bramble, willow, and rare oak and hazel. A dry ditch runs along the hedgerow.	No	No
	H20 –293m	Gappy hedgerow consisting of bramble, oak, holly, hawthorn and pussy willow. A dry ditch runs along the hedgerow.	No	No
	H23 –204m	Hedgerow with ash, bramble, ivy, oak and hawthorn.	No	No
Native hedgerow with trees -h2a, 33	HT2 –314m	Hedgerow with trees to the northeastern section of Site B, with frequent blackthorn and occasional oak and bramble.	No	No
	HT8 –206m	Hedgerow with oak trees, blackthorn, bramble, dogrose and field maple.	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Native hedgerow – h2a	H3 – 124m	Gappy hedgerow consisting of oak, field maple and rose <i>Rosa</i> .		
	H4 –122m	Hedgerow consisting of field maple, bramble, hawthorn and hazel.	No	No
	H6 – 381m	Hedgerow to the west side consisting of oak, bramble and blackthorn.	No	No
Treeline	TL1 – 534m	Mature trees lining a field boundary through the centre of Site B, with scrub below. Tree species of pedunculate oak and elder, with dog rose, hawthorn, bramble and willow.	No	No
TOTAL	65.12ha/ 5,401m			

Table 7 - Site C UK habitat areas

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Other lowland mixed deciduous woodland - w1f	0.406ha	Woodland is present in south and northeast. It is dominated by willow, with rare holly, pedunculate oak, field maple and hazel and has a bramble scrub layer. The section of woodland to the northeast also has a dry ditch running through it.	Yes	No
Other cereal crops-g4	6.72ha	Arable land recently ploughed.	No	No
Species-rich native hedgerow with trees -h2a5, 33	HT7- 231m	Species rich hedgerow with mature trees, composed of willow, elder, holly, bramble, pedunculate oak, alder, hawthorn, and field maples.	No	No
Species-rich native hedgerow -h2a5	H17 - 457m	H17 - Hedgerow along the west and southwest of Site C made up of often hawthorn, hazel, elder, pussy willow and field maple. Scrub layer at field edge made up of often bramble and willow species, with abundant nettles. A wet ditch runs along the majority of the hedgerow.	No	No
	H22 - 212m	H22- hedgerow along the northern part of Site C composed of hawthorn, bramble, blackthorn, elder, holly, field maple, poplars <i>Populus</i> sp. and pedunculate oak. A dry ditch runs long the hedgerow.	No	No
TOTAL	7.12ha/ 900m			

Table 8 - Site D UK habitat areas

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Other lowland mixed deciduous woodland - w1f	0.81ha	Pocket of mixed deciduous woodland to the north of Site D composed of oak, elder and spindle <i>Euonymus europaeus</i> . Dense scrub prevented access into area, for further assessment of ground cover.	Yes	No
Mixed scrub- h3h	0.11ha	Small patch of scrub in front of the woodland to the north of site D. Mixed of bramble, nettle, broad-leaved dock, yarrow, creeping buttercup <i>Ranunculus repens</i> , willowherb <i>Epilobium</i> sp. and occasional cow parsley <i>Anthriscus sylvestris</i> , common hogweed <i>Heracleum sphondylium</i> .	No	No
	0.1ha	Small area of mixed scrub to the south of Site D, comprised of bramble, nightshade <i>Solanaceae</i> sp., ivy, elder, field maple, and willowherb.	No	No
Other cereal crops- g4	21.7ha	Recently ploughed arable field	No	No
Species-rich native hedgerow with trees -h2a5, 33	HT1 – 319m	Line of native species hedgerow with trees comprising of elder, oak, field maple, rose, bramble, holly, and dogwood. A dry ditch runs along the hedgerow.	No	No
	HT6 – 100m	Hedgerow in east of Site D, 4m high, 2m wide, scattered rare pedunculate oak and rare poplar <i>Populus</i> sp.. Within the hedgerow there is abundant	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
		elder, hawthorn, with occasional maple <i>Acer</i> sp. and common nettle is dominant in the ground cover.		
Native hedgerow with trees -h2a, 33	HT9 – 193m	Line of native species hedgerow with trees comprising of bramble, oak and elder.	No	No
Species-rich native hedgerow -h2a5	H2 - 35m	Small section of hedgerow to the north of site D comprising of elder, bramble, hawthorn, dogwood, nightshade and hazel. A dry ditch also runs along this hedgerow.	No	No
	H14 - 66m	Section of hedgerow facing the road to the south of Site D. Comprises of abundant field maple, with occasional elm <i>Ulmus</i> and hazel. Ivy and bramble are present along the hedgerow.	No	No
	H21 - 304m	Longer section of hedgerow facing the road to the south of Site D. Similar hedgerow composition to H14, with additional scattered mature oak trees, and holly present.	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Native hedgerow – h2a	H1 - 404m	Very tall hedgerow (height unmanaged so now almost trees) creating field boundary through the centre of the Site D. 5m high, 2m wide, dominated by hawthorn, with frequent ivy, and occasional elder, oak and dogwood. The ground cover is made up of frequent wild carrot <i>Daucus carota</i> , nettles and cleavers. Hedgerow separating the arable field to the east.	No	No
	H10 - 251m	Consisting of bramble, hawthorn, ivy and thick undergrowth of Yorkshire fog <i>Holcus lanatus</i> , bedstraw <i>Galium verum</i> and some rare oak.	No	No
TOTAL	22.72ha/ 1672m			

Table 9 - Access Road site UK habitat areas

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Other lowland mixed deciduous woodland - w1f	0.69ha	Areas of lowland mixed deciduous woodland comprising of oak, birch, field maple, holly and ash. The woodlands are within areas of mainly modified grassland with ground layer of frequent cow parsley, perennial rye grass, Yorkshire fog, occasional sorrel <i>Rumex acetosa</i>, broadleaved dock, common dandelion <i>Taraxacum officinale</i> and creeping buttercup. The woodlands consist of mature trees, with little to no damage, no veteran or deadwood present.	Yes	No
Artificial unvegetated, unsealed surface- u1c	0.05ha	Bare ground	No	No
Mixed scrub- h3h	0.07ha	Scattered scrub to the north of the Access road Site surrounding an area of hardstanding containing bramble, elder, nettle, ash and field maple.	No	No
	0.09ha	Area of scrub along the southern section of the Access road Site facing the road. Composed of frequent hawthorn, bramble and ivy, occasional hazel and elder with rare field maple.	No	No
Modified grassland – g4	7.66ha	Areas of short, maintained grassland comprising of frequent red fescue, perennial rye grass, Yorkshire fog, with occasional sorrel, broadleaved dock, common dandelion and creeping buttercup.	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
Buildings- u1b5	0.14ha	Comprising built structures used by the university.	No	No
Built up areas and gardens -u1	0.66ha	Area used as a community garden/allotment by the university. Includes raised garden beds, apple tree orchard and other water tanks. Section of the nursery grounds used as garden/play areas.	No	No
Other developed land – u1b6	1.8ha	Area of tarmac/hardstanding used as roads, footpaths and parking area.	No	No
Native hedgerow – h2a	H11 – 238m	Small 1x1m well managed field maple and hawthorn hedgerow running along the road to the east.	No	No
	H13 – 171m	1x1m well managed hedgerow comprised of dominant hawthorn, frequent ivy and common nettle, with occasional bramble, lords-and-ladies <i>Arum maculatum</i> and cleavers.	No	No
	H15 – 101m	Small hedgerow of field maple, hawthorn and ivy separating out the modified grassland and allotment area.	No	No
	H16 – 218m	Long hedgerow along the southern section comprised of thick ivy, field maple and silverberry <i>Elaeagnus commutata</i> .	No	No

Habitat	Area (Ha) / Length (m)	Summary Description	HPI	Irreplaceable
	H18 –135m	Well maintained hedgerow surrounding the nursery consisting of field maple and beech.	No	No
	H19 –129m	Small 1x1m well managed field maple and hawthorn hedgerow running along in front of the treeline.	No	No
Tree line - 33	TL2 – 76m	Line of trees along the southern section of the car park for the nursery consisting of young trees of field maple, hornbeam and birch.	No	No
	TL3 – 83m	Thee line next to the hedgerow consisting of birch and cedar <i>Cedrus</i> trees.	No	No
TOTAL	11.16ha/ 1151m			

3.3. PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 3.3.1. The potential for the Sites and their surroundings to support legally protected species and notable species has been assessed using the results of the desk study and observations made during the visit to the Survey Area. Desk study records were obtained from the KMBRC and have only been considered below if they are recent (from the last 10 years) and/or if they relate to species that may be supported by habitats within and surrounding the Site.
- 3.3.2. Habitats present are suitable for the following species; further consideration is given below to the likelihood for these species to be present:
- Bats;
 - Badger;
 - Hazel Dormouse;
 - Otter;
 - Water Vole;
 - Hedgehog;
 - Breeding, nesting and wintering Birds;
 - Reptiles;
 - Great crested newt;
 - Notable plants; and
 - Invertebrates.
- 3.3.3. The Sites and their surroundings do not provide suitable habitat for other protected or notable species beyond those listed above. However, identification of invasive non-native plants has formed part of the appraisal scope also.

BATS

- 3.3.4. The desk study data returned by KMBRC comprised serotine *Eptesicus serotinus*, whiskered/brandt's/alcahoe (*Myotis mystacinus*, *Myotis brandtii*, *Myotis alcahoe*), Ddaubenton's *Myotis daubentonii*, noctule *Nyctalus noctula*, nathusius' pipistrelle *Pipistrellus nathusii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Bechstein's bat *Myotis bechsteinii* and brown long-eared *Plecotus auritus*.
- 3.3.5. The closest recorded maternity roost is of common pipistrelle located within 900m south east of the Disposal Sites recorded in 2022. The closest recorded hibernating bat was a daubenton's bat, recorded within 1.2 km of the Site in 2022.
- 3.3.6. The Survey Area supports habitats suitable for foraging and commuting bats and provides linear features throughout the wider landscape. Foraging habitat includes both arable and pasture farmland, woodland, grassland and waterbodies that are connected throughout the site and to the wider landscape. The Survey Area is considered to be of "High" suitability for foraging and commuting bats with respect to the BCT guidelines (Collins, 2023).
- 3.3.7. Bat roost assessment to categorise all trees and buildings with regards to their bat roosting suitability was not completed as this was beyond the scope of the appraisal. However, numerous trees within the Survey Area's broadleaved woodland, hedgerows, and along field margins have suitability to support roosting bats. Many are mature, and present features such as splits, hazard

beams, woodpecker holes and rot holes, all of which could support roosting bats. Some are also standing deadwood which are highly suitable for day roost, maternity roost and hibernating bats.

- 3.3.8. Buildings are uncommon within the Disposal Sites, which mainly comprise undeveloped land, but could also support roosting bats where they occur, mainly within the Access Road Site.

BADGER

- 3.3.9. KMBRC did not return records of badger due to their requirement for confidentiality. However, the Survey Area provides suitable badger foraging and commuting habitat, and scrub and woodland habitat within and surrounding the Disposal Sites offers a secure place for their setts (burrows in which badgers rest and find shelter).
- 3.3.10. No evidence of badger presence was found during the survey, however the walkover was completed outside the main active period of badgers and after a period of rain which could have removed signs of badgers such as snuffles holes and dung pits.

HAZEL DORMOUSE

- 3.3.11. KMBRC returned recent records of hazel dormice, populations being located in woodlands surrounding the Survey Area to the west, north and east. Key locations include West Blean Woods, Blean Woods NNR, Cole Wood and Little Hall Wood. The closest records of hazel dormouse were within the Blean Wood located 200m to the west of site B.
- 3.3.12. Suitable habitat for dormouse is found within all the Disposal Sites, with woodland, hedgerows and scrub offering opportunities for this species to forage, commuting between different areas of habitat, breed and hibernate. Site B offers the mix of habitats most suitable for this species which also includes the onsite ancient woodland.

OTTER

- 3.3.13. Otter records returned by KMBRC indicate the presence of this species along the Great Stour, with recent records from 2023. The Great Stour is 2.2km to the south of the Site at its closest point, with urban areas of Canterbury between the Survey Area and the river.
- 3.3.14. The Survey Area is suitable for foraging or commuting otters. However, with only small water courses present and the significant barrier of urban areas in Canterbury between the Disposal Sites and the Great Stour, the Disposal Sites are unlikely to play an important role in supporting local otter populations.

WATER VOLE

- 3.3.15. No recent records of water vole were returned by KMBRC from within the Study Area. Historic records have recorded water vole adjacent to the river Great Stour.
- 3.3.16. The Survey Area offers suitable for foraging and breeding habitat for water voles within Site B along the watercourses running through the ancient woodland and the drainage channel that feeds into it from the north (R1 and R2 in Figure 3.2).

HEDGEHOG

- 3.3.17. KMBRC returned recent records of hedgehog *Erinaceus europaeus* from a variety of locations surrounding the Survey Area and onsite the UoK campus. This species uses scrub and woodland-

edge habitats for foraging and commuting, and is frequently associated with hedgerows. The Survey Area offers extensive suitable habitat for this mammal species.

BREEDING BIRDS

- 3.3.18. Notable bird species were identified within 2km, defined as those which are protected under Schedule 1 of the Wildlife and Countryside Act 1981 and/or listed as SPIs on Section 41 of the Natural Environment and Rural Communities Act 2006 or the Birds of Conservation Concern (BoCC) red or amber lists¹¹. KMBRC returned over 22,000 records of birds across 179 species. Records of seabirds, gulls and waders comprised a large part of the data, but the Survey Area does not provide suitable habitat for such species. The majority of these records were recorded in areas adjacent to the Thames estuary and the North Sea which lie to the north of the Disposal Sites. Some records were of vagrant species passing through the UK on migration, and do not breed within the UK. These data show that the landscape around Canterbury and the Survey Area is used by a wide variety of bird species during different stages of their annual cycle, with breeding, passage migrant and wintering species present.
- 3.3.19. The trees and habitats present within the Survey Area have the potential to support common and widespread species of breeding birds. In addition, arable land and pasture could support yellowhammer *Emberiza citronella* and corn bunting *Emberiza calandra*, and other farmland birds such as skylark *Alauda arvensis*. These three species were identified in the records returned by KMBRC. This farmland bird community is of conservation importance due to steep population declines in the UK due to changes in agricultural practices and land use; corn bunting in particular are BoCC Red listed and are the subject of conservation efforts in the UK to reverse this change (Robinson, 2005; Perkins et al, 2011).

REPTILES

- 3.3.20. KMBRC returned recent records of grass snake *Natrix natrix*, common lizard, and slow-worm. The records were from a wide variety of locations surrounding the Survey Area with the closest record approximately 80m south of Site D. The mixture of grassland, scrub and woodland habitats, along with arable field margins and amenity grassland offers a wide variety of foraging habitat for reptiles within the Survey Area. In addition, a rubble pile located within Site B and smaller log piles at the Access Road Site offer hibernacula for reptiles.

GREAT CRESTED NEWT

- 3.3.21. Recent records of great crested newt were identified, with records of this species occurring with the data every year between 2015 and 2023. Records show that this species is present within the UoK Campus, and previous work has been undertaken by WSP to support development at this site.
- 3.3.22. The mixture of grassland, scrub and woodland habitats, along with arable field margins and habitats associated with development offer a wide variety of terrestrial foraging habitat opportunities for great

¹¹ The Birds of Conservation Concern (BoCC) commonly referred to as the UK Red List for birds is an assessment based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance.

crested newt within the Survey Area. Ponds around the Disposal Sites could be suitable for breeding, and are common throughout the wider area.

NOTABLE PLANTS

- 3.3.23. KMBRC returned a single notable plant record. This was of knot grass *Acronicta rumicis* from Blean Woods to the west of the Survey Area. The agricultural land uses that dominate habitats in the Survey Area, being mainly arable, restrict its ability to support notable plant species. They could however grow along field margins.

INVERTEBRATES

- 3.3.24. Recent records of protected and/or notable invertebrate species were returned which included but not limited to:
- butterfly - heath fritillary *Melitaea athalia*, small heath *Coenonympha pamphilus*, wall brown *Lasiommata megera* and white admiral *Limenitis Camilla*. Records are mainly associated with woodlands surrounding the Survey Area (e.g. Blean Woods);
 - moth - broom-tip *Chesias rufata*, cinnabar *Tyria jacobaeae*, shaded broad-bar *Scotopteryx chenopodiata*, white ermine *Spilosoma lubricipeda* and white-spotted sable *Anania funebris*;
 - bumblebee - large garden bumblebee *Bombus ruderalis*; and
 - dragonfly - Common Darter *Sympetrum striolatum*
- 3.3.25. The HPis within the Survey Area are likely to provide some suitable habitat for protected and notable invertebrates such as the woodland and good quality semi-improved grassland. The remaining lower value habitats are likely to support common and widespread invertebrates only.

NON-NATIVE INVASIVE PLANT SPECIES

- 3.3.26. KMBRC did not return records of non-native and/or invasive plants from the Study Area. However, during the field survey, a species of cotoneaster *Cotoneaster* within a managed hedgerow was identified at the Access Road Site.

4. DISCUSSION AND RECOMMENDATIONS

4.1. STATUTORY DESIGNATED SITES

- 4.1.1. The Habitats Regulations provide strict protection to sites of European and/or international importance; also known as National Network sites. This includes requiring projects or plans to be screened for likely significant effects upon SPA, SAC and candidate SACs (cSACs). Guidance also requires that potential SPAs (pSPAs) and Ramsars are subject to the same assessment.
- 4.1.2. There are six designated sites within the national site network within the desk study area; Blean Complex SAC, Stodmarsh SAC/SPA/Ramsar, The Swale SPA/Ramsar, Tankerton Slopes and Swalecliffe SAC, Thanet Coast & Sandwich Bay SPA/Ramsar and Outer Thames Estuary. Most are some distance from the Survey Area, but Blean Complex SAC is close-by, 278m to the west of Site B. The identified sites within the national sites network should be subject to Habitat Regulations Assessment (HRA) screening exercise by the competent authority (in this case the Local Planning Authority) to determine whether any potentially significant effects are likely to result from the development of the Disposal Sites. The provision of a screening assessment by a competent ecologist is recommended to confirm that no effects pathways link the sites within the national sites network and Proposed Development and to confirm there would be no significant adverse effects on these sites. The screening assessment would be completed in due course when a planning application is progressed.
- 4.1.3. SSSIs are subject to strict protection under the Wildlife and Countryside Act 1981 (as amended). This requires landowners to maintain these sites in favourable condition and that any works within these sites are managed by the appropriate national statutory body via the consent process. Certain operations within SSSIs are listed as operations likely to damage (OLDs) the specific interest of the site and require consent from Natural England; these are specific to each SSSI.
- 4.1.4. Several SSSIs are close to the Disposal Sites, with Church Woods located within 200m of the Proposed Development, but none are located within the red line boundary. Degradation due to run-off, recreational disturbance due to increases in population density and other effects could result from impacts of development on these SSSIs. Their presence could present a potential constraint and any impacts will need to be determined in due course as part of preparation of a planning application and consultation with Natural England.
- 4.1.5. It should be noted that Blean Woods NNR is within the boundary of Church Woods, Blean SSSI 200m to the west of Site B and may represent an additional level of constraint during the consent process.

4.2. NON-STATUTORY DESIGNATED SITES

- 4.2.1. There are five LWS within the desk study area. Blean Pastures LWS lies within Site B and would be directly affected by the development. Tyler Hill Pastures LWS and Little Hall and Kemberland Woods and Pasture LWS are directly adjacent to Site D, with Blean Woods, Harbledown to Dunkirk and Clowes Wood and Marley Wood more distant at between 650m and 700m away. All of these LWSs could be subject to degradation effects due to run-off, disturbance due to increases in population density and other indirect impacts of development.

4.3. HABITATS

- 4.3.1. The ecological importance of habitats present has been assessed with consideration to designations such as listing as HPI, and their potential to support protected or notable species. In particular, the NERC Act requires public bodies (including planning authorities) to *'in exercising its functions, have regard so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'*.
- 4.3.2. The following HPI were identified within the Study Area using Natural England's online database:
- **Ancient and Semi-Natural Woodland:** There are two areas within Site B which are identified as ancient and semi-natural woodland by Natural England. They are important for their rich irreplaceable communities of often rare species of plants, fungi, insects and other microorganisms.
 - **Deciduous woodland:** There are areas of broadleaved semi-natural woodland identified by natural England as HPI within Site B. They are considered intrinsically important as they provide supporting habitat for a wide variety of animals and plants. Further patches of deciduous woodland not identified by the Natural England database, but that may be of HPI quality, are found within the Access Road Site, Site C and Site D.
 - **Good quality semi-improved grassland:** Lying across Tile Kiln Hill (A290) to the west of Site B and associated with Church Woods, Blean SSSI. These grasslands support a diverse community of grasses and forb species, over and above that found in more heavily grazed or managed grasslands elsewhere.
 - **Traditional orchard:** a small area comprising traditionally managed fruit trees that support other species of ecological importance is located east of Site B.
- 4.3.3. Good quality semi-improved grassland and traditional orchard HPI would not be directly affected by the development of the Disposal Sites as they lie outside the red line boundary. They could be subject to degradation effects due to run-off, disturbance due to increases in population density and other indirect impacts of development.
- 4.3.4. Design proposals should seek to avoid effects on ancient woodland and deciduous woodland HPI due to their intrinsic importance, but where this is not possible mitigation and compensation measures should be put in place to offset potential losses. It should be noted that within the context of Biodiversity Net Gain, HPI loss is considered significant, and the ancient woodland is considered irreplaceable habitat and could prevent the scheme from achieving a net gain for biodiversity. Any impacts to irreplaceable habitats would require bespoke compensation to be agreed with the planning authority. A mitigation strategy has been prepared to address any potential loss of ancient woodland on Site.
- 4.3.5. Other habitats found within the Survey Area are common and widespread within the UK and do not have intrinsic ecological importance. Therefore, they are not considered a constraint to the Proposed Development. However, they may support protected or notable species and thus have been discussed below with reference to their roles within the lifecycle of species of importance.

4.4. PROTECTED AND NOTABLE SPECIES

- 4.4.1. The results of the desk study and UK HAB survey highlighted the potential presence of several protected species or species of conservation concern within the Survey Area, or within its immediate surroundings. These include bats, badger, dormouse, otter, water vole, hedgehog, breeding birds, reptiles, great crested newt, notable plants and invertebrates. The legal protection afforded to these

species is outlined below and, where appropriate, the requirement for further survey and/or mitigation measures is identified.

BATS

Legislative Context

- 4.4.2. All species of bats recorded within the UK are protected from killing, injury and disturbance¹² and their roosts are protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) 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 England for certain purposes.
- 4.4.3. Certain species of bats, including Bechstein's bat, noctule, brown long-eared bat and soprano pipistrelle are also listed as Species of Principal Importance (SPI) for the conservation of biodiversity in England in accordance with Section 41 of the NERC 2006. Section 40 obliges public bodies (including local planning authorities) to have regard for the conservation of biodiversity (including SPI) when discharging their duties (including determining planning applications).
- 4.4.4. Bats are European Protected Species (EPS) and both individual animals and their roosts are afforded protection under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

Roosting Bats

- 4.4.5. The survey identified trees that could support roosting bats within all the Disposal Sites, and buildings that could support roosting bats associated with Sites B and the Access Road Site. The houses and church located adjacent to Site B are not within the Disposal Site itself, their proximity and possible roosting potential warrant consideration. However, the field survey undertaken as part of the PEA did not extend to cataloguing all suitable roosting structures due to the extensive area the Disposal Sites collectively cover, and further trees which could support roosting bats are likely present.
- 4.4.6. Further surveys are recommended to determine the suitability of trees and adjacent buildings to support roosting bats as they could present a constraint to development. Where such trees and buildings are identified and would be impacted by the development through removal or disturbance, they should be surveyed to determine whether active roosts are present.

Foraging / Commuting Bats

- 4.4.7. The woodland, grassland, scrub, and water course habitats throughout the Survey Area provide suitable commuting and foraging opportunities for bats. Given the wider environment which is largely urban to the south and a mixture of farmland and woodland to the north, west and east, the Survey Area may function as a potentially important green wildlife corridor used by bats at the landscape

¹² 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.

scale. Development of the Disposal Sites may fragment, or isolate habitat used by foraging and commuting bats as proposals would likely involve loss of habitat and creation of new barriers to bat flight lines. Development could also affect bat foraging areas and commuting routes through changes in the lighting regimes during the construction and operational phases, and through the loss of habitat to facilitate access or construction works.

BADGER

- 4.4.8. The Protection of Badgers Act 1992 makes it illegal to wilfully kill, injure or take any badger, or attempt to do so. It also makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a badger sett. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 4.4.9. Badger presence has previously been confirmed within the PEA completed in 2021, however no active signs of badgers were recorded during the walkover in 2024. This does not mean badgers are not present as badgers are highly movable species and could reappear within the Sites at any time of year. Further surveys are recommended to determine the current level of badger activity across the Disposal sites and 30m outside the red line boundary to understand whether this species presents a constraint to development.

HAZEL DORMOUSE

- 4.4.10. Hazel dormice are protected from killing, injury and disturbance¹³ and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) 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 England for certain purposes.
- 4.4.11. Hazel dormice are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions, which is enacted locally under Policy CS12 of the Gravesham Local Plan Core Strategy.
- 4.4.12. Suitable habitat within the Survey Area and an abundance of records from the wider Study Area indicate that hazel dormouse is a potential constraint to development. Further surveys to determine whether this species is present within the Survey Area, and in which habitats, are recommended.

OTTER

- 4.4.13. Otters are protected from killing, injury and disturbance¹² and their place of rest or shelter (holts) are protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would

¹³ 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.

otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.

- 4.4.14. Otters are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.
- 4.4.15. Aquatic habitats provide foraging opportunities but the nearest such suitable habitat is the River Great Stour 2km to the south of the Access Road Site and across the barrier of Canterbury urban area. There are limited holt-building and 'laying-up' opportunities for otters within the Survey Area due to the distance from significant water courses that would provide a corresponding food resource. Additionally, the levels of disturbance from the public and from adjacent farming operations make habitat less favourable for otter holt creation and for use by otters in general.
- 4.4.16. Further surveys to determine whether otter present a constraint to development should be undertaken combined with surveys for water vole (see below).

WATER VOLE

- 4.4.17. Water voles are protected from killing and injury and their place of rest or shelter (burrows) are protected from damage, destruction or obstruction under the Wildlife and Countryside Act 1981 (as amended). Additional protection from disturbance is extended to individuals occupying places of rest or shelter. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 4.4.18. Water vole is also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.
- 4.4.19. The on-site streams within Site B (R1, R2 and R3 in Figure 3.2) and other watercourses, including drainage ditches, are considered to provide suitable foraging and burrowing opportunities given the presence of aquatic plants and their soft embankments.
- 4.4.20. Further surveys are recommended, covering streams and drainage ditches within the Survey Area, to determine whether water voles are present or absent, and to estimate the size of the population if present.

HEDGEHOG

- 4.4.21. Hedgehog is listed as SPI in accordance with Section 41 of the NERC Act 2006, and is, therefore, a Material Consideration in the planning process, and a potential constraint to development. Clearance of vegetation within the Disposal Sites to facilitate development may result in the killing or injury of hedgehogs, as this species is considered likely to be present within woodland, scrub and arable field margins. Recommendations for sensitive vegetation clearance to minimise the risk of killing or injury to hedgehogs are proposed.

BIRDS

- 4.4.22. The Habitat Regulations 2017 Part 1 Regulation 10(2) & (3) state that local authorities '*must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...*'. The

legislation continues to state that economic and recreation requirements must be taken into account when considering which measures are appropriate.

- 4.4.23. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs are protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young. Measures to prevent disturbance and destruction of nests during the breeding season are proposed as general control measures for risks associated with breeding birds.
- 4.4.24. The presence of a farmland bird community could mean development would contribute to the decline seen by these species in the UK. Further surveys to determine the composition of the breeding bird community in the Survey Area are recommended.

REPTILES

- 4.4.25. Native widespread reptile species (common lizard, adder *Vipera berus*, grass snake and slow worm) are partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This includes protection from killing and injury. All reptile species are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.
- 4.4.26. Suitable habitat for native widespread reptile species is found throughout the Survey Area and ecological records indicate the presence of a variety of species. Further survey is recommended to determine the presence or absence of reptiles, and the species composition of the community within the Disposal Sites.

GREAT CRESTED NEWT

- 4.4.27. Great crested newts are protected from killing, injury and disturbance¹² and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) 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 England for certain purposes.
- 4.4.28. Great crested newt are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.
- 4.4.29. There are recent records of great crested newt from within and surrounding UoK including the Survey Area itself. In addition, previous work undertaken by WSP at UoK confirms that a population of great crested newts is present on the main university campus. Slow flowing streams which could support breeding great crested newt are present within the Disposal Sites along with suitable terrestrial habitats and hibernacula. As such, with all the evidence considered it is likely that great crested newt will pose a constraint to development.
- 4.4.30. Two potential courses of action are available to offset this constraint:
 - Further work to determine the extent to which great crested newts constrain the development. This would firstly involve identifying ponds within the wider landscape to 250m-500m from the Survey Area, followed by field surveys to determine the presence or absence of breeding great

crested newts from those ponds. The surveys should comprise eDNA sampling in the first instance with a follow-up direct pond survey (torch light counts, bottle trapping, netting and/or egg searching) to determine the presence or absence of great crested newts and allow estimation of the population size present. Habitat Suitability Index scores (Oldham, 2001) should also be collected for all ponds identified.

- Alternatively, as Kent and Medway are operating a District Level Licensing (DLL) scheme for great crested newts, consultation should be undertaken with Natural England to determine if this scheme could be utilised rather than pursuing surveys and any licensing that may result. This would offer a more manageable and cost-effective alternative to delivering a solution to this constraint.

- 4.4.31. It is recommended that District Licensing is pursued as the first option, with consultation being undertaken to determine whether this approach is applicable to the development of the Disposal Sites. If not applicable, surveys for great crested newt should be undertaken to inform the planning consent process.

INVERTEBRATES

- 4.4.32. Several invertebrate species are protected under the Wildlife & Countryside Act 1981 (as amended), and further species are included as SPI under the NERC Act 2006 as well as Local BAP species, however, none of these records are located within the Survey Area.
- 4.4.33. The Proposed Development could result in the loss of ancient woodland and deciduous woodland HPI habitat. Further survey work for protected and notable invertebrate species is recommended.

NOTABLE PLANTS

- 4.4.34. Further surveys to characterise botanical communities in woodlands, on arable field margins and in grasslands are recommended to determine the extent of effects on notable plant habitats. National Vegetation Classification (NVC) surveys are recommended to meet this need, covering areas of HPI woodland primarily, with consideration also given to grasslands and the borders or fields within the Survey Area to characterise and evaluate them.

4.5. BIODIVERSITY NET GAIN

- 4.5.1. Under the legislative framework implemented by the Environment Act 2021 (Appendix A), the Proposed Development will be subject to the mandatory 10% BNG requirement, on account of requiring planning permission under the Town and Country Planning Act 1990, and because it does not fall under one of the exemptions set out in Appendix A.
- 4.5.2. The emerging Canterbury District Local Plan 2040 policy DS21 states that all development proposals will be required to demonstrate and deliver a minimum of 20% biodiversity net gain. The new local plan is expected to be adopted in 2027.
- 4.5.3. The BNG legislative framework requires the Biodiversity Gain Hierarchy to be followed. This hierarchy sets out a list of priority actions in relation to replaceable habitats of medium, high and very high distinctiveness, requiring that adverse effects are first avoided; and if they cannot be avoided then mitigated; and then any remaining adverse effects should be compensated for by prioritising in order, where possible, the enhancement of existing onsite habitats, creation of new onsite habitats, allocation of registered offsite gains and finally the purchase of biodiversity credits.

- 4.5.4. Therefore, all habitats of medium distinctiveness or above are key considerations in the design of the Proposed Development, including Other lowland mixed deciduous woodland, deciduous woodland and ancient woodland. These habitats should be retained where possible and enhanced where possible.
- 4.5.5. Irreplaceable habitats have significant protection in the National Planning Policy Framework, which includes the onsite ancient woodland. The 10% net gain requirement is not applied to irreplaceable habitats, as they are so valuable, they cannot be easily recreated. Irreplaceable habitats will require bespoke compensation to be agreed with the planning authority. If there are no impacts, enhancement of irreplaceable habitats can contribute to towards a developments BNG requirement.
- 4.5.6. It is recommended that iterative BNG assessments are carried out throughout the design process for any development, to ensure that it is able to achieve BNG. A long-term (at least 30 years) management plan will be required to cover significant habitat creation and enhancement. The BNG design will need to be undertaken in accordance with the BNG good practice principles (CIEEM, CIRIA, IEMA, 2016) and the British Standard for BNG BS8683:2021 (BSI, 2021).

4.6. FURTHER SURVEY, ASSESSMENT AND CONSULTATION REQUIREMENTS

- 4.6.1. Due to the presence of five designated sites within the national site network falling within 10km of the Disposal Sites, any development within the Disposal Sites must be screened by the competent authority to determine whether significant effects are likely to result. If the local authority is unable to conclude that significant effects are not likely, the development must be subject to appropriate assessment in accordance with the Habitats Regulations.
- 4.6.2. Development of the Disposal Sites will be subject to the mandatory BNG requirement (Section 4.5); therefore any development will need to be designed to achieve BNG and assessments using the Biodiversity Metric Tool will be required to demonstrate the outcome.
- 4.6.3. Potential ecological constraints for which further surveys are required to ensure legal and planning policy compliance are listed in Table 10.

Table 10 - Key Ecological Constraints and Further Survey Requirements

Ecological Receptor	Potential Constraints	Further Survey Requirements	Survey Seasonal Constraints
Bats	Demolition of buildings and felling of trees with suitable roost spaces may result in the damage to/destruction of bat roosts. Vegetation clearance, construction activities and new lighting regimes may result in a loss or disturbance of foraging/commuting habitat.	A Preliminary Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) survey of buildings and trees to map these features and determine their suitability as roosting sites should be undertaken. It may be possible to determine the presence, potential presence or absence of roosting bats at these locations during the PRA and GLTA by direct inspection of suitable roost spaces (e.g. via the use of an endoscope), but additional surveys of suitable roost sites will likely be required also. The GLTA and PRA would comprise a ground level inspection of trees and an external (and internal, where possible) inspection of buildings to search for evidence of roosting bats and to identify potential roosting features. These features will be assigned a level of suitability to support roosting bats which would then inform the need for further presence/absence surveys; buildings by emergence/return survey and trees by climbed inspection or emergence/return survey depending on their condition. Access should be sought for buildings which could not be accessed during the UKHabs survey. It is recommended that further bat activity surveys are undertaken across the Disposal Sites. The design of this survey should	PRA and GLTA surveys can be undertaken at any time of year, in accordance with good practice guidance (Collins, 2023) Emergence/re-entry or climbed inspection surveys, if required following the GLTA and PRA should be undertaken in the active season for bats (May to September inclusive), in accordance with good practice guidance (Collins, 2023). The activity surveys should be undertaken during the active season (May to September inclusive), in accordance with good practice guidance (Collins, 2023).

Ecological Receptor	Potential Constraints	Further Survey Requirements	Survey Seasonal Constraints
		enable the identification of bat species using the Disposal Sites for commuting/foraging purposes, as well as identifying indicative movement patterns. The activity survey should be repeated across multiple months to identify changes in bat activity across the Disposal Sites throughout the active season, following guidance issued by the Bat Conservation Trust (Collins, 2023).	
Badger	Vegetation clearance and construction activities within or adjacent to the Disposal Sites may result in the killing or injury to badger, and the damage or destruction of setts. However, the extent of badger occupation in these areas is unknown at present, with field signs having been identified during the 2021 PEA.	A badger survey should be undertaken covering suitable habitats across the Disposal Sites, including Sites B, C and Site D which are the most likely to support badgers. The badger survey would comprise a walkover of suitable habitats to search for and record evidence of badger presence, including setts, mammal runs, latrines and footprints.	Badger surveys can be undertaken at any time of year but are optimal in winter-early spring when dense vegetation has died back.
Dormouse	Removal of hazel dormouse nesting habitat and food resources during habitat clearance works, killing or injuring individuals.	Surveys of suitable habitats for hazel dormice within the Site should be undertaken to determine their presence or absence.	Survey should cover the active period for this species which is between April (when they emerge from hibernation to feed and breed) and November (when they return to hibernation for the winter).
Otter and water vole	Vegetation clearance in Site B and D may result in the killing or injury of otter and water vole, and the	An otter/water vole survey of Site B and D surrounding vegetated habitat is required to identify presence or absence from these habitats.	At least one of the otter/water vole survey visits should be conducted in spring (e.g. March to May inclusive), when water levels are typically lower,

Ecological Receptor	Potential Constraints	Further Survey Requirements	Survey Seasonal Constraints
	damage or destruction of holts/burrows.	It is recommended that the survey is conducted on two separate occasions to increase the likelihood of detecting evidence of otter/water vole presence.	to increase the likelihood of detecting evidence (Natural England, 2019).
Hedgehog	Vegetation clearance within Disposal Sites may result in the killing or injury of this species.	None, constraint to be offset by mitigation prior to vegetation clearance	N/A.
Breeding birds	Vegetation clearance may result in the damage or destruction of bird nests, including nests of farmland birds, Schedule 1 species and SPI.	It is recommended that a breeding bird survey of the Disposal Sites is undertaken, to identify the presence or absence of farmland birds, Schedule 1 species and SPI. The breeding bird survey would comprise a walked transect of the Disposal Sites, repeated six times between early April and mid-July with visits spread evenly across this period. The aim of the survey should be to confirm species present and their breeding status. The survey methodology should incorporate methods to survey for corn bunting and yellowhammer (which breed late in the season so extending the survey period into July), with nightingale also considered (by extending the survey duration to include the period around sunrise).	The breeding bird surveys should be conducted at regular intervals between early April and mid-July.
Reptiles	Vegetation clearance may result in the killing or injury of reptiles.	A reptile survey of areas of suitable habitat should be undertaken to determine the presence or absence of reptiles within the Disposal Sites. Desk study data records	The deployment of artificial refugia and subsequent survey visits should be appropriately spaced during the active season for reptiles, typically April to September inclusive. The suitability of June and July for reptile surveys is dependent on suitable weather conditions (i.e.

Ecological Receptor	Potential Constraints	Further Survey Requirements	Survey Seasonal Constraints
		slow worm, grass snake, and common lizard in the Study Area. The reptile survey would comprise the deployment of artificial refugia (typically 0.5m x 0.5m squares of roofing felt) within areas of suitable habitat. After a 'bedding down' period of approximately two weeks, the artificial refugia would then be checked over seven separate survey visits to record the presence or otherwise of reptile species.	temperatures between 10°C and 20°C) (Edgar <i>et al.</i> , 2010).
Great crested newts	Vegetation clearance and/or removal of water bodies and associated terrestrial habitat may result in the killing or injury of great crested newt and the damage or destruction of suitable terrestrial/aquatic habitat.	Explore the possibility of using the District Level Licensing (DLL) system, which is available for this species through consultation with Natural England. However, if the DLL system cannot be used and surveys are necessary, Habitat Suitability Index (HSI) assessments should be undertaken on waterbodies on-site and within 250-500m of the Site boundary. Subsequently, population size class estimate surveys should be undertaken in the selected suitable waterbodies to identify the likely population size class range of great crested newt in each waterbody. Population size class estimate surveys comprise six visits to each waterbody to deploy bottle traps which are left overnight and collected the following morning. The waterbodies would also be visually inspected by torchlight and marginal vegetation inspected for great crested newt eggs on each survey visit. Upon completion	Population size class estimate surveys should be completed between March and June, with at least three visits completed in the period from mid-April to mid-June (English Nature, 2001).

Ecological Receptor	Potential Constraints	Further Survey Requirements	Survey Seasonal Constraints
		of the surveys, peak counts are used to estimate the population size class (e.g. low, medium or high population size) of great crested newt.	
Notable plants	Clearance of vegetation may result in the loss of notable plant species not recorded during the Phase 1 habitat survey, particularly within Site B.	A notable plant survey should be conducted within suitable areas of habitat within the Disposal Sites. This survey would comprise a walkover targeting open and wetland areas (along water courses and around ponds), to identify and map the presence of notable plant species and classify botanical communities using the NVC system. The survey should be conducted on two occasions throughout the botanical survey season to capture the different flowering periods of notable species.	The walkover survey should be conducted between May and August inclusive, to cover the main flowering period.
Invertebrates	Clearance of vegetation may result in the loss of notable plant species not recorded during the UKHabs survey.	An invertebrate survey should be conducted within suitable areas of habitat within the Disposal Sites. Following a scoping walk-over survey appropriate survey techniques would be used to assess the relevant habitats. Desk study data identified records of important species in the Study Area, including stag beetle <i>Lucanus cervus</i> and Norfolk aeshna <i>Aeshna isocetes</i> .	Surveys for terrestrial insects and other invertebrates should be carried out between April and September, with adjustment for local weather conditions. A number of visits should be scheduled within this period if different groups of species are being surveyed. A site between 10 and 50 hectares should have between three and seven days of field work, and three and seven days of identification (Natural England, 2006).

4.7. PRELIMINARY AVOIDANCE, MITIGATION AND COMPENSATION MEASURES

- 4.7.1. To enable compliance with relevant legislation and planning policy, as described above within Sections 4.1, 4.2, 4.3 and 4.4, the following avoidance, mitigation and compensation measures set out should be designed into the Proposed Development. These will be refined following the completion of further surveys recommended in Table 11 below.
- 4.7.2. A range of additional mitigation and compensation measures may be required. However, these cannot be defined until further survey work and assessments have been completed. The following account should be taken as a provisional list of avoidance, mitigation and compensation requirements.

Table 11 - Avoidance, mitigation and compensation

Ecological receptor	Likely effects	Recommendations
Ancient woodland, HPI and LWS within Disposal Sites, designated sites and HPI close to the Site. Designated sites (SAC, SSSI, LWS) and HPI close to the Disposal Sites.	Partial or complete loss of LWS within Site B, ancient woodland, HPI and habitats which support protected. Indirect effects on nearby designated sites and HPI.	Where possible, woodland, hedgerows, grassland, and watercourse habitats should be retained as part of the final designs, to avoid direct effects on the LWS in Site B, ancient woodland and HPI. Retained habitats within Disposal Sites, and nearby designated sites and HPI should be protected from indirect effects through adherence to good practice construction methods set out in Section 4.7.3. Where partial or complete removal of habitats is required to facilitate development, they should be replaced through compensatory planting to avoid a net loss of biodiversity. It is recommended that a BNG assessment of the Proposed Development is undertaken to identify the extent of habitat compensation required to achieve a net gain of biodiversity. If ancient woodland will be impacted a bespoke compensation will be required to be agreed with the planning authority.
Commuting/foraging bats	Any new temporary or permanent lighting associated with development may result in disturbance of roosting bats, if present, and may deter commuting/foraging bats.	In order to avoid effects on bats commuting/foraging after dark, night works and artificial lighting during the construction phase of development should be avoided where possible. Lighting used within the development should be low level where possible with luminaires or other directional light accessories affixed to ensure that light is focussed and light spillage onto surrounding habitats is avoided or minimised (BCT, 2014). Motion-activated lighting and/or timing lighting to remain on for a certain period would also help mitigate potential adverse impacts on local bat populations.
Hedgehog	Killing or injury as a result of vegetation clearance	It is recommended that any clearance of vegetation that could be used by hedgehogs (scrub, hedgerows etc) is undertaken sensitively using hand tools or otherwise under ecological supervision, to minimise the risk of killing or injury to this species.
Breeding birds	Death or injury to adults and young,	Any necessary removal of vegetation and trees should occur outside the typical bird nesting season (it is

Ecological receptor	Likely effects	Recommendations
	and destruction of nests as a result of vegetation clearance.	preferable for clearance to take place from October to February inclusive) to minimise the risk of damaging or destroying active bird nests. If vegetation removal outside the typical bird nesting season is not practical, it is recommended that a suitably experienced ecologist search for active nests in advance of the works to confirm the absence of nests. Should an active nest be found, works should not take place within an appropriate area around the nest until it is no longer active (i.e. the chicks have fledged).

ENVIRONMENTAL BEST PRACTICE

4.7.3. In addition, general environmental protection measures must be implemented during the construction phase of the proposed scheme. Such measures include best environmental practice guidance outlined in the Environment Agency's Pollution Prevention for Business guidance (see NetRegs.org.uk¹⁴) and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards should be adhered to prevent ecological impacts beyond the boundary of the Disposal Sites:

- Measures must be taken to prevent dust and other emissions from construction affecting land beyond the Site.
- Chemicals and fuels must be stored in secure containers located away from watercourses or water bodies. Spill kits must be available.
- Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the construction site is closed (e.g. overnight) to prevent entrapment of animals.
- Retained trees must be protected in accordance with BS5837;
- Noise and vibration must be controlled and kept to the minimum necessary;
- The water quality of retained waterbodies, streams and rivers on or near the Disposal Sites should be protected for example through use of silt fencing, channels or protective bunds where appropriate;
- Habitats to be retained should be protected by fencing with clear signage throughout works;
- Biosecurity measures should be in place; and
- Lighting used for construction must be switched-off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the Disposal Sites.

4.8. ECOLOGICAL ENHANCEMENT OPPORTUNITIES

4.8.1. The National Planning Policy Framework (NPPF) (2024) states that at an overview level the 'planning system should contribute to and enhance the national and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the

¹⁴ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'.

4.8.2. To encourage compliance with the planning policy the following measures are recommended for inclusion within the development of the Disposal Sites:

- The Disposal Sites could be enhanced for nesting birds through the provision of additional nesting opportunities on retained mature/semi-mature trees on-site or on newly constructed buildings. A number of designs of bird boxes are commercially available.
- Invertebrate boxes could be included within new areas of habitat to provide additional shelter. Many designs are commercially available, and it is recommended that models are targeted towards invertebrate taxon that the landscaping designs could support, for example, lacewings, ladybirds and solitary bees. The provision of a range of boxes would increase the target species. Boxes should be sited in sheltered locations as much as possible, surrounded by vegetation.
- The creation of log piles (using arisings from tree pruning/felling) within any retained areas of scrub on the edges of the Disposal Sites would provide foraging habitats a variety of saproxylic (deadwood dependant) species. In order to maximise benefit for this species, logs should be partially buried in soil in shady areas. These structures would also provide a sheltering resource for other fauna (amphibians, reptiles and small mammals).

5. CONCLUSIONS

- 5.1.1. The Survey Area comprises Disposal Sites that UoK intends to release for development. The Disposal Sites are located to the north of Canterbury and comprises a mixture of arable farmland, woodland, scrub, grassland and amenity habitats associated with development. Hedgerows, treelines and watercourses are also present along with ancient woodland. Designated sites including SACs, SPAs and Ramsar sites, along with several SSSIs and LNRs, and one NNR are present in the wider area, alongside HPI in the form of deciduous woodland, good quality semi-improved grassland and traditional orchard.
- 5.1.2. The proximity of sites within the national site network to the Survey Area, the closest being Blean Complex SAC ~200m to the west of Site B, necessitates the recommendation of HRA screening exercise to determine whether development would lead to significant adverse effects on these designated sites. The proximity of other statutory designated sites including Blean Woods NNR, Church Woods, Blean SSSI and Blean Pastures LWS would need to be considered in terms of any potential impacts in due course and in consultation with Natural England.
- 5.1.3. Suitable habitat is present for protected and notable species and further survey is recommended for bats, badger, hazel dormouse, otter, water vole, breeding birds (focussing on farmland bird species), reptiles, great crested newt, notable plants and invertebrates. No surveys are recommended for hedgehog, but instead, precautionary methods of working have been recommended to avoid effects on this species.
- 5.1.4. Retention of important habitats, including those designated as Blean Pastures LWS and ancient woodland in Site B and HPI more widely, is recommended. Where important habitats are to be removed, compensatory habitat creation would be required to offset losses and achieve BNG and bespoke compensation would be required for any loss or impact to the ancient woodland with the local planning authority. Under the legislative framework implemented by the Environment Act 2021, development of the Disposal Sites will be subject to the mandatory 10% BNG requirement, and 20 % BNG under the new Canterbury District Local Plan as currently proposed. It is recommended that iterative BNG assessments are carried out throughout the design process for any development, to ensure that it is able to achieve BNG.
- 5.1.5. Implementation of recommendations within this report for avoidance, mitigation and enhancement measures would allow development of the Disposal Sites to proceed in compliance with relevant biodiversity legislation and planning policy. It should be noted that the findings of further surveys will likely highlight further such requirements, however a mitigation strategy has been prepared to address any potential constraints the Proposed Development may encounter.

6. REFERENCES

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7. FIGURES

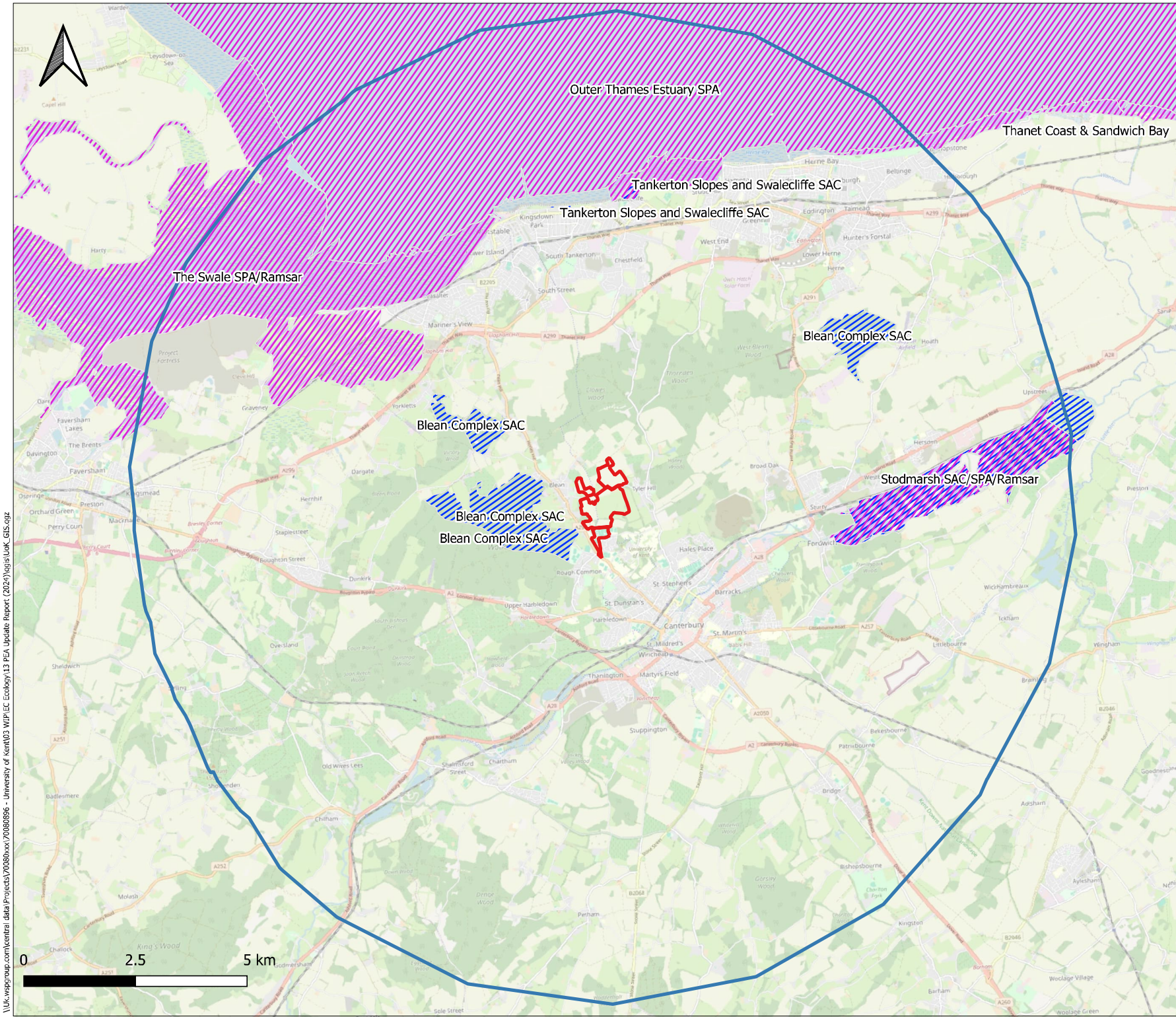
Figure 1a – Statutory Designated Sites: International Importance

Figure 1b – Statutory Designated Sites: National and Local Importance

Figure 1c – Non-statutory Designated Sites

Figure 2 – Habitats of Principal Importance and Ancient Woodland

Figure 3 – UKHabs Survey



LEGEND:

- Site Boundary
- 10Km Study Area
- Designated Sites
 - Special Protection Area (SPA)
 - Special Area of Conservation (SAC)
 - Ramsar Site

STATUS:

FOR INFORMATION ONLY



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PROJECT:

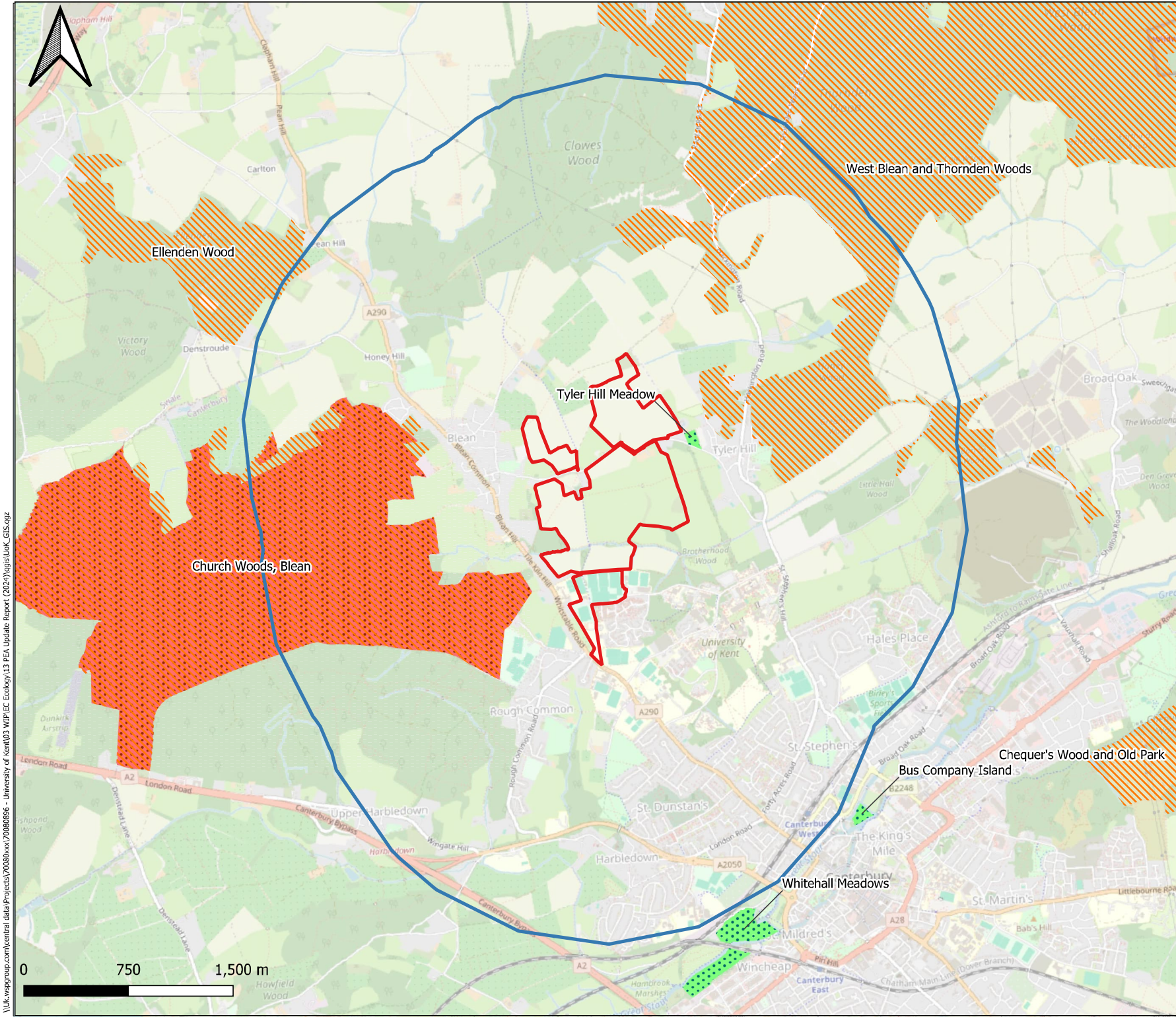
University of Kent Disposal Sites

TITLE:

Statutory Designated Sites:
International Importance

SCALE @A3:	DRAWN:	APPROVED:
1:79,000	NMR	PJ
VERSION:	DATE:	DATE:
01	10/02/25	10/02/25
PROJECT No:	DRAWING No:	
UK70080896	Figure 1a	

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LEGEND:

- Site Boundary
- 2km Study Area
- Designated Sites
 - National Nature Reserve (NNR)
 - Local Nature Reserve (LNR)
 - Sites of Special Scientific Interest (SSSi)

STATUS:
FOR INFORMATION ONLY

wsp

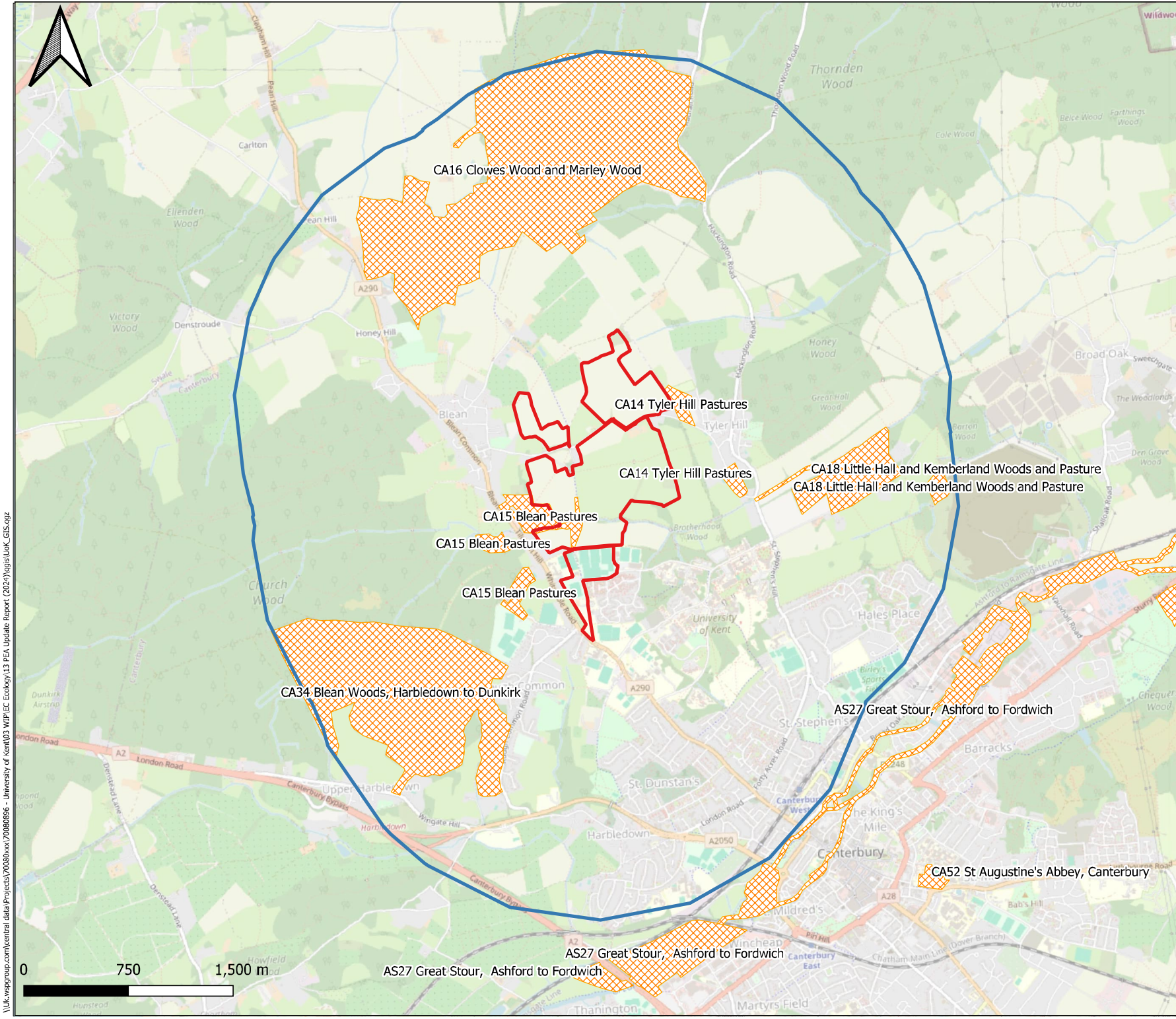
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PROJECT:
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TITLE:
Statutory Designated Sites: National and Local Importance

SCALE @A3: 1:1,262,189	DRAWN: NMR	APPROVED: PJ
VERSION: 1	DATE: 10/02/25	DATE: 10/02/25
PROJECT No: UK70080896	DRAWING No: Figure 1b	



LEGEND:

- Site Boundary
- 2km Study Area
- Local Wildlife Sites (LWS)

STATUS:

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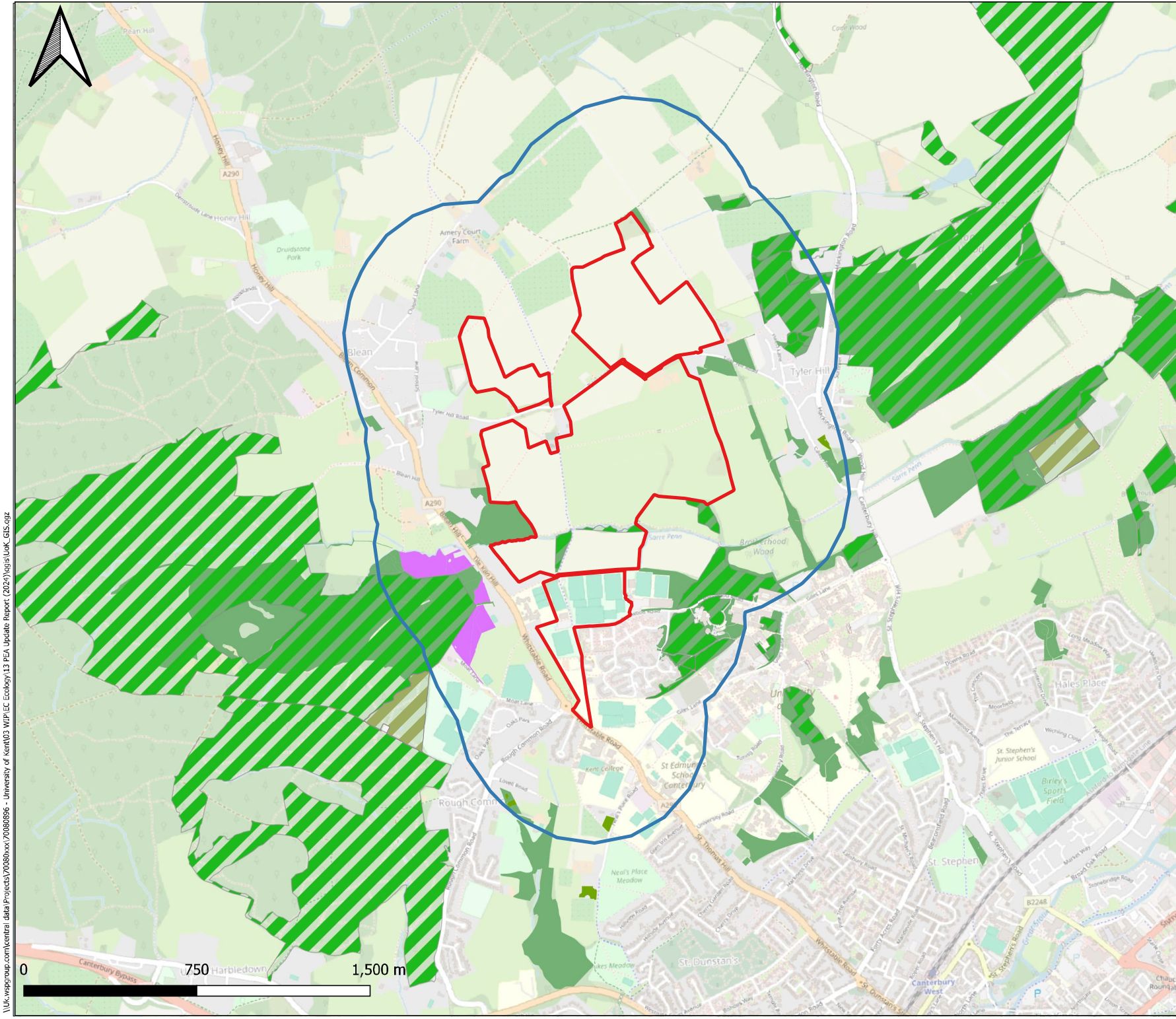
PROJECT:

University of Kent Disposal Sites

TITLE:

Non-Statutory Designated Sites

SCALE @A3:	DRAWN:	APPROVED:
1:1,262,189	NMR	PJ
VERSION:	DATE:	DATE:
1	10/02/25	10/02/25
PROJECT No:	DRAWING No:	
UK70080896	Figure 1c	



LEGEND:

- Site Boundary
- 500m Study Area
- PHI_UKGYB600_2021-04-07
- Deciduous woodland
- Good quality semi-improved grassland
- Traditional orchard
- Ancient Woodland**
 - Ancient and Semi-Natural Woodland
 - Ancient Replanted Woodland

STATUS:
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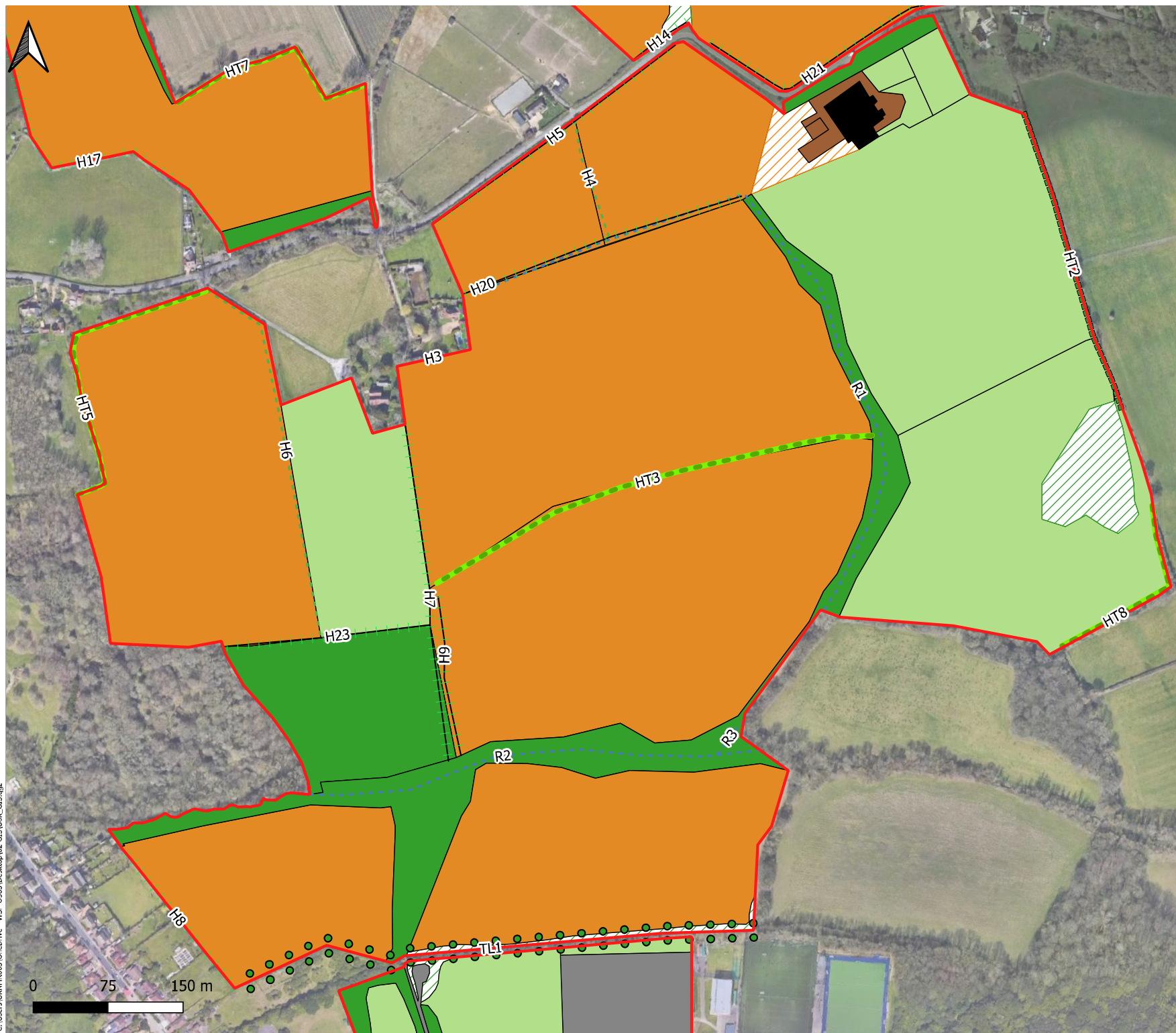
TITLE:
Habitats of Principal Importance and Ancient Woodland

SCALE @A3: 1:1,262,189	DRAWN: NMR	APPROVED: PJ
VERSION: 1	DATE: 10/02/25	DATE: 10/02/25
PROJECT No: UK70080896	DRAWING No: Figure 2	

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LEGEND:		
UK Habitats		
	Artificial unvegetated, unsealed surface	
	Buildings	
	Built-up areas and gardens	
	Lowland mixed deciduous woodland	
	Mixed scrub	
	Modified grassland	
	Other cereal crops	
	Other developed land	
Linear Habitats		
	Native species hedgerow	
	Species rich native hedgerow	
	Treeline	
STATUS:		
FOR INFORMATION ONLY		
		
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CLIENT:		
University of Kent		
PROJECT:		
University of Kent Disposal Sites		
TITLE:		
UK Habitats Map - Access Road Site		
SCALE @A3: 1:1,262,189	DRAWN: NMR	APPROVED: PJ
VERSION: 001	DATE: 10/02/25	DATE: 10/02/25
PROJECT No: UK70080896	DRAWING No: Figure 3.1	



LEGEND:

UK Habitats

-  Artificial unvegetated, unsealed surface
-  Bramble scrub
-  Buildings
-  Lowland mixed deciduous woodland
-  Mixed scrub
-  Modified grassland
-  Other cereal crops
-  Other developed land

Linear Habitats

-  Other rivers and streams
-  Native species hedgerow
-  Native species hedgerow with trees
-  Species rich native hedgerow
-  Species rich native species hedgerow with trees
-  Troeline

STATUS:

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PROJECT:

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TITLE:

UK Habitats Map - Site B

SCALE @A3:

1:1,262,189

DRAWN:

NMR

APPROVED:

PJ

VERSION:

001

DATE:

10/02/25

DATE:

10/02/25

PROJECT No:

UK70080896

DRAWING No:	
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Figure 3.2



LEGEND:

UK Habitats

- Lowland mixed deciduous woodland
- Other cereal crops

Linear Habitats

- Species rich native hedgerow
- Species rich native species hedgerow with trees

STATUS:

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CLIENT:

University of Kent

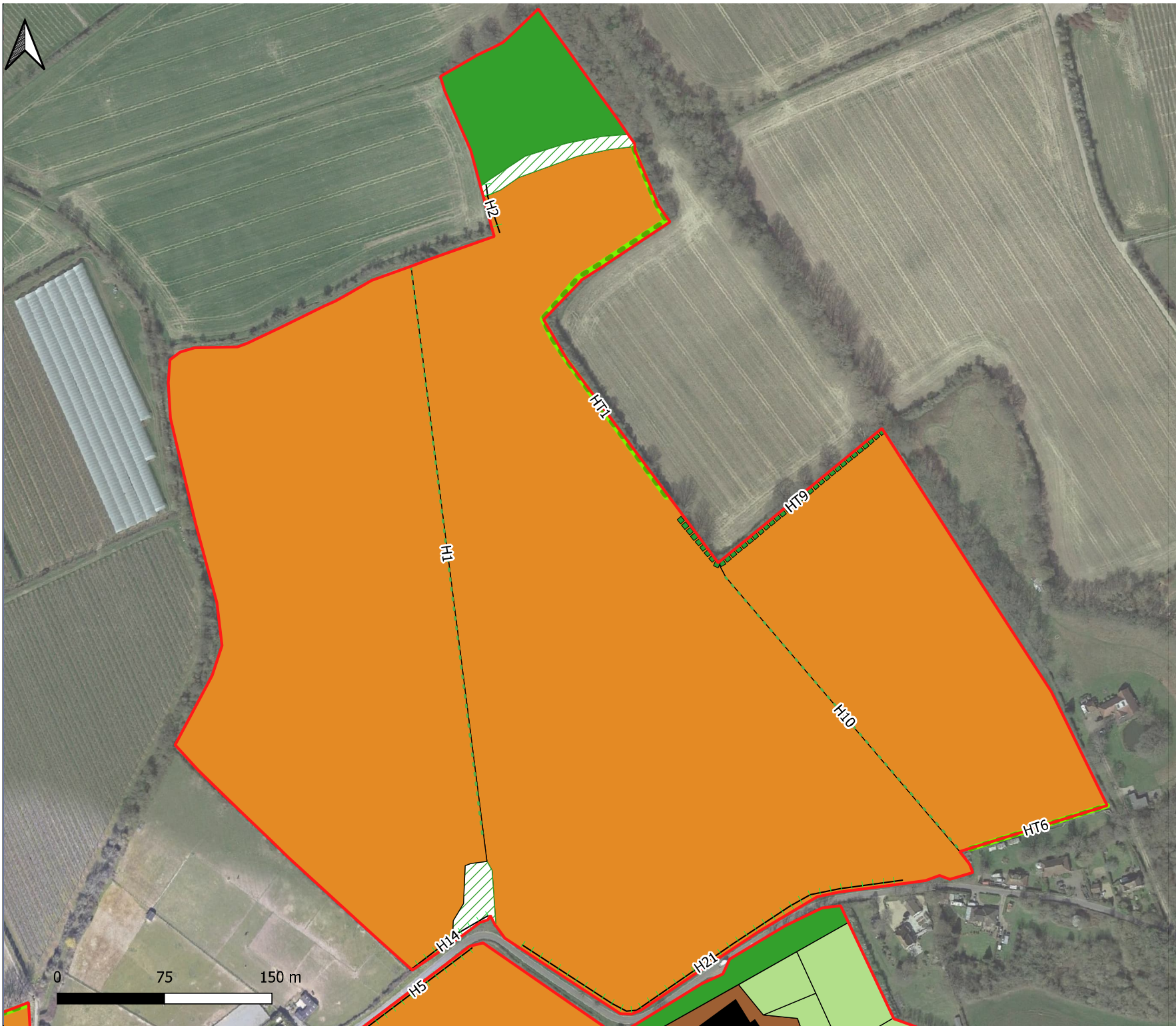
PROJECT:

University of Kent Disposal Sites

TITLE:

UK Habitats Map - Site C

SCALE @A3: 1:1,262,189	DRAWN: NMR	APPROVED: PJ
VERSION: 001	DATE: 10/02/25	DATE: 10/02/25
PROJECT No: UK70080896		DRAWING No: Figure 3.3



LEGEND:

UK Habitats

- Artificial unvegetated, unsealed surface
- Buildings
- Lowland mixed deciduous woodland
- Mixed scrub
- Modified grassland
- Other cereal crops

Linear Habitats

- Native species hedgerow
- Native species hedgerow with trees
- Species rich native hedgerow
- Species rich native species hedgerow with trees

STATUS:

FOR INFORMATION ONLY

wsp

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CLIENT:

University of Kent

PROJECT:

University of Kent Disposal Sites

TITLE:

UK Habitats Map - Site D

SCALE @A3: 1:1,262,189	DRAWN: NMR	APPROVED: PJ
VERSION: 001	DATE: 15/01/25	DATE: 10/02/25
PROJECT No: UK70080896	DRAWING No: Figure 3.4	

Appendix A

LEGISLATION AND POLICY CONTEXT



LEGISLATION AND NATIONAL POLICY CONTEXT

This appendix provides an overview and context of the below legislation and national policy and guidance, as applies in England.

Legislation:

- The Wildlife and Countryside Act 1981 (as amended) (the “WCA”);
- The Invasive Alien Species (Enforcement and Permitting) Order 2019;
- Countryside and Rights of Way Act 2000 (the “CRoW Act”);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (the “Habitats Regulations”);
- Environment Act 2021;
- The Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- The National Parks and Access to the Countryside Act 1949;
- The Protection of Badgers Act 1992;
- The Hedgerows Regulations 1997;
- The Water Environment (Water Framework Directive) (England And Wales) Regulations 2017;
- The Salmon and Freshwater Fisheries Act 1975;
- The Eels (England and Wales) Regulations 2009;
- The Wild Mammals (Protection) Act 1996;
- The Conservation of Seals Act 1970.

National policy and guidance:

- The National Planning Policy Framework (NPPF) 2023;
- National planning policy guidance;
- Environmental Improvement Plan 2023;
- UK Post-2010 Biodiversity Framework (2011-2020); and
- UK Biodiversity Action Plans.

THE WILDLIFE AND COUNTRYSIDE ACT 1981, (AS AMENDED) (WCA)

The Wildlife and Countryside Act 1981 (as amended; hereafter referred to as the ‘WCA’) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Bern Convention and (partially) the European Union Directives on the Conservation of Wild Birds (79/409/EEC) and Habitats Directive are implemented in the UK. The WCA includes provisions, amongst others, for the identification and designation of protected species; for the safeguarding and designation of Sites of Special Scientific Interest (hereafter referred to as SSSI); and for the designation of invasive non-native species and measures to control the spread of these.

Protected birds, animals and plants are listed under Schedules 1, 5, 8 respectively of the WCA. Schedule 9 lists non-native invasive species. A description of these Schedules and their meaning is provided below. Activities that would otherwise constitute an offence under this legislation may be licensed under certain circumstances by Defra or Natural England.

Birds

Under the WCA all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected. It is an offence to:

- Intentionally kill, injure, or take any wild bird;
- Take or destroy an egg of any wild bird;
- Damage or destroy the nest of any wild bird (whilst being built, or in use).

Birds listed under Schedule 1 of the WCA¹⁵ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Protected animals

Species listed in Schedule 5 can either be fully protected or partially protected under Section 9, which makes it unlawful to intentionally or recklessly:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

The Environment Act 2021 enables licences to be granted under section 16 of the WCA for reasons of over-riding public interest where there is no other satisfactory solution, and the grant of the licence is not detrimental to the survival of any population of the plant or animal species to which the licence relates. In addition, the Environment Act 2021 has amended section 10 of the WCA such that where a European Protected Species (ESP) licence is obtained under the Habitats Regulations and fully complied with, the above offences under the WCA no longer apply for that species.

Protected plants

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

Invasive species

Invasive animal species listed under Schedule 9 are prohibited from release into the wild under Section 14 of the WCA, and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

¹⁵ To view the current list of Schedule 1 listed birds, visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1>

SSSIs

SSSIs are subject to strict protection under the Wildlife and Countryside Act 1981 (as amended). Certain operations within SSSIs or affecting SSSIs require approval (known as assent); these are specific to each SSSI.

THE INVASIVE ALIEN SPECIES (ENFORCEMENT AND PERMITTING) ORDER 2019

This removes the Invasive Alien Species (IAS) of European Union concern from the scope of Sections 14 and 14ZA of the WCA, and brings all offences relating to species of European Union concern into one place under The Invasive Alien Species (Enforcement and Permitting) Order 2019. For animal species under this order, it is an offence to release or allow them to escape into the wild, and for plant species it is an offence to plant or otherwise cause them to grow in the wild.

Schedule 9A of the WCA is amended to ensure that species control agreements can be used for all species of European Union concern, including widely-spread invasive species.

COUNTRYSIDE RIGHTS OF WAY ACT 2000 (CROW ACT)

The CRoW Act has amended the WCA in England and Wales, strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species, and provides better management arrangements for Areas of Outstanding Natural Beauty (AONBs). It adds the word 'reckless' to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (HABITAT REGULATIONS)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales.

European Protected Species (EPS)

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 43 of the Habitats Regulations it is an offence to:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species*;
*In particular any disturbance which is likely to a) impair their ability to survive, breed, reproduce, rear or nurture their young, hibernate or migrate, or b) affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

It is also an offence to be in possession of or to control, transport, sell or exchange, or offer for sale or exchange, any live or dead animal or part of an animal of an EPS which has been taken from the wild, or anything derived from such an animal or any part of such an animal.

If the ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site specific mitigation licence from Natural England (NE). Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes. Low Impact Class licences are also available for bats and great crested newts, enabling Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length. District licencing is also available for great crested newts.

National Site Network

Certain EPS are also listed under Annex II of the Habitats Directive and are designated and afforded protection under the Habitats Regulations by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA). The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I¹⁶ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

The Habitats Regulations require projects or plans to be screened by the competent authority (usually the Local Planning Authority) for likely significant effects upon SPA, SAC and candidate SACs (cSACs). Guidance and policy also requires potential SPAs (pSPAs) and Ramsar sites be subject to the same assessment. If the competent authority is unable to conclude that significant effects are not likely, the Proposed Development must be subject to Appropriate Assessment in accordance with the Habitats Regulations.

ENVIRONMENT ACT 2021

The Environment Act legislates enhancing the environment through measures and targets for improving air quality and waste management, increase recycling, restoring habitats and preventing species decline. This includes a new legally binding target on increasing abundance of British species by 2030, makes a requirement for Local Nature Recovery Strategies, and updates the NERC Act 2006 (see below). The Act also sets out the requirement for the Secretary of State to prepare an Environmental Improvement Plan, and sets out a framework for mandatory Biodiversity Net Gain in England.

Section 98 of the Environment Act specifies that measures outlined in Schedule 14 of the Environment Act, to make provision for biodiversity gain to be a condition of planning permission in England, are to apply. Schedule 14 specifies that biodiversity gains are to be assessed using the metric published by the SoS and that a 10% gain will be mandatory. The Act requires that gains must be secured for a minimum of 30 years post completion of development. This is implemented through the insertion of Schedule 7A into the Town and Country Planning Act 1990, which provides

¹⁶ To view birds listed under Annex I visit:

http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm

the statutory framework. The Act includes this requirement for Nationally Significant Infrastructure Projects (NSIPs), being secured under Section 99 and Schedule 15 of the Planning Act 2008. It is expected that the mandatory requirement for a 10% gain for NSIPs will come into force in November 2025.

As a result, under the Town and Country Planning Act 1990, every grant of planning permission is deemed to have been granted subject to the pre-commencement condition that the biodiversity gain objective is met ('the biodiversity gain condition'). The biodiversity gain objective is for development to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the onsite habitat. Secondary legislation includes a number of biodiversity net gain regulations which provide the detail around implementing mandatory BNG, including provisions around irreplaceable habitats, and amendments which set out the requirements of the Biodiversity Gain Hierarchy. It also sets out exemptions for categories of development to which biodiversity net gain does not apply, as follows:

- Householder development. Development which is subject of a householder application as defined within Article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015.
- Development granted planning permission by a development order under section 59. This includes permitted development rights.
- Development subject to the de minimis exemption. Development that does not impact a priority habitat and impacts less than 25 square metres of onsite habitat, and 5 metres of linear habitats such as hedgerows.
- Self-build and custom build development. Development which: consists of no more than 9 dwellings, and is carried out on a site which has an area no larger than 0.5 hectares, and consists exclusively of dwellings which are self-build or custom housebuilding as defined in section 1(A1) of the Self-build and Custom Housebuilding Act 2015.
- Urgent Crown development granted permission under section 293A of the Town and Country Planning Act 1990.
- Development of a biodiversity gain site. Development which is undertaken solely or mainly for the purpose of fulfilling, in whole or in part, the biodiversity gain condition which applies in relation to another development.
- Development related to the high speed railway transport network. Development forming part of, or ancillary to, the high speed railway transport network comprising connections between all or any of the places or parts of the transport network specified in section 1(2) of the High Speed Rail (Preparation) Act 2013.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006 (AS AMENDED)

The Natural Environment and Rural Communities Act (NERC Act) provides that any public body or statutory undertaker in England must have regard to the purpose of conservation of biological diversity in the exercise of their functions. The intention is to help ensure that biodiversity becomes an integral consideration in the development of policies and plans.

The Environment Act 2021 makes changes to the NERC Act which updates the general duty to conserve biodiversity by adding a duty to not only conserve but also enhance biodiversity. Public authorities are also expected to produce reports on the action they have taken under this duty when designated by the Secretary of State. Under Section 40 of this legislation, every public body (including planning authorities) must further the general biodiversity objective, which is described as ‘the conservation and enhancement of biodiversity in England through the exercise of functions in relation to England’.

Section 41 of the NERC Act requires the Secretary of State (SoS) to “publish a list of the living organisms and types of habitat which in the Secretary of State’s opinion are of principal importance for the purpose of conserving biodiversity”. These are referred to as Habitats/Species of Principal Importance. The habitats and species listed in accordance with Section 41 largely replicate those listed on the UK Biodiversity Action Plan (BAP) which occur in England (however there are exceptions).

THE NATIONAL PARKS AND ACCESS TO THE COUNTRYSIDE ACT 1949

The Act provides the framework for the creation of National Parks, National Nature Reserves and Local Nature Reserves. The Act confers powers on the Nature Conservancy (a now defunct government body whose functions Natural England now perform) and local authorities: for the establishment and maintenance of nature reserves; to make further provision for the recording, creation, maintenance and improvement of public paths; for securing access to open country; and to amend the law relating to PRow.

THE PROTECTION OF BADGERS ACT 1992

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as ‘any structure or place, which displays signs indicating the current use by a badger’ and Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009¹⁷).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.

THE HEDGEROWS REGULATIONS 1997

The Hedgerows Regulations (1997) make provision for the protection of important hedgerows in England and Wales. The regulations affect hedgerows which are 20 m or more in length or connected at both ends to another hedgerow of any length. They relate to hedgerows which are on,

¹⁷ Natural England, June 2009, Protection of Badgers Act 1992 (as amended), Guidance on ‘Current Use’ in the definition of a Badger Sett WMLG17, Natural England, Peterborough.

or adjoining land used for agriculture and / or conservation purposes. They do not include hedges that are attached to or marking the boundaries of a private dwelling.

THE WATER ENVIRONMENT (WATER FRAMEWORK DIRECTIVE) (ENGLAND AND WALES) REGULATIONS 2017

The purpose of the Water Framework Regulations is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. All water bodies (unless artificial or heavily modified) are required to achieve 'good' ecological status unless alternate objectives are set or there are grounds for deterioration. Ecological status demonstrates the quality of the structure and function of surface water ecosystems indicated through 'quality elements'. These include hydromorphological, chemical and biological indicators (including benthic invertebrates, macroalgae, fish, phytoplankton and angiosperms).

When considering the effect of a development or activity on a water body, it is a regulatory requirement under the Water Framework Regulations to assess if it will cause or contribute to a deterioration in status or jeopardise the water body achieving good status in the future. Water Framework Regulations lists Lower and Higher Sensitivity Habitats that it considers important features that require protection.

THE SALMON AND FRESHWATER FISHERIES ACT 1975

This Act covers regulation of fisheries in England and Wales and includes legislation that covers the introduction of polluting effluents, the obstruction of fish passage (screens, dams, weirs, culverts etc), illegal means of fishing, permitted times of legal fishing and fishing licencing (which covers electric fishing). The Act also requires that fish passes are installed on new and rebuilt barriers that affect waters frequented by salmon or migratory trout.

Under this Act any person who causes or knowingly permits to flow, or puts or knowingly permits to be put, into any waters containing fish or into any tributaries of waters containing fish, any liquid or solid matter to such an extent as to cause the waters to be poisonous or injurious to fish or the spawning grounds, spawn or food of fish, shall be guilty of an offence.

THE EELS (ENGLAND AND WALES) REGULATIONS 2009

The Eels (England and Wales) Regulations 2009 implement Council Regulation (EC) No 1100/2007 of the Council of the European Union, which required Member States to establish measures for the recovery of the stock of European eel. The regulations apply to England and Wales. The Regulations give powers to the regulators (the Environment Agency and Natural Resources Wales) to implement recovery measures in all freshwater and estuarine waters in England and Wales. The aim of the regulations is to achieve 40 per cent escapement of adult eels relative to escapement levels under pristine conditions. The measures, as set out in the legislation, by which this is to be achieved is to reduce fishing pressures, improve access and habitat quality and reduce the impact of impingement and entrainment.

Under the Regulations, the regulators can serve notice to companies detailing their legal obligation to screen intakes and outfalls for eel and/or to remove or modify obstructions to eel migration. However, it is possible for companies to be granted with exemptions if the costs of works greatly exceeds the benefits. In such a situation it is likely the regulator will seek a package of more cost-effective, "alternative measures".

THE WILD MAMMALS (PROTECTION) ACT 1996

This Act makes it an offence to use a variety of methods to intentionally cause suffering to a wild mammal. It is an offence to mutilate, kick, beat, nail (or otherwise impale), stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering. It also has exemptions, related to euthanasia.

THE CONSERVATION OF SEALS ACT 1970

Pinnipeds, commonly known as seals, are protected under the Conservation of Seals Act. This Act does not prohibit the killing of seals but does regulate the way in which seals can be killed. For example, there is an annual close season for grey seals extending from 1st September to 31st December and an annual close season for common seals extending from 1st June to 31st August. It is a criminal offence to wilfully kill, injure or take a seal during the close season or to attempt to do so. The Act also gives the SoS the power to make an order prohibiting the killing, injuring or taking of seals in an area where such an order is necessary for the proper conservation of seals.

NATIONAL PLANNING POLICY FRAMEWORK 2023

The National Planning Policy Framework 2023 (the 'NPPF') sets out the Government's planning policies for England and it contains relevant policies specific to biodiversity and nature conservation (most notably in section 15). It sets out provisions for biodiversity, including protected sites and species, for which local planning authorities (LPAs) must have regard.

The NPPF requires local authorities in England to take measures to:

- Protect and enhance sites of biodiversity;
- Recognise the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services;
- Maintain the character of the undeveloped coast;
- Minimise impacts and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- Prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability; and
- Remediate and mitigate despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

When determining planning applications, local planning authorities should apply principles including:

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

special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- Typically refusing development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) unless there are wholly exceptional reasons (for example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat), and a suitable compensation strategy exists. Irreplaceable habitats are defined in the glossary as: *“habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen”*; and
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Planning Practice Guidance (PPG) has been published alongside the NPPF, and is regularly updated, to provide guidance on the implementation of the planning policies. It is also a matter of government policy under the NPPF that Ramsar Sites are given the same protection as European Sites (habitats sites), and therefore should be considered in the HRA process.

NATIONAL PLANNING PRACTICE GUIDANCE (PPG)

Explains the processes and tools that can be used through the planning system in England. In relation to terrestrial biodiversity, guidance on Appropriate Assessment (i.e. the assessment of effects on sites designated under the Conservation of Habitats and Species Regulations 2017), BNG, and Environmental Impact Assessment are relevant, alongside the “Biodiversity, Geodiversity and Ecosystems” section of the Natural Environment guidance section. It states that a key purpose of a public authorities’ duty under the NERC Act 2006 is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by government in its 25 Year Environment Plan.

The guidance advises how to identify suitable mitigation and adaptation measures in the planning process. This would require the implementation of appropriate measures by the local planning authorities. The guidance particularly recommends development of brownfield sites over greenfield sites, implementation of green infrastructure networks in development, avoidance of effects on important ecological sites and species and use of appropriate mitigation where necessary.

The BNG PPG sets out the statutory framework for mandatory BNG.

ENVIRONMENTAL IMPROVEMENT PLAN 2023 (DEFRA, 2023)

This is the government's first revision of its 25 Year Environment Plan. It sets out a new plan for delivering ten goals to improve the environment, with interim targets to measure progress. Part of the plan includes new National Nature Reserves, Nature Recovery Networks, implementing the Environment Act 2021 including Local Nature Recovery Strategies and Biodiversity Net Gain. The apex goal is to improve nature, with other goals to help achieve it including:

- Goal 1 - Thriving plants and wildlife
- Goal 2 - Clean air
- Goal 3 - Clean and plentiful water
- Goal 4 - Managing exposure to chemicals and pesticides
- Goal 5 - Maximise our resources, minimise our waste
- Goal 6 - Using resources from nature sustainability
- Goal 7 - Mitigating and adapting to climate change
- Goal 8 - Reduced risk of harm from environment waste
- Goal 9 – Enhancing biosecurity
- Goal 10 – Enhanced beauty, heritage and engagement with the natural environment

THE UK POST-2010 BIODIVERSITY FRAMEWORK (2011-2020) (JNCC AND DEFRA, 2012)

The UK Post-2010 Biodiversity Framework covers the period from 2011 to 2020 and was developed in response to two main drivers: the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020, and its five strategic goals; and 20 'Aichi Targets'. The Framework lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The targets set in this framework are still valid, even though the period has now elapsed. The Biodiversity Framework shows how the work of the four UK countries joins up with work at a UK level to achieve the 'Aichi Targets' and the aims of the EU Biodiversity Strategy. It identifies the activities required to complement each country's biodiversity strategy, and where work in the country strategy contributes to international obligations.

UK BIODIVERSITY ACTION PLANS

The United Kingdom Biodiversity Action Plan (UKBAP) has been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant. The UKBAP, first published in 1994 and updated in 2007, is a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contains a list of priority habitats and species of conservation concern in the UK, and outlines biodiversity initiatives designed to enhance their conservation status. The priority species generally correlate with those listed in accordance with Section 41 of the NERC Act (with some exceptions).

BAPs in the UK have no statutory status but provide a framework for implementing conservation requirements. Species listed as Priority species in the UK BAP which are also listed as Species of Principal Importance are afforded a degree of protection under the NERC Act (2006) (see above).



The national BAP is supplemented by local BAPs which identify habitats and species of particular value or concern at the local level.



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