University of Kent, Canterbury Campus

Ecological Mitigation Strategy

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Ecological Mitigation Strategy

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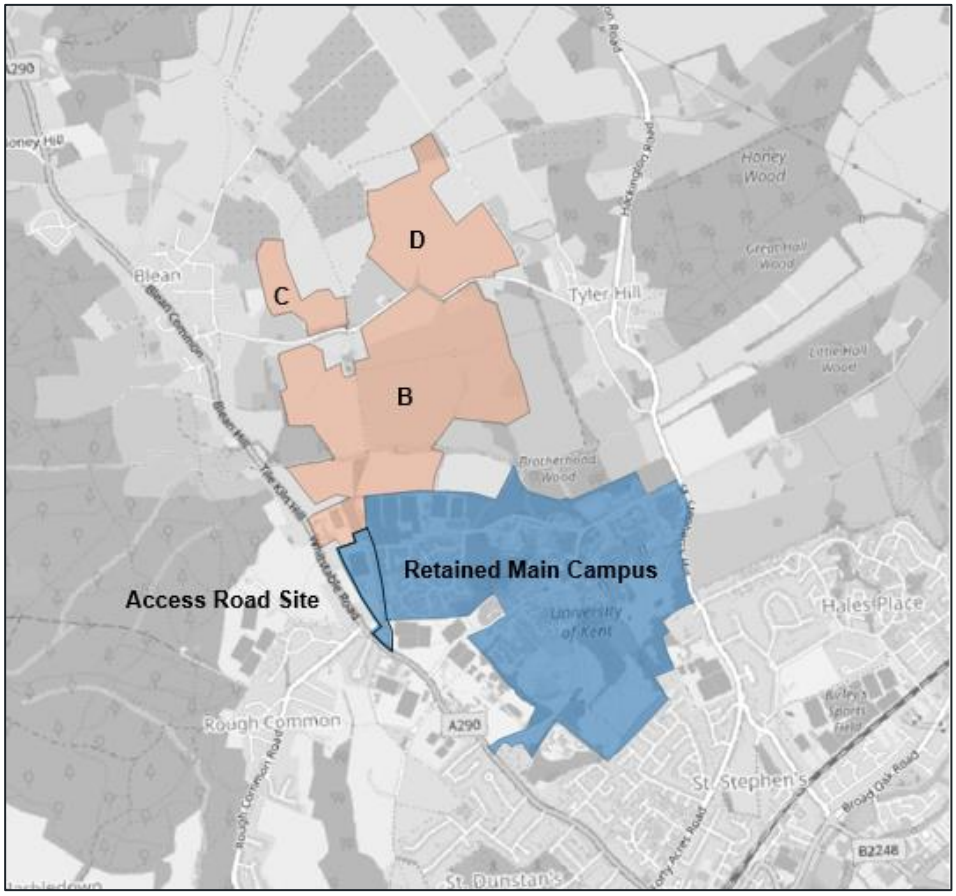
1 Introduction

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), are working with WSP to support the delivery of a planning and disposal strategy, aimed at surplus land within UoK's ownership in and around its Canterbury Campus, herein 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). These 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, see Figure 1-1.

Figure 1-1 - University of Kent



1.2 Ecological background

1.2.1. Baseline ecological review was undertaken as part of an earlier feasibility study. This comprised a walkover of the Disposal Sites noting features of ecological interest, classification of habitats and a desk study of protected and notable species records, designated sites and habitats.

1.2.2. Preliminary Ecological Appraisal (PEA) of the UoK Campus and surrounding land holdings was undertaken in May 2021 by WSP[1]. An updated PEA[2] was completed in 2025 (supported by walkover survey undertaken in November 2024), with only the Site B, Site C and Site D and the Access Road Site included.

1.3 Scope of Report

This report is an Ecological Mitigation Strategy. The focus of this report is to provide detail on how known ecological effects of the Proposed Development would be mitigated. The report will cover items that have been identified through ecological studies undertaken to date (the 2021 PEA and its 2025 update) and through consultation with statutory authorities including Natural England. It will specifically cover the following items:

- Ancient Woodland – identification of where a potential compensation area for the loss of ancient woodland could be located and provide a method for establishment of compensatory woodland.
- Connectivity with Blean Complex – identification of landscape connectivity to Blean Complex to provide an alternative leisure use area to reduce recreational impacts on Blean Complex through the creation of an Alternative Natural Recreational Greenspace (ANRG).
- Impacts on protected species – provide mitigation for known ecological features within the Disposal Sites.

1.4 Relevant Legislation and Policy

1.4.1. The mitigation strategy 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 Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations);

[1] WSP (2021) Preliminary Ecological Appraisal. University of Kent disposal sites. \\Uk.wspgroup.com\central data\Projects\70080xxx\70080896 - University of Kent\03 WIP\EC Ecology

[2] WSP (2025) Preliminary Ecological Appraisal. University of Kent disposal sites. \\Uk.wspgroup.com\central data\Projects\70080xxx\70080896 - University of Kent\03 WIP\EC Ecology

- 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);
- 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).

1.4.2. 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.

2 Ecological Baseline

2.1 Habitats

Ancient woodland

2.1.1. Within Site B, two areas approximately 0.4 ha and 0.5 ha in size, are identified within the Natural England ancient woodland inventory[3] as ancient woodland. The ancient woodland consists of pedunculate oak *Quercus robur*, hazel *Corylus avellana*, yew *Taxus baccata*, birch *Betula sp*., holly *Ilex aquifolium*, elder *Sambucus nigra*, beech *Fagus sp.* and ash *Fraxinus excelsior*, with hawthorn *Crataegus monogyna*, bramble *Rubus fruticosus* and dog rose *Rosa canina* present on the woodland edge. The two areas are located on either side of the Crab and Winkle Way, a public right of way within Site B. The ancient woodland has a small river running through going from west to east.

Blean Complex

2.1.2. The Blean Complex Special Area of Conservation (SAC) is located adjacent to the west of Site B. The SAC comprises of three woodland blocks; the Church Woods Site of Special Scientific Interest (SSSI), Ellenden Wood SSSI, and East Blean SSSI.

2.1.3. The Blean Complex is designated as a SAC for the presence of Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*. Hornbeam *Carpinus betulus* coppice occurs interspersed with pedunculate oak stands and introduced sweet chestnut *Castanea sativa*. Great wood-rush *Luzula sylvatica* is locally dominant in the woodland, and the characteristic greater stitchwort *Stellaria holostea* 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 *Mellicta athalea.*

2.1.4. The Blean Complex is also a national nature reserve, and a section of the West Blean and Thornden Woods are currently part of a wilding project for European bison *Bison bonasus.*

2.2 Protected species

Bats

2.2.1. The desk study data returned by Kent and Medway Biological Record Centre (KMBRC) comprised serotine *Eptesicus serotinus*, whiskered/brandt's/alcathoe (*Myotis mystacinus, Myotis brandtii, Myotis alcathoe*), daubenton's *Myotis daubentonii*, noctule *Nyctalus noctula*, nathusius' pipistrelle *Pipistrellus nathusii*, common pipistrelle *Pipistrellus pipistrellus*,

3 https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland england/explore?location=51.302287%2C1.056813%2C16.61

soprano pipistrelle *Pipistrellus pygmaeus*, bechstein's bat *Myotis bechsteinii* and brown long-eared *Plecotus auritus*.

2.2.2. The closest maternity roost is of common pipistrelle located within 900m south east of the Site recorded in 2022. The closest hibernating bat was Daubenton's bat, recorded within 1.2 km of the Site in 2022.

2.2.3. The Site 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 Site is considered to be of "High" suitability for foraging and commuting bats with respect to the BCT guidelines[4].

2.2.4. Bat roost assessment to categorise all trees and buildings with regards to their bat roosting suitability has not been completed, however, numerous trees within the Site broadleaved woodland, hedgerows, and along field margins have suitability to support roosting bats. Many onsite trees 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.

2.2.5. 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

2.2.6. The Site 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.

2.2.7. Badger presence has previously been confirmed within the PEA completed in 2021, however no active signs of badgers were recorded during the walkover in November 2024 supporting the updated PEA. This does not mean badgers are not present as badgers are highly movable species and could reappear within the Site at any time of year.

Hazel Dormouse

2.2.8. KMBRC returned recent records of hazel dormice, populations being located in woodlands surrounding the Site to the west, north and east. Key locations include West Blean Woods, Blean Woods NNR, Cole Wood and Little Hall Wood.

[4] Collins J. (ed.) (2013) Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.

2.2.9. 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, with the northern edge of Brotherhood Wood noted as of particular importance and onsite ancient woodland.

Great crested newt

2.2.10. 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 campus developments. Consultation with UoK revealed a population of GCN is present at Kent Community Oasis Garden (part of the University's landholding), which is adjacent to the Access Road Site.

2.2.11. 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 crested newt within the Site. Ponds suitable for breeding are common and provide suitable stepping stone throughout the Site and wider area.

Breeding Birds

2.2.12. Notable bird species were identified within 2km of the Site, 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 lists[5].

2.2.13. 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 Site does not provide suitable habitat for such species, the records coming from areas adjacent to the Thames estuary and the North Sea which lie to the north. 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 Site is used by a wide variety of bird species during different stages of their annual cycle, with breeding, passage migrant and wintering species present.

2.2.14. The trees and habitats present within the Site 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

[5] 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.

birds such as skylark *Alauda arvensis*. These three species were identified in the records returned by KMBRC.

Invertebrates

2.2.15. 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 Site (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 ruderatus*; and
- dragonfly - Common Darter *Sympetrum striolatum*

2.2.16. The ancient woodland within Site B is 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.

Reptiles

2.2.17. KMBRC returned recent records of grass snake *Natrix natrix*, common lizard *Zootoca vivipara*, and slow-worm *Anguis fragilis*. The records were from a wide variety of locations surrounding the Site. 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 Site. In addition, a rubble pile located within Site B and log piles at the Access Road Site offer hibernacula for reptiles.

Water Vole

2.2.18. No recent records of water vole were returned by KMBRC from the Site. Historic records have recorded water vole adjacent to the river Great Stour.

2.2.19. The Site offers suitable habitat for foraging and breeding for water voles within Site B along the small river running through the ancient woodland and a drainage channel that feeds into it from the north.

Other species

2.2.20. KMBRC returned recent records of hedgehog *Erinaceus europaeus* from a variety of locations surrounding the Site. This species uses scrub and woodland-edge habitats for foraging and commuting, and is frequently associated with hedgerows. The Site offers extensive suitable habitat for this mammal species.

2.2.21. The Disposal Sites and Access Road Site also offer suitable habitat such as grasslands and farmlands for brown hare *Lepus europaeus,* stoat *Mustela erminea*, weasel *Mustela nivalis*,

harvest mouse *Micromys minutus,* common shrew *Sorex Araneus* and pygmy shrew *Sorex minutus.* These species have recent records from KMBRC within 2km of the Site.

3 Mitigation strategy

3.1 Mitigation hierarchy

3.1.1. Effects on ecological features should be mitigated through application of the 'Mitigation Hierarchy'. CIEEM defines this as "…everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere".

3.2 Ancient woodland

3.2.1. Ancient woodlands are defined as areas that have been continuously wooded since at least 1600 AD, and are complex, irreplaceable ecosystems that have taken hundreds of years to establish. Although the ancient woodland habitat within Disposal Site B has no doubt received significant human influence through adjacent agriculture, forestry and in more recent times leisure (due to the adjacent public right of way), it has maintained a continuous link between the ancient woodland present in the past by maintaining tree cover without conversion to another land use type (such as arable, pasture etc). It is therefore not possible to mitigate for removal of this habitat; it is only possible to provide compensation.

3.2.2. Although mitigation for ancient woodland loss is not possible, retaining its unique character through habitat compensation may be possible by retention of soils and other living materials, and their translocation to a new site where a new woodland would be established. A number of case studies where ancient woodland soil translocation has occurred have been reviewed in the Ancient Woodland Strategy[6] (Appendix B). Translocation could comprise the following:

- Salvaging of ancient woodland soil and applying it to land to become new woodland;
- Translocation of coppice stools to move trees directly between the existing ancient woodland and new woodland site; and
- Movement of leaf litter, dead wood and other materials to supplement the establishment of new woodland.

3.2.3. An area of 1 hectare within Disposal Site B has been provided to be utilised for the ancient woodland translocation/compensation. The location of the new area for the ancient woodland can be viewed on the concept Masterplan in Appendix C.

[6] WSP (2024) University of Kent Disposal Sites-Ancient Woodland Strategy Technical Note. \\Uk.wspgroup.com\central data\Projects\70080xxx\70080896 - University of Kent\03 WIP\EC Ecology

3.2.4. Further detailed survey work would be required of the ancient woodland and consultation with the local planning authority, as well as a bespoke mitigation plan to cover issues associated with the irreplaceable nature of the habitats.

3.3 Blean Complex

3.3.1. Although recreational pressure is not identified as either a pressure or threat for the SAC on the JNCC standard data form[7], there is likely recreational pressure that could occur from the Proposed Development.

3.3.2. Given the Blean Complex SAC is located directly to the west of the Proposed Development a ANRG has been designed within Site B and partly Site C. The ANRG will be designed to encompass a walking route mainly to the west of Site B that will link into other local rights of way including the Crab and Winkle Way which passes through the Site.

3.3.3. The ANRG will create an additional walking route of 2.8 km and include the Crab and Winkle Way. The ANRG will include areas for recreational activities and dog walking possibilities which will reduce the pressure on the Blean Complex. See Appendix C for location of the ANRG.

3.4 Protected species

3.4.1. At the current stage of plan making, the presence of protected species on Site is currently not known and further surveys will be undertaken at a later stage. **Table 4-1** set out the preliminary mitigation measures proposed on Site for each protected species with potential to be present on Site.

[7] https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013697.pdf

Table 3-1 – Protected Species Mitigation Strategy

Species	Mitigation
Bats	Roosting bats Where a bat roost will be impacted due to the Proposed Development a European Protected Species (EPS) Licence from Natural England is required to ensure the Proposed Development is compliant with legislation and policy relating to roosting bats. The EPS licence application must demonstrate compliance with these regulations and be accompanied by a detailed method statement that incorporates measures to ensure that the development will not be detrimental to the Favourable Conservation Status (FCS) of bats across their natural range. The level of mitigation required will be based off the roost present on Site and level of disturbance. Mitigation options include the provision of bat boxes within the Site, creation of a bat barn/house, translocation of limbs for bats roosting in trees or creation of lofts for roosting bats within newly built buildings. All the mitigation options are possible to be executed within the Site. The retained habitat and new buildings can have a large number of installed bat boxes and the ANRG area has suitable space to maintain a bat barn, and can be designed to be inaccessible to the public. Where limbs have roosting bats, these can be translocated to retained trees within the Site, and the new buildings can be designed to maintain roost within loft spaces or roof tiles.

Species	Mitigation
	Any mitigation work will be required to be undertaken during specific times of the year based on the type of bat roost present on Site and will follow the bat mitigation guidelines[8]. Foraging and commuting bats To ensure suitable foraging and commuting habitat across the Site during the construction and operational phase, a sensitive lighting strategy will be developed and followed to maintain dark corridors across the Site. The lightning strategy will follow the bat conservation trust guidance[9].
Badgers	Where a badger sett will be impacted and require closure due to the Proposed Development an EPS Licence from Natural England is required to ensure the Proposed Development is compliant with legislation and policy relating to badgers. The level of mitigation required on Site for badgers will be dependent on the type and number of setts impacted. All mitigation works in relation to any closed setts will be completed in accordance with the mitigation strategy agreed as part of the licence application. Mitigation could include the construction of an artificial sett or exclusion through one-way gates. Closure of any setts would also be restricted to occur between July and November. Where setts are located where they will be disturbed by construction activities, but does not require closure, a 30m exclusion zone will be created to safeguard the setts and badger from disturbance. Other mitigation will be included where appropriate such as;

[8] Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

[9] Bat Conservation Trust/Institution of Lighting Engineers (2009). *Bats and Lighting in the UK*. Bats and the Built Environment Series. Version 3.

Species	Mitigation
	■ A layout designed to avoid isolating the badgers' territory with badger sett retention/protection/enhancement, such as exclusion zones around setts/sett entrances. ■ Avoid artificial lighting around setts and retain unlit wildlife corridors to provide safe badger access to foraging areas within existing territories. ■ Retention of vegetation around setts, to provide cover and enhancement of public areas away from setts to provide improved foraging habitats.
Birds (breeding, nesting and wintering birds)	Any habitat suitable for nesting birds such as trees, scrub and hedgerows will be cleared outside the nesting bird season (March-August). If the breeding season cannot be avoided, a nesting bird check will be required 24-48 hours prior to any vegetation removal and must be supervised by a suitability qualified ecologist. For ground nesting birds such as skylark and lapwing, a walkover of the arable field will be required 24-48 hours prior to any disturbance. If nesting birds are found, a suitable buffer zone will be established around the nest to ensure no disturbance from construction activities occur. The nest will be protected until the birds have fledged and a suitably qualified ecologist has checked the nest is empty. For areas that are suitable for wintering birds such as the arable fields, a suitable alternative area near to the Site or on Site will be established, to mitigate for any habitat loss.
Hazel Dormouse	Prior to the removal of any habitat with the potential to support dormouse an EPS licence from Natural England will need to be obtained to legitimise the works in the event of encountering a dormouse at any stage of the works. As part of a Natural England dormouse mitigation licence the works would be required to follow a method statement in order to safeguard any dormouse within the habitats affected. Working methods likely to be included within this would be appropriately timed sensitive vegetation clearance under supervision by an Ecological Clerk of Works (ECoW).

Species	Mitigation
	In addition, compensatory habitat to account for any habitat loss is likely to be required and where possible any retained areas of scrub or woodland will be enhanced. The connectivity across the Site for dormouse will remain and the additional planting within the ANRG and Proposed Development will increase the overall available habitat for dormouse for breeding, hibernation, foraging and dispersal.
Great crested newts	Prior to the removal of any habitat suitable for GCN an application to join the District Level Licensing (DLL) Scheme run by Natural England will be required. The proposed Development sits within the amber and green zone, which both are suitable for DLL. The developer will be required to pay to join the scheme and once planning permission is granted, apply to obtain a district level licence. Once granted a further conservation payment is required prior to Natural England issuing the district level GCN licence. The payment is used to fund off-site mitigation through the scheme rather than on site specific mitigation and compensation. A GCN Provisional Impact Assessment Conservation Payment Certificate can be completed prior to full planning application, which will provide evidence the Proposed Development will be suitable to join the DLL scheme.
Invertebrates	Given the removal of ancient woodland on Site, the Proposed Development will mitigate the potential loss of suitable invertebrate habitat through soil, standing deadwood and tree stump translocation. The ancient woodland soil and associated tree material will be translocated to the new area designated for ancient woodland planting. This will ensure that suitable habitat for protected invertebrates such as the stag beetle *Lucanidae sp*., will remain within the Site. Other habitat removal will also include pre-clearance checks for deadwood, relocation of any deadwood encountered to retained suitable habitat and check of the soil around any deadwood encountered, to search for presence of stag beetle larvae. Any larvae encountered to be relocated to the retained suitable habitat.

Species	Mitigation
	Proposed landscaping will also provide enhanced habitat for terrestrial invertebrates, including provision of new meadow and species-rich grassland, hedgerow and native buffer planting.
Reptiles	To ensure safeguarding of potential population of reptiles on site a reptile mitigation strategy will be created which will be based upon the confirmed presence of reptile on Site and estimated population size. A trapping and translocation programme will be undertaken for any area which is due to be cleared for the Proposed Development and which have confirmed presence of reptiles. This will involve a herptile fencing being installed around the areas to be trapped out, and the receptor site. The receptor site will be located within the designated ANRG space within Site B. This area of land will be able to be enhanced sufficiently to hold a good population of all reptile species, if required. Once the trapping programme have completed the areas requiring clearance will be cleared under ecological supervision. Any reptiles encountered will be translocated into the receptor site. The Proposed Development will have connectivity for reptiles post-construction, through additional green corridors going north to south and east to west across the development.
Water vole	Impacts on potential water vole population on Site will include avoiding and minimising effect during construction by maintaining a buffer of 3-5m from the bank of the streams on Site. The streams on Site will be maintained and enhanced within the Proposed Development thereby avoiding habitat loss and requirement for translocation. If the Proposed Development will require loss of water vole habitat and burrow an EPS licence from Natural England will be required to ensure the Proposed Development is compliant with legislation and policy relating to water voles.

Species	Mitigation
	A water vole mitigation strategy will be developed and followed to ensure the safeguarding of water voles on Site. The strategy will follow the water vole mitigation handbook[10].
Other species	To ensure the risk to other animal on Site, such as hedgehog and brown hare, is minimised during the construction of the development the works will adhere to an ecological method statement. This document will detail working measures and practices to be followed at the various stages of construction to reduce the risk the works pose to protected species. Measures include, but are not limited to: ■ A pre-works check to be undertaken prior to vegetation clearance to verify the absence of animals within the habitat affected; ■ Cover or fence-off any deep open excavations overnight; ■ Provide a means of egress or to cover any shallow open excavations overnight; and ■ Avoidance of overnight works wherever possible.

[10] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).

4 Enhancement and Monitoring

4.1 Enhancement

4.1.1. The Proposed Development will include additional enhancements for habitats and protected species on Site.

4.1.2. Through an iterative approach to landscape proposals, habitat creation and enhancement, the Site will be designed to have a net benefit for all habitats and species present on Site.

4.1.3. Ecological habitat enhancements will be explored though the completion of a BNG Assessment for the Proposed Development developed as part of the planning application. The Assessment will make use of the latest Defra Metric which provides a baseline assessment of the Biodiversity Unit (BU) value of the existing habitats.

4.1.4. In addition to the Defra Metric, alternative options for enhancing biodiversity across the Site will be explored, focussing on increasing opportunities for notable and/or protected species which are either confirmed to, or may use, the Disposal Sites. These may include but are not limited to:

- Habitat value enhancement, such as increasing botanical species diversity through creating new native habitats and enhancing existing habitats through planting appropriate native species.
- Bat roost features in buildings, permanent suitable structures and bat boxes in excess of those necessary to replace any identified roosts in buildings, structures and trees.
- Create and retain dark linear features going north-south and west-east across the Site to ensure commuting and foraging habitat for bats and other nocturnal species.
- Bird boxes such as traditional bird boxes on retained mature trees.
- Designated reptile habitat, which includes hibernacula, log piles, tussocky grassland and water features to increase the overall reptile population and species diversity on site.
- The ANRG will also include additional habitat creations such as ponds and woodland in line with the Nature partnership strategy.

4.2 Monitoring

4.2.1. Post development monitoring schemes will also be applied to each species mitigated for on site. The Post mitigation monitoring is essential to ensure that any species or habitat are establishing themselves successfully, and that ongoing habitat management measures are being implemented successfully. These may be carried out at biennial intervals up to 10 years of monitoring to ensure habitat and species are managed appropriately.

4.2.2. A habitat management plan review will be undertaken at the appropriate stages of the monitoring program. Further habitat enhancements or changes to the habitat management regime may be required if it is demonstrated that the target measures of success are not being met. The habitat management plan would be secured as part of any planning consent relating to the Proposed Development.

Appendix A

Relevant Legislation

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) 2024;
- 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 WCA11 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.

4.2.3. 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.

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

Protected plants

4.2.4. 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

4.2.5. 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.

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.

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 I[12] 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.

[12] To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm

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 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, 200913).

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 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.

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;

[13] 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.

- 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
- Clean 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.

Appendix B

Ancient Woodland Technical Note

TECHNICAL NOTE

DATE:	19 April 2024	**CONFIDENTIALITY:**	Confidential
SUBJECT:	University of Kent Disposal Sites - Ancient Woodland Strategy		
PROJECT:	70080896	**AUTHOR:**	Paul Joyce
CHECKED:	Katie Johnson	**APPROVED:**	Alan Heatley

INTRODUCTION

WSP has been commissioned by the University of Kent (UoK; the client) to provide transport and environmental advice for the development of proposals at various sites in and around their Canterbury Campus. Land to the north of the University Campus (referred to as Sites BCD) has been identified for a residential led development with local centre accommodating up to 2000 homes. Development of Disposal Site B is constrained by the presence of ancient woodland within its boundary, and a requirement to clear this woodland to provide an access route exists.

This technical note sets out the relevant legislative and planning context in relation to ancient woodland and its potential clearance to permit development of Disposal Site B, options for compensation for its clearance, and case studies for similar compensation proposals to inform the client about their likely success and how this may be received by the local planning authority.

PLANNING CONTEXT

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. When determining planning applications, it requires that LPAs typically refuse 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 (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. Removal of ancient woodland within Disposal Site B would require the development demonstrates "wholly exceptional reasons" in line with the NPPF.

Similar provisions are cascaded into Canterbury District Local Plan, policies of which have not been reproduced here for brevity.

BIODIVERSITY NET GAIN REQUIREMENTS

The Environment Act 2021[1] enacted a statutory requirement for biodiversity net gain in the UK, which became mandatory for developments requiring planning consent in February 2024. Biodiversity net gain is a quantitative method of assessing residual effects of a development on habitats. It places a requirement on a developer to not only off-set habitat loss, but that there should be a net gain in the value of habitats on

[1] The National Planning Policy Framework (NPPF) (2021); The Environment Act, 2021

completion of a development, through creation of new areas of habitat and/or enhancement of existing ones. In Kent, the net gain target is 20% above baseline value[2]; more widely in the UK it is 10%.

Ancient woodland is considered by the biodiversity net gain process to be an irreplaceable habitat and thus a bespoke mitigation plan would need to be agreed with the local authority for its loss. For other habitats, evaluation through the Defra Statutory Biodiversity Metric[3] would establish the extent of habitat creation and/or enhancement that would be required to achieve compliance with the Environment Act.

MITIGATION HEIRARCHY

Effects on ecological features should be mitigated through application of the 'Mitigation Hierarchy'. CIEEM defines this as "…*everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere*"[4].

Ancient woodlands are defined as areas that have been continuously wooded since at least 1600 AD, and are complex, irreplaceable ecosystems that have taken hundreds of years to establish. Although the ancient woodland habitat within Disposal Site B has no doubt received significant human influence through adjacent agriculture, forestry and in more recent times leisure (due to the adjacent public right of way), it has maintained a continuous link between the ancient woodland present in the past by maintaining tree cover without conversion to another land use type (such as arable, pasture etc). It is therefore not possible to mitigate for removal of this habitat; it is only possible to provide compensation. Clearance of ancient woodland for development will lead to an irreversible alteration from which it could not be restored.

COMPENSATION OPTIONS

Ancient Woodland Soil Translocation

Although mitigation for ancient woodland loss is not possible, retaining its unique character through habitat compensation may be possible by retention of soils and other living materials, and their translocation to a new site where a new woodland would be established. A number of case studies where ancient woodland soil translocation has occurred have been reviewed below. Translocation could comprise the following:

- *Salvaging of ancient woodland soil and applying it to land to become new woodland;*
- *Translocation of coppice stools to move trees directly between the existing ancient woodland and new woodland site; and*

[2] Kent Nature Partnership (2021) Biodiversity Net Gain. Available at: Biodiversity Net Gain | Kent Nature
[3] DEFRA (2023) Statutory biodiversity metric tools and guides. Available at: Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)
[4] CIEEM (2019). Biodiversity Net Gain Good Practice Principles for Development. Available at: https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf

- *Movement of leaf litter, dead wood and other materials to supplement the establishment of new woodland.*

It has not been possible to calculate the size of the compensatory woodland that would need to be created at this stage. Further detailed survey work would be required of the ancient woodland and consultation with the local planning authority, as well as a bespoke mitigation plan to cover issues associated with the irreplaceable nature of the habitats.

Woodland Planting Without Soil Translocation

If translocation techniques are not used then new woodland could be planted directly on land with little or no existing ecological value, such as arable land. In this case likely a greater area would be required to compensate for the loss of ancient woodland characteristics.

ANCIENT WOODLAND SOIL TRANSLOCATION CASE STUDIES

Background

This chapter comprises a rapid review of available literature on ancient woodland soil translocation. Key messages relating to the practical aspects of translocating woodland soils and the success, or otherwise, of the process are described. This review does not consider the legislative or policy case for translocation ancient woodland soils nor does it endorse the technique or confirm that the approach should be adopted for the project in question. The relative financial costs of different techniques is not studied and would require a further, larger piece of work.

Existing Best Practice, Standing Advice and Position Statements

The standard industry best practice guidance is Penny Anderson Associates/CIRIA (2003) or the CIRIA C600 publication[5]. However, this document is relatively old and there is limited specific coverage of ancient woodland soils translocation. In general, there is relatively poor guidance and evidence underpinning ancient woodland soil translocation. New guidance is expected on ecological restoration practices from the Chartered Institute for Ecology and Environmental Management in 2024. It is unclear if this will specifically deal with ancient woodland as a habitat or soil translocation as a practice.

Natural England and the Forestry Commission do not have a formal position statement on ancient woodland soil translocation that was detected during this rapid review. However, Natural England's standing advice[6] makes the following comments:

[5] Penny Anderson Associates/CIRIA (2003). Publication C600 Habitat translocation - a best practice guide. CIRIA. London

[6] Natural England (January 2022). Guidance: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - How to assess a planning application when there are ancient woodland, ancient trees or veteran trees on or near a proposed development site [on-line] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions (accessed March 2024)

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"*Planting new trees and creating new native woodland is not a direct replacement for lost or damaged trees or woodland. You can accept large-scale woodland creation as a compensation measure alongside other measures. This could be on soil that has been moved from the destroyed area of ancient woodland (soil translocation) which could include other ancient woodland ecosystem features, such as:*

- *tree hulks*
- *coppice stools*
- *saplings*

You cannot accept plans to move an ancient woodland ecosystem because:

- *it's not possible to replicate the same conditions at another site; and*
- *it's no longer an ancient woodland".*

The Woodland Trust published a position statement on ancient woodland soil translocation[7] which makes a number of points, most important of which are:

- *We reject suggestions that "translocation" of materials from areas of ancient woodland subject to damage or destruction can be considered as mitigation for loss of ancient woodland.*
- *Such "translocation" is not avoiding or minimising the loss; it can only be viewed as a "salvage" operation seeking to move components of a complex habitat, when loss of woodland is inevitable, as part of a compensation package.*
- *Translocation of soils, vegetation or other materials from damaged or destroyed habitats should not be used to justify development decisions in the name of sustainable development.*
- *A biodiversity cost-benefit analysis should be applied to assess if translocation of soil, vegetation or other elements from damaged or destroyed ancient woodland is sufficient compensation for the loss of biodiversity, compared to, for example, a high ratio of new native woodland creation.*
- *Clear objectives, a binding commitment to subsequent management and stringent monitoring should be an essential requirement of any consented translocation of ancient woodland components. Monitoring should be long term (a minimum of 25 years), with agreed sanctions or interventions should the translocation not meet its objectives.*

Literature Review Method

A search on conservationevidence.com was undertaken for search terms such as 'ancient woodland', 'soil translocation', 'ancient woodland soil'. However, no relevant studies were identified.

Enquiries were lodged within WSP's ecology team for experience and relevant studies on ancient woodland soil translocation. This generated a list of resources which are reviewed in Appendix A**Error! Reference**

[7] Woodland Trust (October, 2014). Position statement – ancient woods and translocation [on-line] https://www.woodlandtrust.org.uk/media/4730/ancient-woodland-translocation-position-statement.pdf

source not found. and form the basis of this chapter. A summary of relevant findings is presented below arising from a review undertaken of these studies. Additional studies were accessed by search Google for 'ancient woodland soil translocation'.

It is recognised that a more extensive literature search (e.g. including a full academic literature search) is likely to warrant additional literature resources. It is also noted that many studies are not published or available for review e.g. those undertaken by developers in response to planning commitments etc.

A key finding of this chapter is that a full synthesis of ancient woodland soil translocation approaches is needed.

Summary of Key Issues

AVAILABLE LITERATURE

Appendix A reveals that there are few long-term studies (i.e. greater than 10 years in age) charting the success of ancient woodland soil translocation. This is particularly important for a habitat which takes decades, or even centuries, to reach its ecological potential. It cannot be clearly stated if the outcomes of soil translocation will be sustained into the long term. There are few studies which look at the impact on translocation on soil faunal and fungal communities compared to a controlled reference community not subject to translocation. Most studies examine the effect of soil translocation on high plant community composition and/or abundance (i.e. trees, shrubs and woodland ground flora). However, few studies looking at plant communities adopt a truly quantitative comparison of the donor community verses the receptor community.

KEY TECHNIQUES DESCRIBED IN THE LITERATURE

The following key techniques are described for ancient woodland soil translocation:

- Ancient woodland soil translocation – the process of moving soils, to rescue habitats which would otherwise be lost. Translocation may involve features such as trees, shrubs, individual plants, litter and deadwood; and
- Soil translocation may comprise loose tipping of soils or turf translocation.

STATED AIMS OF THESE PROJECTS

The various attempts to translocate ancient woodland soils have the following stated objectives:

- Translocate donor site ground flora and recreate at receptor site;
- Translocate donor site coppice stalls, shrubs and trees and re-plant at receptor site;
- Preserve soil horizons during translocation process; and

- Improve the condition, quality or species-richness of new/compensation woodland by inoculating it with ancient woodland soils.

Other stated reasons for translocating ancient woodland soils included:

- Soil will be disposed of otherwise; and
- Newly created woodland is likely to be more species-rich and be given a better head start if inoculated with ancient woodland soils, even if the precise ancient woodland community isn't recreated.

KEY PRACTICAL CONSIDERATIONS

The following issues were stated as key practical considerations:

- Translocation should find a receptor site with similar soils, hydrology and topography;
- The correct machinery should be used to translocate soils, different machines may be needed for loose tipping compared to turf translocation;
- Woodland soils should be translocated in the correct season;
- Soil moisture and structural integrity levels should be monitored throughout the process. Soils should not be translocated when too wet or allowed to become too dry;
- Surface water may need to be managed at the receptor site – keeping soils from excessive flooding or drying;
- The work should be supervised by ecological, soil scientist and other appropriate qualified personnel;
- Setting up a grid system to ensure translocation of woodland soils in the same spatial configuration between donor and receptor; and
- Use of matting to prevent compression of donor and receptor site soils by vehicles and personnel.

DO ANCIENT WOODLAND SOIL TRANSLOCATION PROJECTS MEET THEIR OBJECTIVES?

The following key messages were drawn from analysis of the studies in Appendix A:

- In general, most translocation exercises appear to retain some of the ancient woodland plants present at the donor site, but the majority of cases report marked differences between donor and receptor woodland communities (e.g. species abundance, composition, structural characteristics);
- In respect to translocated coppice stools, trees and ancient woodland field layer plants, the majority of the translocation projects appear to have achieved their aims as far as preserving the viability of translocated coppice stools, shrubs and the regeneration of ancient woodland field layer plants;
- Few of the published sources quantify the recovery of ancient woodland plants compared to the donor site baseline, they focus instead on presence/absence. Although the HS2 studies do quantify the number of coppice stools, shrubs and trees that were translocated;

- For certain studies it is very difficult to compare the translocated community to the baseline (donor) community in all but qualitative terms;
- There appears to be no long-term monitoring of these sites. However, both HS2 and A21 projects occurred recently, within the last 5 – 10 years. The Buckley et al. study[8] used a 25-year monitoring period; and
- None of the published sources report on the success of translocation when it comes to soil fungi and soil fauna.

A rigorous monitoring strategy should accompany any new proposal for ancient woodland soil translocation. The Woodland Trust suggest that it should continue for a minimum of 25 years.

CONCLUSIONS

Case studies of ancient woodland soil translocation within the UK were reviewed, and the key techniques and practical considerations highlighted. In general, most translocation exercises appear to retain some of the ancient woodland plants present at the donor site, but the majority of cases report marked differences between donor and receptor woodland communities (e.g. species abundance, composition, structural characteristics). Few of the published sources quantify the recovery of ancient woodland plants compared to the donor site baseline, they focus instead on presence/absence. The difficulty in comparing the case study results in terms of translocated community to the baseline (donor) community in all but qualitative terms was also highlighted by the review. None of the published sources report on the success of translocation when it comes to soil fungi and soil fauna.

It is our view that, in light of the above case studies and legislative/planning policy context, the local planning authority is likely to be sceptical of proposals to compensate for the loss of ancient woodland within Disposal Site B through establishment of new woodland, without or without translocation of soil. Early consultation with the LPA will be require to determine their position and feasibility of achieving a successful planning outcome for Disposal Site B.

The Environment Act 2021 enacted a requirement for biodiversity net gain in the UK, which became mandatory for developments requiring planning consent in February 2024. In Kent, the net gain target is 20% above baseline value; more widely in the UK it is 10%. Ancient woodland is considered by the biodiversity net gain process to be an irreplaceable habitat and thus a bespoke mitigation plan would need to be agreed with the local authority for its loss. It is likely compensation through new woodland establishment would need an area in the order of 10s of hectares, although the true area can only be established through negotiation with the LPA. A rigorous monitoring strategy should also accompany any new proposal for ancient woodland soil translocation. The Woodland Trust suggest that it should continue for a minimum of 25 years.

[8] Buckley Helliwell, Milne and Howell, (2016). Twenty-five years on – vegetation succession on a translocated ancient woodland soil at Biggins Wood, Kent, UK. *Forestry-An International Journal of Forest Research Science* 90: 561–572

TECHNICAL NOTE

DATE:	19 April 2024	**CONFIDENTIALITY:**	Confidential
SUBJECT:	University of Kent Disposal Sites - Ancient Woodland Strategy		
PROJECT:	70080896	**AUTHOR:**	Paul Joyce
CHECKED:		**APPROVED:**	

Appendix A – Review of ancient woodland soil translocation case studies

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
HS2 Phase 1	Warwickshire and Buckinghamshire	Not stated	▪ N/A	▪ Plan translocation around other ecological requirements (e.g. protected species issues). ▪ Involve a soil scientist and map to document donor site soils. To set a baseline and to inform translocation technique. ▪ Use a grid system to record donor site soils and transfer this system to the receptor site for translocated soils. ▪ Soils scientist and ecologist supervision of works is necessary. ▪ May need to involve forestry and horticulrual expertise when it comes to translocating coppice stools and shrubs. ▪ Seek to preserve the soil profile. ▪ Translocation of soil in turves is preferrable as it preserves soil horizons but may not always be possible.	▪ Not stated – but see Decoy Pond Wood case study below. ▪ Large literature on the practical methods for ancient woodland soil translocation.	HS2 Ltd. (2022)[9]

[9] HS2 Ltd. (2022). Ancient woodland soils translocation. HS2 Learning Legacy [on-line]

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
				▪ Monitor the moisture content of soils during translocation to prevent excessive drying. ▪ Management of water at receptor site is critical for soils with a high clay content to prevent 'smearing' of translocated soils. ▪ Soils were translocated during the dormant season for plant growth which is c. October to March.		
HS2 Phase 1 - Decoy Pond Wood	Buckinghamshire	1ha	▪ Holly, blackthorn, hazel, hawthorn, oak sp., privet sp., guelder rose, dog rose, honeysuckle, dogwood, wild service tree. ▪ Primrose, yellow archangel, lords and ladies, wood anemone, wood	▪ As above for HS2 in general. ▪ Project involved translocation of dead wood, clumps of ancient woodland indicator species (c. 1,000), trees and saplings (c. 40) and coppice stools (c. 130).	▪ Anecdotal evidence provided in HS2 et. al. (undated) of recovering ancient woodland ground flora plants e.g. bluebell.	HS2 Ltd, Fusion and RSK Habitats (Undated)[10]

[10] HS2 Ltd, Fusion and RSK Habitats (Undated). Learning Legacy Case-Study – Decoy Pond Wood

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
			sedge, wild strawberry, germander speedwell, St Johns Wort sp., ribwort plantain, bugle, wood speedwell.			
HS2 Phase 1 – Ashow Road	Warwickshire	0.1ha	▪ Intermediate between W10 and W8 woodland.	▪ As above for HS2 in general. ▪ Project involved soil translocation but also coppice stools, living trees and standing deadwood.	▪ Anecdotal evidence provided in HS2 et. al. (undated) of recovering ancient woodland ground flora plants.	LM, Three Shires Ltd, Lochart Garratt (Undated)[11]
National Highways/Balfour Beatty - A21	Kent	15.6ha	▪ Sweet chestnut coppice.	▪ Soil waterlogging frustrated the process in places.	▪ Translocated coppice stools were mainly found	Middlemarch Environmental Ltd. (July 2018)[12]

[11] HS2 Ltd, LM, Three Shires Ltd, Lochart Garratt (Undated). Learning Legacy Case-Study - Ashow Road
[12] Middlemarch Environmental Ltd. (July 2018) A21 Tonbridge to Pembury Dualling Habitat Translocation Monitoring Report - A Report to: Balfour Beatty / Highways England. Report No: RT-MME-115836-20-06

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
Tonbridge to Pembury			▪ NVC types W8 and W10.	▪ Non-native invasive species and fly tipping of hazardous materials reduced the area of donor woodland available for translocation.	to be health in the receptor site. ▪ Most receptor sites supported several of the donor site ancient woodland ground flora species (presence/absence not quantified).	
Biggins Wood - Channel Tunnel Rail Link	Kent	1.1ha	▪ Tree canopy consisted of ash, elm, pedunculate oak and field maple over hazel, with willow. ▪ Several wet springs were present.	▪ After 25 years the project succeeded in transferring some shade-tolerant elements of the ground flora including over 70 per cent of its ancient woodland indicator species. ▪ However, the new community was significantly different from the original, principally because soil conditions were drier ▪ In future translocations, the tree species should be carefully chosen to match the prevailing topographic and edaphic factors.	▪ After transference there was an increase in the abundance of open-ground species, reflected in the soil seedbank ▪ Some losses of ancient woodland	Buckley et al. 2016[8]

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
				▪ Close spacing to hasten an initial canopy cover may be an advantage at first, but tree 'nurse' crops should be removed promptly once their purpose has been served. ▪ Location of the new site as close as possible to an existing wood may provide additional colonizing sources of propagules. ▪ The priority for the surviving field layers is to re-establish a canopy quickly, but once developed, the long, dark phase of woodland development can become a threat to woodland-edge species and others requiring more light.	indicator plants occurred. ▪ The comparatively drier conditions of the receptor strongly influenced the field layer. The planted trees also differed from that of the canopy in the donor wood. ▪ Tree canopy uniformity at the receptor site was much greater than in the donor wood.	
Brickhouse Wood – quarry and	Kent	2.8ha	▪ Not stated	▪ Autumn translocation promoted better immediate recovery of forest species than spring translocation.	▪ After 10 yr the field layer at the receptor site still	Craig et al. 2015[13]

[13] Craig, Buckley and Howell, (2015). Responses of an ancient woodland field layer to soil translocation: methods and timing. Applied Vegetation Science 18: 579–590

Project	Location	Approx. Area Translocated	Type of woodland (donor)	Key lessons	Successful?	Reference
landfill site development				▪ Soil placement caused less initial damage than loose-tipping. soils spread by bulldozer rather than loose-tipping had higher levels of total nitrogen and organic matter than loose-tipped areas but were more heavily compacted. ▪ Ancient woodland indicators (AWI) declined by an average of about one species per 4 x 4-m plot.	resembled that of the donor, but with differences in abundance of some individual species.	

Appendix C

Concept Masterplan

National Cycle Route 1 - Crab and Winkle Way

D

C

B

BLEAN

TYLER HILL

Tyler Hill Road

Whitstable Road

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Key

- Site boundary
- Site ownership boundary
- Developable land parcels
- Allotments
- Outdoor sport facilities
- Amenity parks and play facilities
- Natural and semi-natural open space
- Potential new Primary School location
  NOTE: Size of site for relocated school is TBC (and will be dependent on the size of the school(s) ultimately delivered). At this stage, noting KCC's requirements, we envisage a school site of up to 3 Ha being delivered within the masterplan – the shape/design of which will be subject to discussions with KCC moving forward.
- Potential new Local Centre location
- New recreational walking route
  Total new length of approximately 2.8km
- Recreational walking route along existing Crab and Winkle Way
  Total existing length to be used as part of circular walking route: 0.8km

0mm 100m 200m 300m 400m

Designed with reference to 'University of Kent. A Vision for Development' (August 2021)

Rev	Date	Description	Dwn	Ckd

Drawn	DS
Checked	CI
Date	19-12-2024
Scale @ A2	1:5000

University of Kent

Concept Masterplan with recreational walking route

B100390-AD - SK002
REV -

Draft for revision

PRP

The University of Kent, Canterbury

University of Kent

A Vision for Development *Landscape and Green Infrastructure Extract*

December 2024

PRP

Landscape and Green Infrastructure Design Strategy

The green and blue network created responds to the varied and rich context, including Blean Woods to the West and Daw's Wood to the east. Green and blue corridors already run across the site, with Sarre Penn, National Cycle Route 1 and the Crab and Winkle railway all providing linear habitats.

Key landscape considerations include:

1. A comprehensive drainage network spread across the site's open spaces, with ample capacity to not overwhelm the Sarre Penn stream and its habitats.
2. Provision of new varied open spaces to achieve the 20% BNG target of policy DS21.
3. Retain and enhance denser areas of planting, alongside a new area of woodland to mitigate the impact on the Ancient Woodland.
4. The majority of the open space is provided to the west, including new sports pitches in close proximity to Blean. More natural open spaces can be found to the south west, closer to Blean Woods SAC.
5. Green corridors through the site are to be enhanced and further connected, allowing for enhanced pedestrian and cycle access to both the surrounding villages and Canterbury city centre.
6. By using hedgerows to dictate open space locations, the field pattern has largely been retained.
7. Providing varied open space types, to ensure feasible access to nature and leisure for all residents.
8. Compensatory woodland to mitigate for the small amount of Ancient Woodland removed to facilitate the spine road. Depending on access requirements, the woodland can be designated as 'semi natural and natural open space'.

Open space provision

Type	Draft LP requirement (ha)	Provided (ha)
Semi natural and natural open space	18.7	19.0
Parks and gardens	3.7	3.9
Amenity green spaces and green corridors*	10.5	12.8
LAP and LEAP	1.2	1.2
NEAP / destination play	1.4	1.4
Outdoor sports pitches	4.1	4.1
Allotments	1.8	1.8

*Includes green routes between parcels with access roads.

Landscape and green infrastructure design strategy

Key

- Site boundary
- Green corridors and green routes
- Natural and semi-natural open space
- Existing tree planting mitigation
- Amenity green spaces and green corridors, and parks and gardens
- Ancient woodland
- Compensatory habitat for ancient woodland of approximately 1ha, within natural and semi natural open space
- *Development parcel*
- *Primary education parcel*
- *Community hub*

University of Kent

PRP

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