



Surrey Wildlife Trust
Ecology Services

Landscape and Ecology Management Plan

Sovereign House

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**Wildlife Trust
Consultancies**



Constructionline
Gold Member



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Acronyms

Acronym	Definition
ACIEEM	Associate Member of CIEEM
BNG	Biodiversity Net Gain
BOA	Biodiversity Opportunity Areas
BREEAM	Building Research Establishment Environmental Assessment Method
EPS	European Protected Species
GIS	Geographic Information System
HMMP	Habitat Management and Monitoring Plan
HPI	Habitats of Principal Importance
LEMP	Landscape and Ecological Management Plan
LPA	Local Planning Authority
NERC	Natural Environment and Rural Communities
PL/A	Presence likely/absence
PPE	Personal Protective Equipment
RSPB	Royal Society for the Protection of Birds
SPI	Species of Principal Importance
SSSI	Site of Special Scientific Interest
SWT	Surrey Wildlife Trust
VAT	Value Added Tax
WCA	Wildlife and Countryside Act

1 Summary

- 1.1.1 This Landscape and Ecology Management Plan (LEMP) has been prepared to ensure long-term biodiversity improvements are secured. The biodiversity improvements involve habitat retention and creation set out in a Statutory Biodiversity Net Gain (BNG) assessment undertaken for a granted planning application to full planning permission for a Change of use from E(g)(i) offices to F1(g) Law Courts, including internal alterations, additional external lift, additional sub-station and landscaping works at Sovereign House (planning reference: PL/25/0616).
- 1.1.2 The template is based on best-practice guidance and has been informed by knowledge of ecological management practices at the time of preparation (Natural England and Department for Environment, Food and Rural Affairs, 2024a) (Natural England and Department for Environment, Food and Rural Affairs, 2024b).
- 1.1.3 This plan will be adaptive which means it will be regularly reviewed and updated in line with monitoring results, to ensure the management measures detailed deliver the desired outcome and reflect local conditions.
- 1.1.4 This document refers to the latest Landscape General Arrangement plan dated 07/04/2025 (AtkinsRéalis UK Limited, 2025c) and the Landscape Softwork Plan (AtkinsRéalis UK Limited, 2025d).
- 1.1.5 An overview of the project is presented in Table 1, and a summary of the management plan in Table 2 and the monitoring plan in Table 3.

Table 1: Project overview

Project type	Onsite	
Site name	Sovereign House, 57-59 Vastern Road, Reading RG18BT	
Landowner	Ministry of Justice (MoJ) Tribunal Court	
Land manager	Bowmer and Kirkland Ltd (construction phase year 0-2) Landowner (operational phase year 2-30)	
Responsible person/organisation for creating or enhancing the habitat	Landowner/contractors	
Funding mechanism	Funding Resource: LEMP for HMCTS Reading will be funded by His Majesty's Courts & Tribunals Service (HMCTS) ultimately the MOJ as part of its operational estate responsibilities. Funding Mechanism: All LEMP activities will be delivered through HMCTS's national Facilities Management (FM) contracts, which include Soft FM services such as grounds maintenance, landscaping, ecological management and statutory environmental compliance. The appointed FM (Equans) provider will undertake routine and cyclical LEMP tasks in accordance with the prescriptions set out in this plan. Specific details are not currently available but it is expected that it would be a standard circle for a Public Building for Soft Services.	
Period covered by this management plan	2026-2055	
Planning authority	Reading Borough Council	
Planning reference (if applicable)	PL/25/0616	
Central OS grid reference	SU 71597 74061	
Metric revision/title	Sovereign House BNG Calc V1 (AtkinsRéalis UK Limited, 2025b)	
Are any Irreplaceable Habitats present onsite	No	
Required consents and licences	Potential EPS Bat mitigation licence, Bat Mitigation Class Licence (BMCL) and/or notification of disturbance, dependent on results of further surveys.	
Site restrictions	To be verified.	
Legal agreement	As a result of the BREEAM assessment (Condition 12 to Planning), a LEMP is required to evidence element LE 05 - Long Term Impact on Biodiversity.	
Target biodiversity net gain onsite units	Habitat units	0.14
	Hedgerow units	0.35
	Trading rules met?	Yes

Table 2: Summary of management plan

Habitat Type	Figure 1 Compartment ID	Target UK habitat classification and code	Target habitat condition	Habitat intervention	Years to targeted habitat type and condition	Summary of management measures	Management timescale												Management Frequency (per year)
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Grassland (low distinctiveness)	1	Modified grassland	Moderate	Create	5 years	Seeding													Year 1
						Weeding													Year 1-30
						Mowing													Year 2 (likely from year 2 and only after grassland has established) -30, as required
						Management of bare ground													Year 1-30 as required
Scrub	2	Mixed scrub	Moderate	Create	5 years	Planting and protection													Year 1
						Replacement of failed plants													Year 1-Year 5
						Removal of tree guards													Year 5
						Watering													Year 1-2
						Scrub cutting – general maintenance of scrub footprint													Year 1-30
Individual trees	All individual trees	Individual trees	Moderate	Retain: G002-A, G002-B, G002-C, T003, T004, T005, T006 Create: Newly planted tree (1x)	Retained: N/A Created: 27 years	Tree planting													Year 1
						Water													As required
						Replace dead trees													November-February As required
						Control weeds around new trees													Years 1-3
						Check tree stakes													Year 1
						Yearly arboricultural check													Annually
						Yearly maintenance													As required
Hedgerow	H1	Native hedgerow	Moderate	Create	5 years	Planting													Early winter Year 1
						Water													Year 1-Year 5 As required
						Initial cut of new hedgerow													Year 1 Winter
						Early-stage maintenance trim													Year 2-Year 10 Every two years Winter
						General maintenance trim													Year 10-Year 30 Every three years Winter

Habitat Type	Figure 1 Compartment ID	Target UK habitat classification and code	Target habitat condition	Habitat intervention	Years to targeted habitat type and condition	Summary of management measures	Management timescale												Management Frequency (per year)
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
						Coppice or hedge laying of hedges													Winter As required, likely in year 10, 20 and 30
						Replant gaps													Early winter As required when encountered
Urban	4	Introduced shrubs	Not applicable	Create	5 years	Planting													Year 1
						Replacement of failed plant species													Year 1-2 Spring optimal (avoiding frost and wet periods)
						Application of mulch													Year 1 Spring optimal (avoiding frost and wet periods)
						Ongoing management (pruning)													Year 1- 30 as required. Late winter – early spring.
						Watering													Year 1 and 2, as required
	All urban habitats	N/A	N/A	N/A	N/A	Controlling non-native invasive species													Annually

Table 3: Summary of monitoring plan

Habitat Type	Figure 1 Compartment ID	Summary of monitoring measures	Monitoring timescale												Monitoring Frequency (per year)
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Grassland	1	Update UK Habitat classification survey and condition assessment													Year 5 then every 5 years (for bare ground, monitor annually)
Scrub	2	Walkover of scrub parcels to check for new planting failure, gaps, scrub extent and presence of invasive species or dominating species.													Annually Year 1-Year 5
		Update UK Habitat classification survey and condition assessment													Year 5 then every 5 years
Individual trees	All individual trees	Arboricultural walkover survey to review new tree establishment, general tree health, site user health and safety requirements.													Annually
		Updated condition assessment of trees.													Year 5 then every 5 years
Hedgerow	H1	Walkover of hedges to check for whip failure, gaps, hedgerow extent, presence of invasive species, height.													Annually Year 1-Year 5 then every 5 years
		Updated UK Habitat classification and condition assessment of hedgerows.													Year 5 then every 5 years
Urban	All urban areas	Walkover to check for failed plants and invasive/undesirable species.													Annually Year 1-Year 5 then every 5 years
		Botanical survey to include species list across the bioswale to check against species richness and KPIs.													Year 5 then every 5 years

Key

Planning Boundary

Enhancement Features

Log pile

Proposed tree

Retention of bird boxes

Retention of hedgehog box

Tree mounted bat box

Tree mounted bird box

Retention of hanging bug hotel

UK Habitat Classification

h3h - Mixed scrub

g4 - Modified grassland

u1 - 847 - Introduced shrub

u1b5 - Buildings

u1b - Developed land; sealed surface

h2b - Native hedgerow

Trees

Proposed tree

Retained tree



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Created By: EB
Map Revision Number: 1.1
6441, 17/06/2026

Figure 1:
Sovereign House
Post Intervention Habitat Plan

2 Introduction

2.1 Background

- 2.1.1 This LEMP will not be delivered in a phased approach.
- 2.1.2 For habitats that are enhanced, the 30-year management plan commences for enhanced habitats once management measures start to be implemented. This follows the standard HMMP required for BNG and therefore covers 30 years.
- 2.1.3 Where habitats are being created, the 30-year management plan commences once these habitats have been created and suitably settled, as defined by these beginning to function as the new habitat.

2.2 Plan area

- 2.2.1 The LEMP area is presented in Figure 1 and is approximately 0.3 ha, located at Sovereign House, 57-59 Vastern Road, Reading RG1 8BT, in the Reading Borough district of Berkshire, at Ordnance Survey National Grid Reference SU 7159 7406. It is located within the National Character Area (NCA) 115: Thames Valley.
- 2.2.2 The LEMP area comprises developed land (comprising hardstanding roads and buildings), introduced shrub, and urban trees.

2.3 Past and existing management

- 2.3.1 The site is a vacant office building, originally serving as the headquarters for the Sovereign Housing Association. Habitats on site are subject to regular management and maintenance typical of habitats surrounding publicly accessible buildings and premises. Bird nest boxes, bird feeders, insect hotels and hedgehog box present on site.

2.4 Roles and responsibilities

- 2.4.1 Roles responsible for delivering this HMMP are detailed below.

Table 4: Roles and responsibilities

Role	Responsibilities	Organisation	Dates responsible
Ecologist	- Surveys to inform HMMP - EclA - BNG assessment and design	AtkinsRéalis UK Limited	2025
	Creation of HMMP	SWT Ecology Services	Year 0-1
	- Monitoring surveys - Monitoring report	Unknown	Year 1-30
Landowner	Ensuring compliance with the relevant environmental legislation and consents, objectives, targets and the HMMP.	Ministry of Justice (MoJ) Tribunal Court	Year 0-30
Land manager or management organisation	Ensuring compliance with the relevant environmental legislation and consents, objectives, targets and the HMMP.	Bowmer and Kirkland	Bowmer and Kirkland Ltd (construction phase year 0-2)

Role	Responsibilities	Organisation	Dates responsible
			Landowner (operational phase year 2-30)

3 Legislative framework, consent and licences

- 3.1.1 All projects need to comply with relevant environmental UK legislation, as detailed in Appendix 1. It is the responsibility of the organisation delivering the management plan to ensure they comply all legislation, including non-environmental legislation such as the Health and Safety Act 1974. Appendix 5 provides information on when management measures can be undertaken to minimise impacts on protected species, and species of conservation concern.
- 3.1.2 The proposed management measures do not require specific consent or mitigation licences or to proceed with the management plan lawfully, the following licences are required, once planning consent has been granted and all conditions relating to ecology have been discharged.

4 Baseline environmental information

4.1 Methods

- 4.1.1 Baseline information was collected by AtkinsRéalis UK Limited as part of an EclA to inform the planning permission (AtkinsRéalis UK Limited, 2025). Methods are detailed within the EclA report.

4.2 Results

- 4.2.1 A brief outline of the baseline information considered as part of this management plan is detailed below and can be found in version 4.0 of the EclA report (AtkinsRéalis UK Limited, 2025) and the Biodiversity Net Gain Design Stage Report (AtkinsRéalis UK Limited, 2025a).

Table 5: Baseline habitats recorded during the surveys

UK habitat classification and code ¹	HPI ² ? (Y/N)	Baseline habitat condition
u1b - Developed land; sealed surface	No	Not applicable
u1 - 847 - Introduced shrub	No	Not applicable
Individual tree (urban)	No	Moderate

¹ Refer to Table 5-1 – Area Habitat Retention/ Enhancement of the BNG Design Stage Report (AtkinsRéalis UK Limited, 2025a) and sheet A-1 of the metric (AtkinsRéalis UK Limited, 2025b)

² Confirmed through surveys or MAGIC mapping of HPI boundaries

Table 6: Protected species and species of conservation concern considered as part of the LEMP

Species group	Species	Recorded in the desk study	Summary of desk study and survey results
Invertebrate	Priority species such as the stag beetle and other common UK species.	Yes	Priority species such as the stag beetle (nearest record - from 2023 - within 10m of the site) and other common UK species. Suitability for stag beetle in tree roots and some deadwood around the site, suitable for deadwood-dependent (saproxylic) beetle species. Buildings are also suitable for invertebrates.
Birds	Suitability for common passerines and nesting birds.	Yes	Data search results show records of 1,129 recent priority bird records within 500 m of the survey area, with one record of peregrine within 10m (species listed under Schedule 1 Part 1 of the Wildlife and Countryside Act 1981, as amended) and various species within the red and amber BoCC list. However, the site has suitability for common species of breeding birds within the buildings, scattered trees and introduced shrub.
Mammals	Badger	Yes	Badger records in the data search results within 350m. No signs of badger activity recorded during the badger walkover. No suitable habitat present at baseline.
	Bats	Yes	Records of pipistrelle species (<i>Pipistrellus</i> sp.), common pipistrelle, soprano pipistrelle, Natterer's bat, Nathusius's pipistrelle, brown long-eared bat, Daubenton's bat, Leisler's bat, long-eared bat species, Myotis bat species, western barbastelle, noctule bat, serotine and whiskered bat. The closest record (a roost record) is of common pipistrelle located approximately 60m west of the application site. All buildings were assessed for roosting suitability: B1 was assessed as low, and following a PL/A survey bat were considered likely absent. B3 was assessed as negligible for roosting bats, and B2 was assessed as having low suitability. The only building impacted by the proposal is B1. No trees with bat potential will be impacted by the proposal (AtkinsRéalis UK Limited, 2025). The habitats on site were considered to be of moderate value for foraging and commuting bats.
	Hedgehog	Yes	Hedgehog records in the data search results the nearest was 220m from the site boundary. Suitable habitat present.
All species	Invasive, non-native species	Yes	The field survey identified four invasive non-native plant species: <i>Cotoneaster microphyllus</i> , snowberry, butterfly-bush and cherry laurel

5 Management Plan

5.1.1 Management prescriptions are detailed below for each habitat type and condition targeted by this LEMP to deliver improvements for biodiversity. Relevant post-intervention compartment numbers are presented in Figure 1. The vegetative habitats included in the plan include:

Grassland (low distinctiveness):

- Modified grassland

Heathland and shrub:

- Mixed scrub

Individual trees:

- Urban tree

Hedgerows:

- Native hedgerow

Urban

- Introduced shrubs

5.2 Grassland (low distinctiveness)

Assessment of significance

5.2.1 Grassland (low distinctiveness) is of site importance as it provides some local habitat and found sources for small numbers of more common species.

5.2.2 An area of 0.015ha of modified grassland of moderate condition will be created in the project design (compartment 1 Figure 1).

5.2.3 Grassland was not present at baseline. The created modified grassland is likely to be suitable to support the following species groups/species:

- Invertebrates
- Common reptile species
- Common amphibians in their terrestrial phase
- Foraging birds
- Foraging badger
- Foraging bats
- Hedgehog
- Other mammals

Ecological trends, threats and constraints

5.2.4 Grassland requires active management to retain its conservation interest. Without management, tall vigorous grasses will dominate, and dead plant matter will accumulate. This will suppress the less vigorous species, and the botanical diversity of the grassland will decrease. Eventually without management natural succession will cause grassland to become scrub and finally woodland.

5.2.5 Over-management or inappropriate management can be a threat, such as intensive mowing which can limit sward height and reduce species diversity present.

5.2.6 If the grassland is managed by cutting without removing the arisings, the nutrients in the soil can increase and a thatch of dead plant material will accumulate. This also can lead to tall vigorous grasses dominating and little opportunities for new plants to germinate.

5.2.7 Ongoing airborne pollution will cause nitrogen deposition. This may give rise to changes in the vegetation communities.

5.2.8 Based on the use of the site, foot fall and littering could reduce ecological value of the habitats where this is not managed properly.

5.2.9 The hotter, drier summers and wetter winters with more extreme events predicted as a result of climate change are likely to alter the composition of grassland habitats. For example, drier conditions will favour stress tolerant (e.g. deep-rooted) and ruderal species due to the increased gaps/bare ground in swards (Natural England and RSPB, 2020). The longer growing season may mean that more than one cut a year will be required to suppress the grasses (Plantlife, 2019).

5.2.10 Invasive species are a threat to grassland on site as they can be brought in from external sources. Invasive species can dominate habitats and reduce biodiversity. Currently few invasive species (cherry laurel, *Cotoneaster microphyllus*, butterfly bush and snowberry) are present at baseline.

Objective, targets and measures of success (KPIs)

5.2.11 Objectives and targets are detailed below. When monitoring, all KPIs will be checked for each compartment to check these are being delivered.

Table 7: Grassland (low distinctiveness) management plan targets and KPIs

Target		KPI		Measure of success	Relevant post-intervention compartment ID
1	Modified grassland habitat will cover an area of 0.015ha as defined in BNG metric V1.0 (AtkinsRéalis UK Limited, 2025b) by 2055	1A	Number of grassland habitat hectares.	Target area of grassland habitat met by target year.	1
2	Grassland compartments to be in at least good condition by Year 5.	2A	Number of vascular plant species per m ² .	There are 6-8 vascular plant species per m ² present, including at least two forbs.	1

Target		KPI		Measure of success	Relevant post-intervention compartment ID
		2C	Percentage of scrub present.	Any scrub present accounts for <20% of the total grassland area (some scattered scrub such as bramble may be present).	
		2D	Percentage of physical damage.	Physical damage is evident in <5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	
		2E	Percentage of bare ground.	Cover of bare ground between 1% and 10%, including localised areas (e.g. a concentration of rabbit warrens).	
		2F	Percentage of bracken.	Cover of bracken <20%.	
		2G	Number of invasive, non-native species.	There is an absence of invasive non-native species (as listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended).	

Management measures

5.2.12 The management prescriptions are detailed below.

Seeding

5.2.13 Seeding with an appropriate seed mix would be required. The landscape plan (AtkinsRéalis UK Limited, 2025d) referring to the planting schedule (AtkinsRéalis UK Limited, 2025e) includes (Ref: PL06) a single species seed mix including *Lolium perenne* (perennial rye grass). However, as specified in the Biodiversity Net Gain Design Stage Report (AtkinsRéalis UK Limited, 2025a), modified grassland to achieve moderate condition must pass criterion A (6-8 species per square metre). It is recommended to use Emorsgate EL1 Flowering Lawn Mixture that includes species that are tolerant to regular mowing and trampling and will be able to flower and set seed over the summer period while experiencing these pressures.

5.2.14 Other examples of appropriate seed mixes include:

- Naturescapes N14 Flowering Lawn Mixture
- Emorsgate EG21 Fine Lawn Grass Mixture

5.2.15 Seeds will be sown following the specific instructions provided by the supplier. However, in general, seeds will be sown on bare, raked ground. To achieve this, the existing modified grassland will be managed to create a medium tilth. Seeds will be surface sown by machine or hand, in overlapping sections, followed by rolling to create full contact with the soil. Sowing would typically be carried out in spring or autumn; this may vary depending on the composition of species – the supplier would provide details on this.

Weeding

5.2.16 The grassland should be monitored for encroachment of non-native and invasive species including those mentioned in 5.2.10 as well as thistles, docks, ragwort and other weedy species. In most cases, the mowing regime given below should manage this. However, where this is not suitable a mixture of hand pulling, targeted herbicides and more frequent mowing should be used to control spread. In more extreme cases, professional advice will be sought.

Mowing

5.2.17 The grassland will be cut to minimum sward height of 500mm with arisings removed. Mowing will occur regularly only as required over the growing period (spring and summer). Winter mowing will be avoided as the sward will be dormant and the soil conditions would likely be wetter and therefore more sensitive to damage from mowing equipment.

5.2.18 To ensure that the seed mixture has set, mowing will only occur once growth of the sward has been established.

Management of bare ground

5.2.19 While some small areas of bare ground can be beneficial, persistent and large areas are detrimental to the overall health of the grassland. Due to the use of the site and target areas (recreational use for school), bare ground from foot traffic is likely to occur in areas, especially along desire lines. In areas of persistent bare ground, temporary fencing will be erected and the area reseeded. If compaction has occurred, then lightly tilling the topsoil will be required in order for the seeds to establish.

Table 8: Grassland (low distinctiveness) management prescriptions

Action	Figure 1 Compartment ID	Target condition criteria	Timing	Prescription	Consideration for protected species/species of conservation concern
Seeding	1	1A, 2A	Spring or Autumn Year 1	Seeding with an appropriate seed mix would be required. The planting schedule proposes (Ref: PL06) <i>Lolium perenne</i> (Perennial ryegrass). However, as specified in the Biodiversity Net Gain Design Stage Report (AtkinsRéalis UK Limited, 2025a), modified grassland to achieve moderate condition must pass criterion A (6-8 species per square metre). It is recommended to use Emorsgate EL1 Flowering Lawn Mixture that includes species that are tolerant to regular mowing and trampling and will be able to flower and set seed over the summer period while experiencing these pressures. Other examples of appropriate seed mixes include: - Naturescapes N14 Flowering Lawn Mixture - Emorsgate EG21 Fine Lawn Grass Mixture Seeds will be planted following the specific instructions provided by the supplier.	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Weeding		1A, 2A	Spring to autumn Year 1-30	Monitoring of grassland for encroachment by non-native and invasive species, management of these may include, more regular mowing, herbicide treatment or hand pulling.	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Mowing		1A, 2A, 2C, 2D, 2E, 2F	March-September Year 2-Year 30	Mowing will start only when grassland has established (likely from year 2). Regular mowing of the bulk of the modified grassland compartments for their amenity use. Mow to minimum height of 500mm and avoid winter mowing which can damage the soil. Only mow when necessary, i.e. sward height identified as too high, to reduce the amount of mowing undertaken thus limiting disturbance. Remove arisings from site (some can be kept in a compost pile in a discrete corner of site).	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Management of bare ground		1A, 2E, 2D	Spring or autumn Year 1-30 as required	Fencing off and reseeding of areas of persistent bare ground using appropriate seed mix	None

Habitat creation species list

5.2.20 Planting schedule (AtkinsRéalís UK Limited, 2025e) includes seeding perennial rye grass only. However, it is recommended to seed target species composition detailed in the table below. The species composition is based on the composition of Emorsgate EL1: Flowering Lawn Mixture, which is composed of 20% wildflowers and 80% meadow grasses and is suitable to create the target grasslands, although other suitable seed mixes are also available.

Table 9: Target species list for creation of grassland (low distinctiveness)

Scientific name	Common name	Abundance (%)	Scientific name	Common name	Abundance (%)
<i>Cynosurus cristatus</i>	Crested Dog's-tail	28.00%	<i>Lotus corniculatus</i>	Common bird's-foot Trefoil	0.10%
<i>Festuca rubra</i>	Red Fescue	24.00%	<i>Medicago lupulina</i>	Black Medick	0.70%
<i>Poa pratensis</i>	Smooth Meadow-grass	16.00%	<i>Phleum bertolonii</i>	Smaller Cat's-tail	4.00%
<i>Primula veris</i>	Cowslip	1.00%	<i>Plantago lanceolata</i>	Ribwort Plantain	2.40%
<i>Agrostis capillaris</i>	Common Bent	8.00%	<i>Prunella vulgaris</i>	Selfheal	1.20%
<i>Anthyllis vulneraria</i>	Kidney Vetch	1.00%	<i>Ranunculus acris</i>	Meadow Buttercup	1.60%
<i>Betonica officinalis</i>	Betony	1.00%	<i>Silene vulgaris</i>	Bladder Champion	1.00%
<i>Centaurea nigra</i>	Common Knapweed	1.60%	<i>Taraxacum officinale</i>	Dandelion	0.40%
<i>Galium album</i>	Hedge Bedstraw	1.00%	<i>Trifolium repens</i>	White Clover	5.60%
<i>Leucanthemum vulgare</i>	Oxeye Daisy	1.40%			

5.3 Scrub

Assessment of significance

- 5.3.1 Scrub is not present at baseline but 0.025ha of mixed scrub will be created under the development proposals and managed to be of moderate condition. The created scrub is likely to be of site importance as it provides some habitat from common and notable species, such as foraging bats and nesting birds.
- 5.3.2 The created mixed scrub is likely to be suitable to support the following species groups/species:
- Invertebrates
 - Amphibians in their terrestrial phase
 - Reptiles
 - Birds
 - Badger
 - Foraging bats
 - Hedgehog
 - Other mammals

Ecological trends, threats and constraints

- 5.3.3 Managing scrub inappropriately, either through neglect, over management, over too large an area, at the wrong time of year, can result in a reduction of species and structural diversity and a direct impact of the resources and refuge areas required by invertebrates, reptile, amphibians, birds and small mammals.
- 5.3.4 The effects of climate change over the next decade are likely to have significant impacts on the scrub habitat. The greatest threat to scrub from climate change is likely to be an increase in the frequency and severity of summer drought. The impacts of both insect pests and diseases are likely to increase with climate change. Deer and grey squirrel are likely to benefit from climate change thus becoming a greater threat. In addition, the risk of wind-throw may increase if the UK experiences more storms.
- 5.3.5 Invasive species can present a threat to scrub on site if these are spread from sources within the wider area. Currently few invasive species (cherry laurel, *Cotoneaster microphyllus*, butterfly bush and snowberry) are present at baseline.

Objective, targets and measures of success (KPIs)

- 5.3.6 Objectives and targets are detailed below. When monitoring, all KPIs will be checked for each compartment to check these are being delivered.

Table 10: Scrub management plan targets and KPIs

Target		KPI		Measure of success	Relevant post-intervention compartment ID
3	Mixed scrub habitat will cover an area of 0.025ha as defined in BNG metric V1.0 (AtkinsRéalis UK Limited, 2025b) by 2056	3A	Number of mixed scrub habitat hectares.	Target area of mixed scrub habitat met by target year.	2
4	Mixed scrub compartments to be in at least moderate condition by Year 5.	4A	Percentage of native species and number of native woody species.	The parcel represents a good example of its habitat type: • The appearance and composition of the vegetation closely matches its UK habitat classification description. • At least 80% of the scrub is native. • There are at least three native woody species. • No single species comprises more than 75% of the cover.	2
		4B	Number of size classes present.	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	
		4C	Number of invasive, non-native species and sub-optimal species present.	There is an absence of invasive non-native species (as listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended) and species indicative of suboptimal condition (non-native conifers, tree-of-heaven, holm oak, turkey oak, cherry laurel, snowberry, shallon, American skunk-cabbage, butterfly-bush, cotoneasters, Spanish bluebell, hybrid bluebell) make up less than 5% of ground cover.	
		4D	Presence of a well-developed edge and tall grassland or forbs present between scrub and adjacent habitat.	The scrub has a well-developed edge with scattered scrub and tall grassland and/or forbs present between the scrub and adjacent habitat.	

Management measures

5.3.7 The management prescriptions are detailed below.

Scrub planting

5.3.8 Native shrubs appropriate for the local area and size of the site will be used. Bareroot shrub saplings can be purchased from a range of native plant providers, as detailed in the planting schedule all planting stock is to be sourced from a certified UK location to ensure that the seedlings do not carry disease or pests. Table 11 below gives suggested species considered suitable given the soil type, provenance and what was recorded locally; it is also in accordance with the planting schedule for the development (AtkinsRéalis UK Limited, 2025e).

5.3.9 Planting will be undertaken in clumps, avoiding segregating species to encourage a diverse mix which will look more natural. Row planting will be avoided.

5.3.10 Planting will be undertaken in October and November, ideally before December, to maximise the success rate of the planted saplings. Saplings planted in the late winter, and early spring are more prone to desiccation as the ground becomes increasingly dry.

5.3.11 New shrubs will be protected with biodegradable tree guards whilst they are establishing.

5.3.12 Scrub will be watered during establishment if required. This would be undertaken by saturating the ground to ensure the water soaks deep into the soil.

5.3.13 Establishing and/or newly planted scrub is vulnerable to grazing pressure, although this is a low risk for the school site as perimeter fencing will reduce the exposure to grazing animals such as grey squirrel that could potentially be present and have some impact. Therefore, newly planted scrub will be protected by biodegradable tree grazing guards. These will be removed once scrub is established, likely at Year 5.

5.3.14 Foot traffic should not be allowed on the areas of scrub while the plants establish and mature – this is likely to be in year 10, however this should be monitored and proactively adapted over time. Any shrubs which fail in the first five years of planting should be replaced and if specific species are struggling to establish, an alternative should be chosen.

Scrub management

5.3.15 Management of scrub is useful as it helps maintain structural diversity and a range of age classes. Rotational cutting and coppicing can help achieve this and help meet the criteria for BNG targets.

5.3.16 Cutting of dense scrub habitat, if required, should be achieved by an operator on foot using a brush cutter or heavier machinery using a hydraulic arm to reach the scrub outside of the breeding bird nesting season, September to February inclusive. Any management of scrub habitat using machinery within the breeding bird season, March to August inclusive, should be avoided or undertaken under supervision of a suitably experienced ecologist. Some of the willow and alder present can be coppiced to aid in structural diversity and longevity of the scrub habitat. Each plant species should be coppiced every 10 to 20 years and no more than two plant species should be coppiced in any one year. With this in mind the willow and alder can be coppiced on rotation by area to allow for a varied regeneration growth but together in any one area as a mixed coppice.

Table 11: Scrub management prescriptions

Action	Figure 1 Compartment ID	Target condition criteria	Timing	Prescription	Consideration for protected species/species of conservation concern
Planting and protection	2	4A, 3A	Year 1 October to December	New plants to be planted including tree guards	None
Replacement of failed plants		4A	Year 1-Year 5 October to December	Plants to be replaced for the first five years if they fail	None
Removal of tree guards		4A	Year 5 Any	Once plants are established (likely year 5) any remaining tree guards should be removed	None
Watering		4A	Year 1-2 Spring and summer	As required for the first two years	None
Scrub cutting – general maintenance of scrub footprint		4A, 4B, 4D, 4E	Year 1-30 September - February	Supplementary cutting back of scrub, as required.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.

Habitat creation species list

5.3.17 Target species, composition to create scrub is detailed in the table below are suitable/local species that could be included. The planting schedule within the Landscape Outline Specification (AtkinsRéalis UK Limited, 2025e) includes a mix of non-native species and native species and that is not suitable for creating a mixed scrub habitat as defined in the UK Habitat classification system.

Table 12: Target species list for creation of scrub

Scientific name	Common name	Abundance (%)	Scientific name	Common name	Abundance (%)
<i>Cornus sanguinea</i>	Dogwood	10	<i>Corylus avellana</i>	Hazel	10
<i>Crataegus monogyna</i>	Hawthorn	5	<i>Crataegus laevigata</i>	Midland hawthorn	10
<i>Prunus spinosa</i>	Blackthorn	5	<i>Ligustrum vulgare</i>	Wild privet	10
<i>Rosa arvensis</i>	Field rose	10	<i>Sambucus nigra</i>	Elder	15
<i>Viburnum opulus</i>	Guelder-rose	10	<i>Ulmus sp. such as lutece</i>	Elm	8
<i>Ulex europaeus</i>	Gorse	2	<i>Ilex aquifolium</i>	Holly	5

5.4 Individual trees

Assessment of significance

- 5.4.1 Individual trees are of site importance as they provide habitat for a small number of common and notable species.
- 5.4.2 Trees G002-A, G002-B, G002-C, T003, T004, T005, T006 will be retained and managed to maintain their baseline condition (moderate condition) under the project proposals. One new small tree will be planted and managed to moderate condition. Locations of the existing and planted trees is shown in the Tree Protection Plan (AtkinsRéalis UK Limited , 2025f).
- 5.4.3 During the ecological surveys the habitat was assessed as being suitable to support the following species groups:
- Invertebrates
 - Nesting birds
 - Roosting, foraging and commuting bats
 - Other mammals

Ecological trends, threats and constraints

- 5.4.4 Long dry spells causing die-off of trees especially at the early stages of their growth.
- 5.4.5 The effects of climate change over the next decade are likely to have significant impacts on trees. The greatest threat to trees from climate change is likely to be an increase in the frequency and severity of summer drought. The impacts of both insect pests and diseases are likely to increase with climate change. Deer and grey squirrel are likely to benefit from climate change thus becoming a greater threat. In addition, the risk of wind-throw may increase if the UK experiences more storms (Natural England & RSPB, 2020).
- 5.4.6 Other threats to this habitat include littering and vandalism and impacts from exhaust fumes from cars on site due to the proximity of these habitats to university buildings and accommodation.
- 5.4.7 Over-tidying of standing and fallen deadwood can remove the habitat for a number of protected and notable species that rely on this habitat, in particular fungi and invertebrates.
- 5.4.8 Grazing animals such as deer and non-native grey squirrel can cause significant browsing damage to trees. Numbers of grey squirrel in England have been increasing in recent years and are predicted to continue rising (Matthews, 2018).
- 5.4.9 Tree diseases such as ash dieback will likely cause the loss of the majority of ash trees over the coming years. Additional tree diseases and other issues that may arise include oak processionary moth, oak decline and horse-chestnut leaf-miner. Note that oak processionary moth is an invasive species, which can be harmful to human health and requires specialist treatment.
- 5.4.10 Based on the use of the site, foot fall and littering could reduce ecological value of the habitats where this is not managed properly.

Objective, targets and measures of success (KPIs)

- 5.4.11 Objectives and targets are detailed below. When monitoring, all KPIs will be checked for each compartment to check these are being delivered.

Table 13: Individual trees management plan targets and KPIs

Target		KPI		Measure of success	Tree protection Plan (AtkinsRéalis UK Limited , 2025f)
5	Individual tree habitat will cover an area as defined in BNG metric V1.0 (AtkinsRéalis UK Limited, 2025b) by 2056	5A	Area of individual trees	Target area of individual trees met by target year. Trees G002-A, G002-B, G002-C, T003, T004, T005, T006 will be retained. One new small tree will be planted.	All trees
6	Retained trees managed to maintain moderate condition, and newly planted tree will be in moderate condition by 2056.	6A	Tree species	The tree is a native species (or more than 70% within the block are native species).	Newly planted tree and all trees except G002-A, G002-B, G002-C (Norway maple)
		6B	Continuity of tree canopy and percentage and length of canopy gaps	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	All trees
		6C	Tree maturity	The tree is mature (or more than 50% within the block are mature).	All trees in 30 years
		6D	Presence of human disturbance and percentage of expected canopy for tree age and height.	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	All trees
		6E	Presence of ecological niches.	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	All trees
		6F	Percentage of canopy oversailing vegetation beneath.	More than 20% of the tree canopy area is oversailing vegetation beneath.	All trees will pass this criterion following the operational phase of the development

Management measures

5.4.12 The management prescriptions are detailed below.

Planting new native trees

5.4.13 New planted tree of native species (*Acer campestre*), as specified in the planting schedule (AtkinsRéalis UK Limited, 2025e). it will require pit planting using the following steps (The Tree Council, 2021):

- A hole large enough to encompass the root ball will be dug, if the soil is poor this could be widened to include a soil improver.
- The soil should be broken up where compacted to improve drainage and aeration.
- Trees will likely require staking for stability, the stake should reach the bottom of the pit, be no more than 1/3 the height of the tree and be placed flush to the trunk with a spacer to prevent rubbing.
- The top of the root ball should be kept level with the top of the pit and the pit back filled and firmed down.
- A suitable sized circle (typically 1 m) around the trunk should be mulched to aid in water retention reduce weed competition, the mulch should not touch the tree bark as this will cause rotting, mulch typically will be bark chip or wood chip.
- All trees should be watered thoroughly on planting.

5.4.14 Mulch circles should be maintained for the first 2 to 3 years after planting; this should be accompanied by hand weeding where required.

Management of trees

5.4.15 General management of onsite trees will focus on health and safety requirements and allow for full functionality of the premises for public access, such as pruning dead trees or branches which could put site users at risk. This will be as advised by a qualified arboriculturalist. Where any woody material is generated from tree management, this will be used for species enhancements where feasible, including material used for the loggeries or placed on the arisings/brash habitat piles.

5.4.16 An arboriculturalist will inspect the trees on site annually and will advise on appropriate actions to be undertaken depending on the status of the trees.

5.4.17 Where any tree fails, both newly planted or retained, this will be replaced like for like or better.

Table 14: Individual trees management prescriptions

Action	Tree protection plan (AtkinsRéalis UK Limited , 2025f) ID	Target condition criteria	Timing	Prescription	Consideration for protected species/species of conservation concern
Tree planting	New tree	6A, 5A	Autumn – early spring Year 0	New tree planting will include native species that are local to the area.	None
Water	New tree	6A	Summer months, as required after dry spells Year 1	At first planting trees will be watered, and during the first year to aid establishment	None
Replace dead trees	New tree	6A, 5A, 6D	November-February As required	Plant the same species in the same location (or nearby if failed tree is mature as stump should be retained).	Invertebrates, nesting birds, roosting bats
Control weeds around new trees	New tree	6A, 6D	Any time of year Years 1-3	Manage weeds within 1m diameter around new trees using mulch or mulch mat, or hand weeding.	None
Check tree stakes	New tree	6A, 6D	November – January Year 1	Check on status of the tree stakes and replace if damaged.	None
Yearly arboricultural check	All trees	6D, 6E	November-February Yearly	Arboriculturalist will check the trees for safety on an annual basis	None
Yearly maintenance	All trees	6D, 6E	November-February As required	Maintenance will focus on requirements for health and safety highlighted by the arboriculturalist. Ivy will only be removed if it is it posing a health risk to the tree or site users. Management should look to encourage ecological niches such as rot holes.	Nesting birds, roosting bats

5.5 Hedgerow

Assessment of significance

- 5.5.1 Native hedgerows are of site importance as provide habitat connectivity within the site and provide opportunities for fauna, such as nesting habitat for birds.
- 5.5.2 No hedgerows are present at baseline. Other native hedgerow (H1-H10) of 0.09km will be created under the development proposals. The other native hedgerow will be managed to attain moderate condition.
- 5.5.3 Other native hedgerow is likely to be suitable to support the following species groups/species:
- Invertebrates
 - Amphibians in their terrestrial phase
 - Reptiles
 - Birds
 - Badger (foraging)
 - Bats (foraging/commuting)
 - Hedgehog
 - Other mammals

Ecological trends, threats and constraints

- 5.5.4 Neglect or under management of hedgerow can lead to it becoming a line of trees. As hedgerows grow upwards into a line of trees, the low shrubby cover that is needed by wildlife for shelter, food and as corridors for travelling along, is gradually lost. A line of trees can develop gaps over time as trees are lost.
- 5.5.5 Tree diseases such as ash dieback will likely cause the loss of the majority of ash trees over the coming years.
- 5.5.6 The effects of climate change over the next decade are likely to have significant impacts on the woodland habitat. The greatest threat to hedgerow from climate change is likely to be an increase in the frequency and severity of summer drought. The impacts of both insect pests and diseases are likely to increase with climate change. Deer and grey squirrel are likely to benefit from climate change thus becoming a greater threat. In addition, the risk of wind-throw may increase if the UK experiences more storms (Natural England and RSPB, 2019).
- 5.5.7 Nutrient enrichment from littering and fly tipping, introduces new nutrients into an area which can lead to unfavourable species dominating a habitat. Foot fall and littering could reduce ecological value of the habitats where this is not managed properly.
- 5.5.8 Invasive species can present a threat to native hedgerows on site if these are spread from sources within the wider area. Currently few invasive species (cherry laurel, *Cotoneaster microphyllus*, butterfly bush and snowberry) are present at baseline.

Objective, targets and measures of success (KPIs)

- 5.5.9 Targets and KPIs are detailed in the table below.

Table 15: Other native hedgerow management plan targets and KPIs

Target		KPI		Measure of success	Figure 1 Compartment ID
7	Hedgerow habitat will cover a length as defined in BNG metric V1.0 (AtkinsRéalis UK Limited, 2025b) by 2056	7A	Length of other native hedgerow kilometres	Habitat meets definition of other native hedgerow as defined by UK Habitat classification (UKHab Ltd, 2023) and the target length of native hedgerow is met by 2056.	H1
8	Hedgerow to achieve a moderate condition by Year 10	8B1	Gap between ground and base of canopy	Gap between ground and base of canopy <0.5m for >90% of length.	
		8B2	Percentage of gaps in relation to length and number of gaps exceeding 5m	Gaps make up <10% of total length; and no canopy gaps >5m.	

Target		KPI		Measure of success	Figure 1 Compartment ID
		8C1	Length of undisturbed ground in proportion of length of hedgerow	>1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length. Measured from outer edge of hedgerow, and is present on one side of the hedge (at least)	
		8C2	Number of species indicating nutrient enrichment	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	
		8D1	Number of invasive, non-native species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.	
		8D2	Evidence of disturbance from human activities	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	
		8E1	Number of invasive, non-native species.	>90% of the hedgerow is free of invasive non-native plant species (including those listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended) and recently introduced species. The latter refers to plants that have naturalised in the UK since 1500CE (neophytes). Archaeophytes count as native species.	
		8E2	Percentage of trees in healthy condition.	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	

Management measures

5.5.10 The management prescriptions are detailed below.

Creation of new 'other native hedgerow'

5.5.11 To create new other native hedgerows, native species will be planted. Bareroot tree saplings will be purchased from a native plant provider.

5.5.12 New shrubs will be protected with biodegradable guards whilst they are establishing. Planting will be undertaken in the early winter months, ideally before December, to maximise the success rate of the planted saplings. Saplings planted in the late winter, and early spring are more prone to desiccation as the ground becomes increasingly dry.

5.5.13 Once the ground has been prepared for planting, the saplings will be planted at 5-7 plants per metre in a double staggered row, with hawthorn being the dominant species within each 1m section. The other native species will be used to fill in the gaps; it is important that the planting takes into account the need for at least 5 woody species per 30m of hedge. The whips will be planted in double-rows to maximise success and ensure an appropriate thickness.

5.5.14 Soil will be firmed down around each of the saplings and canes used to support the young plants until they establish.

5.5.15 Hawthorn and blackthorn will be pruned immediately after planting and the subsequent season's new growth will be reduced by about half. This will promote more 'bushy' lateral growth.

5.5.16 Other deciduous species will be lightly pruned after planting and then pruned by one third of the annual growth the autumn after planting.

5.5.17 Any non-woody species (e.g. hedge bindweed) competing for the same space will be cut back until the hedgerow is fully established (~Year 10 of the relevant phase).

5.5.18 Watering will only be necessary if there is a particularly long, dry spell, and this will be undertaken by saturating the ground to ensure the water soaks deep into the soil.

5.5.19 Once established, hedgerows will be cut to the desired shape and height at the end of the winter period. Trimming in the early winter after the previous spring/summer growth would normally be required.

5.5.20 A 1-2m strip in front of the hedgerow will be left as a vegetation buffer where possible, to minimise impacts from footfall, nutrient enrichment and litter.

Other native hedgerow management

5.5.21 All hedgerows will be managed in the winter period (October-February inclusive, with January-February as the most optimal period) outside of the bird nesting season (March-August inclusive). A light cut of any regenerated growth can be undertaken later in the summer, but a walkover check will be undertaken first to check for nesting activity. The hedgerow will be cut back no more than every two to three years as cutting more often will reduce the flowers and berries available to wildlife. Any extensive regeneration will be trimmed annually. Hedge will be maintained as a closely clipped hedge to ensure clearance and visibility as specified in the planting schedule (AtkinsRéalis UK Limited, 2025e).

- 5.5.22 When cut to the same height repeatedly, the structure of a hedgerow may begin to decline. To avoid this, incremental cutting will be undertaken. When hedges are cut slightly higher and wider, even just 10cm, structural damage can be avoided. Hedges that are managed in this way maintain their dense structure but are also able to provide blossom and fruit and the hedgerow can still move through its lifecycle (PTES, 2024).
- 5.5.23 As the hedgerows are sited next to or within ornamental planting and amenity grassland, these surrounding habitats will be managed sensitively in order to protect the hedges from impact. This includes, but is not limited to, piling of waste material against the hedge, allowing encroachment of non-native species within the hedge, in appropriate pruning of the hedge or other damaging management activity that might compromise the root stock of the hedge.
- 5.5.24 Based on the site usage, hedge laying is considered inappropriate, therefore regenerative coppicing will be used where required. To coppice, stems over 20cm diameter should be removed to near ground level (5cm high stool left). This task will be undertaken in winter (November to February) when the hedge is dormant. Removed wood should be used to create habitat piles onsite and the left stools protected from damage using fencing or piled brash. As this method causes a drastic change in the habitat a maximum of 5% of the hedgerows should undergo this in anyone year (PTES, 2024). This method should be reviewed as required; however, it is like to be in Year 30 onwards.

Table 16: Hedgerow management prescriptions

Action	Figure 1 Compartment ID	Target condition criteria	Timing	Prescription	Consideration for protected species/species of conservation concern
Planting	H1	8A, 7A, 8E2	Year 0 Early winter	Hedgerow saplings planted with sufficient spacing so woody vegetation can grow to exceed 1.5m in width (double row planting). Prune saplings to recommended height.	None
Water		8A, 7A, 8E2	Year 0-Year 5 As required	Water young hedgerows, including newly planted trees, as needed in periods of drought.	None
Initial cut of new hedgerow		8A, 8B	Year 1 Winter	Cut previous season's growth by half. Monitor encroachment from other competing species and cut back if necessary.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.
Early-stage maintenance trim		8A, 8B, 8D2	Year 2-Year 10 Every two years Winter	Trim hedgerow to desired shape/height every two years from Year 2-Year 10.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.
General maintenance trim		8A, 8B, 8E2, 8C2, 8D2	Year 10-Year 30 Every three years Winter	Cut back every three years, with annual light trimming of extensive regeneration (if required). Cut back on a rotational cycle so not all sections of each hedgerow are affected at once.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.
Coppice/hedge laying of hedges		8A, 8E2, 8D2, 8B	Winter As required, likely in year 30	5% of hedgerow to be coppiced or laid, taking out large stems to rejuvenate the hedge. Stools to be protected from damage.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.
Replant gaps		8A, 8E2, 8D2, 8B	Early winter As required when encountered	Gaps replanted in any instance where these form during the 30-year HMMP period.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.

Habitat creation species list

5.5.25 The species selected for planting in the planting schedule (AtkinsRéalais UK Limited, 2025e) are suitable species for the creation of other native hedgerows and include holly, beech and yew.

5.6 Urban

Assessment of significance

- 5.6.1 Urban habitat, including introduced shrub, is of site importance due to the provision of flowering plants suitable for pollinators in an area comprising mostly urban habitat (such as hardstanding and buildings) with little ecological function. For example, winter-flowering and evergreen species provide pollen and nectar sources for invertebrates much later into the season than may otherwise be present, which is particularly important in a changing climate as invertebrates become more active within the winter. By supporting the local invertebrate population, other fauna in turn will be supported (e.g. bats). The urban planting therefore has site importance.
- 5.6.2 All areas of introduced shrub present at baseline will be lost to facilitate the development. New areas of introduce shrubs will be created under the proposals. This habitat type has a default condition of 'Condition Assessment N/A'.
- 5.6.3 During the ecological surveys the introduced shrub was assessed as being suitable to support the following species groups:
- Invertebrates
 - Nesting birds

Ecological trends, threats and constraints

- 5.6.4 Dominance of 'weed' species such as butterfly-bush, incursion and establishment of non-native invasive species all reduce the benefits to biodiversity that these habitats can deliver. This can lead to non-native invasive species dominating the habitat and out-competing other species present which would reduce the biodiversity and opportunities for species.
- 5.6.5 The effects of climate change over the next decade are likely to have significant impacts on the vegetated garden. The greatest threat to vegetated garden is from climate change is likely to lead to an increase in the frequency and severity of summer drought. The impacts of both insect pests and diseases are likely to increase with climate change, and the risk of wind-throw may increase if the UK experiences more storms (Natural England and RSPB, 2019).
- 5.6.6 Other threats to this habitat include trampling, littering and vandalism and impacts from exhaust fumes from cars on site due to the proximity of these habitats to health club buildings.
- 5.6.7 Ornamental plants do not provide significant opportunities for biodiversity improvement.
- 5.6.8 Invasive species can present a threat to urban habitats on site if these are spread from sources within the wider area. Currently few invasive species (cherry laurel, *Cotoneaster microphyllus*, butterfly bush and snowberry) are present at baseline.

Objective, targets and measures of success (KPIs)

- 5.6.9 Targets and KPIs are detailed in the table below

Table 17: Urban management plan targets and KPIs

Target		KPI		Measure of success	Figure 1 Compartment ID
9	Introduced shrub habitat will cover an area as defined in BNG metric V1.0 (AtkinsRéalis UK Limited, 2025b) by 2056	9A	Area of vegetated garden	Habitat meets definition of vegetated garden as defined by UK Habitat classification (UKHab Ltd, 2023) and target area of vegetated garden met by target year.	4

Management measures

5.6.10 The management prescriptions are detailed below.

Vegetated garden management measures

- 5.6.11 Non-native invasive species will be avoided, instead priority will be given to native or drought tolerant species. Where non-native species are planted, these will have a known benefit to wildlife, such as nectar producing flowers for pollinators or berries for birds and small mammals
- 5.6.12 Where possible, plants will be procured through UK nurseries to minimise the projects carbon footprint and reduce risk of importing new pests and diseases. Before planting occurs, plants will be checked for signs of damage or disease. This is because healthy plants are more able to withstand drought and will establish faster.
- 5.6.13 Planting will be undertaken in the first available planting season after construction (Year 0), under suitable weather conditions. All shrubs are to be planted following the provider's protocols. Some plants will need regular watering until they are settled and will be drought-tolerant once they have put down a good root system. All shrubs are to be planted as container stock unless otherwise specified, all stock is to be well rooted into the container but not pot bound.
- 5.6.14 Ornamental grade bark mulch can be applied to planting areas according to provider's advice. This will occur following planting of shrub species during springtime in Year 0.
- 5.6.15 Planted species will be watered as recommended by the provider's protocols, or after periods of drought, for at least two full growing seasons to ensure successful establishment of the plants (Years 1 and 2).
- 5.6.16 Once established, vegetated garden species can be pruned as per the horticultural advice prescribed for each specific planted species. In general, pruning should be undertaken when plants are not flowering, such as in late winter or early spring.

Control of non-native invasive species

- 5.6.17 Regular checks for invasive species will be completed of all urban habitat compartments, and where identified, action taken to remove them and prevent their spread using best practice methods for the species identified. Schedule 9 of the Wildlife and Countryside Act and London Invasive Species Initiative should be referred to.

Table 18: Urban management prescriptions

Action	Figure 1 Compartment ID	Target condition criteria	Timing	Prescription	Consideration for protected species/species of conservation concern
Planting	4	9A	Year 0 Spring optimal (avoiding frost and wet periods)	Planting of Introduced shrub plant species, through container planting, following horticultural best-practice and using native species where possible.	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Replacement of failed plant species	4	9A	Year 1-2 Spring optimal (avoiding frost and wet periods)	Replanting of failed plant species.	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Application of mulch	4	9A	Year 0 Spring optimal (avoiding frost and wet periods)	Ornamental grade bark mulch can be applied to planting areas according to provider's advice	Invertebrates, amphibians, reptiles, hedgehog, other mammals.
Ongoing management (pruning)	4	9A	Year 1- 30 as required. Late winter – early spring.	Ongoing regular management, such as pruning, following horticultural advice.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.
Watering	4	9A	Year 1 and 2, as required	Irrigation during and after dry spells. And as required following horticultural best-practice	None
Controlling non-native invasive species	4	9A	All year round Years 1-30 annually	Any invasive non-native species (included on Schedule 9 of the WCA 1981) or butterfly-bush will be immediately removed. These species impair the health of the local ecosystem and reduce the biodiversity.	Nesting birds, invertebrates, amphibians, reptiles, hedgehog, other mammals.

Habitat creation species list

Species list

5.6.18 Target species composition to create introduced shrub habitat are detailed in the table below, extracted from the planting schedule (AtkinsRéalis UK Limited, 2025e).

Table 19: Target species list for creation of introduced shrub

Scientific name	Common name	Planting mix (AtkinsRéalis UK Limited, 2025e)	Figure 1 Compartment ID
<i>Calluna vulgaris</i> 'Spring Cream'	Heather	[Ref. PL03] Proposed planting mix A	3
<i>Centaurea nigra</i>	Common knapweed	[Ref. PL03] Proposed planting mix A	3
<i>Eryngium bourgatii</i>	Mediterranean sea holly	[Ref. PL03] Proposed planting mix A	3
<i>Euonymus fortune</i> 'Harlequin'	Spindle 'Harlequin'	[Ref. PL03] Proposed planting mix A	3
<i>Euphorbia palustris</i>	Marsh spurge	[Ref. PL03] Proposed planting mix A	3
<i>Helictotrichon sempervirens</i>	Blue oat grass	[Ref. PL03] Proposed planting mix A	3
<i>Molinia caerulea</i> subsp. <i>caerulea</i> 'Poul Petersen'	Purple moor-grass	[Ref. PL03] Proposed planting mix A	3
<i>Festuca glauca</i> 'Elijah Blue'	Blue Fescue	[Ref. PL03] Proposed planting mix A	3
<i>Rudbeckia</i> 'Goldstrum'	Black-Eyed Susan	[Ref. PL03] Proposed planting mix A	3
<i>Eryngium bourgatii</i>	Mediterranean sea holly	[Ref. PL05] Proposed planting mix C	4

Scientific name	Common name	Planting mix (AtkinsRéalis UK Limited, 2025e)	Figure 1 Compartment ID
<i>Molinia caerulea subsp. caerulea</i> 'Poul Petersen'	Purple moor-grass	[Ref. PL05] Proposed planting mix C	4
<i>Festuca glauca</i> 'Elijah Blue'	Blue Fescue	[Ref. PL05] Proposed planting mix C	4
<i>Rudbeckia</i> 'Goldstrum'	Black-Eyed Susan	[Ref. PL05] Proposed planting mix C	4
<i>Vinca minor</i> 'Bowles's Variety'	Lesser Periwinkle	[Ref. PL05] Proposed planting mix C	4

6 Risk register and remedial measures

6.1.1 The risk register, detailed below, is a dynamic document which must be updated regularly to reflect the risks identified during the monitoring surveys. The aim of the register is to identify triggers for actions and remedial measures to implement.

Table 20: Risk register and remedial actions

Habitat Type	Post-intervention compartment ID	Risk Factor	Trigger for Action	Remedial Measure
Grassland (low distinctiveness)	1	Sward dominated by nutrient tolerant or undesirable species or invasive and harmful species.	Coverage of undesirable species exceeds 5% of habitat area.	Targeted removal of plants. Review of mowing regime. Consideration of invasive species management measures depending on the species recorded.
		Over or under cutting.	Bare ground or scrub encroachment over thresholds detailed in KPIs.	Cutting regime to be altered. Review of causes of bare ground – re-turfing or seeding if extensive, and consideration of fencing or signage.
		Lack of species diversity within sward.	Species diversity lower than threshold detailed in KPIs.	Consider over-seeding with green hay or local seed mix. Review mowing regime. Soil testing to determine nutrient levels or pollutant levels.
		Litter or fly tipping.	Any litter or fly tipping observed.	Removal of litter – consider deterrent measures.
		Invasive species or non-native species establish.	Any presence.	Targeted removal.
		Damage to species enhancements.	Any damage observed.	Repair damage and replace if required. Ascertain source of damage and stop or remediate.

Habitat Type	Post-intervention compartment ID	Risk Factor	Trigger for Action	Remedial Measure
		Failure for species to use enhancements.	No uptake of species after five years.	Consider relocating enhancement to a more suitable location (e.g. there may be too much shade or sun in initial location).
Scrub	2	Newly planted species failing to establish.	10% of planted species found dead one year from planting.	Replace failed specimens like for like, and review cause of failure e.g. disease, drought, soil conditions.
		Invasive species or non-native species establish.	Any presence.	Targeted removal.
		Disease establishes.	Any presence.	Targeted removal of affected plants under guidance of a professional.
		Damage to mixed scrub.	Any significant and long-term damage.	Source of the damage will be ascertained and stopped or remediated.
Individual trees	<i>All individual trees</i>	Newly planted trees failing to establish.	Any tree failure.	Replace failed specimens like for like. Review cause of failure in case a different species is preferable.
		Disease establishes.	Any presence.	Consult with arboriculturist for appropriate action.
		Damage to tree.	Any significant and long-term damage.	Source of the damage will be ascertained and stopped or remediated.
Hedgerow	H1	Newly planted whips failing to establish.	10% whips dead within Years 1-5.	Plant larger number of whips as contingency. Consider different species if it is observed that a specific species is failing at a higher rate to others.

Habitat Type	Post-intervention compartment ID	Risk Factor	Trigger for Action	Remedial Measure
		Hedgerow becomes too tall or wide.	Significant gaps appear at base over 50cm between ground and canopy, or lengthwise, gaps over 1m develop horizontally.	Infill horizontal gaps with new whips. Coppice hedgerow to remove vertical gaps.
		Invasive species or non-native species establish.	Any presence.	Targeted removal.
		Disease establishes.	Any presence.	Targeted removal of affected plants under guidance of a professional.
		Damage to hedgerow.	Any significant and long-term damage.	Source of the damage will be ascertained and stopped or remediated.
Urban	4	Newly planted species failing to establish.	10% of planted species found dead one year from planting.	Replace failed specimens like for like, and review cause of failure e.g. disease, drought, soil conditions.
		Invasive species or non-native species establish.	Any presence.	Targeted removal.

7 Monitoring plan

7.1.1 The successful delivery of this HMMP requires monitoring is undertaken on a regular basis to inform progress and ensure the management measures are updated to reflect the outcome of the monitoring. The monitoring plan is presented in the table below.

Table 21: Monitoring plan

Habitat type	Post-intervention compartment ID	Monitoring methods	Monitoring interval	Monitoring timing
Grassland	1	Quadrat sampling to identify the UK Habitat classification habitat type that is establishing and the number of species per m². Estimate the percentage of bare ground, bramble, bracken, suboptimal species and damage cover. Collect a botanical species list across the grassland to check against species richness and KPIs. To include an updated condition assessment.	Year 5 then every 5 years (for bare ground, monitor annually)	May to early August
Mixed scrub	2	Walkover of scrub parcels to check for new planting failure, gaps, scrub extent and presence of invasive species or dominating species.	Annually Year 1-Year 5	Any time of year
		Update UK Habitat classification survey and condition assessment	Year 5 then every 5 years	May to early August
Individual trees	<i>All individual trees</i>	Arboricultural walkover survey to review new tree establishment, general tree health, site user health and safety requirements.	Annually	Summer
		Updated condition assessment of trees.	Year 5 then every 5 years	May to early August

Habitat type	Post-intervention compartment ID	Monitoring methods	Monitoring interval	Monitoring timing
Hedgerow	H1	Walkover of hedges to check for whip failure, gaps, hedgerow extent, presence of invasive species, height.	Annually Year 1-Year 5 then every 5 years	Any time of year
		Updated UK Habitat classification and condition assessment of hedgerows.	Year 5 then every 5 years	May to early August
Urban	4	Walkover to check for failed plants and invasive/undesirable species.	Annually Year 1-Year 5, then every 5 years	Any time of year
		Collect a botanical species list across the bioswale to check against species richness and KPIs.	Year 5 then every 5 years	May to early August

7.1.2 A monitoring report is required in years 5, 10, 15, 20, 25 and 30. Monitoring will need to be undertaken by a competent person and the report submitted to the LPA or Responsible Body for review. The monitoring report should detail methods, results, whether relevant KPIs are being met, and any newly identified risks, and remedial actions are required.

7.1.3 A full review of the LEMP will be undertaken every 10 years.

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Appendix 1: Legislation

Conservation of Habitats and Species Regulations 2017 (as amended)

Provides for the protection of Natura 2000 sites (SACs, SPAs and Ramsar sites), European Protected Species and habitats. Species listed under Schedule 2 are protected from:

- Deliberate capture, injury or killing.
- Deliberate disturbance [...], such that it impairs their ability to breed, reproduce or rear their young, hibernate or migrate or significantly affect their local distribution or abundance.
- Deliberate taking or destroy effect.
- Damage or destroying a breeding site or resting place.
- Keeping, transporting, selling or exchanging any live, dead or part.

Species listed under Schedule 2 include, but are not limited to:

- Great crested newt
- Natterjack toad
- Otter
- Smooth snake
- Sand lizard
- All bat species
- Hazel dormouse

The LPA will be aware of its legal duty under Regulation 9(5) of Conservation of Habitats and Species Regulations 2017, as amended, which states that “*a competent authority in exercising any of its functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those function*”.

Also, under Regulation 55 (9b) of the above regulations, the LPA must apply the following three tests when deciding whether to grant planning permission where a Protected Species (bats) may be harmed, in line with the Conservation of Habitats and Species Regulations 2017, as amended.

- The activity must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative;
- Favourable conservation status of the species must be maintained.

Natural England has stated that they would expect these three tests to be adequately considered by the LPA before planning permission is granted. Natural England will require evidence from the applicant that the LPA has considered the three tests and how they were met, before a mitigation licence can be issued. Where a mitigation licence is required to avoid breach of legislation, development cannot proceed even where a valid planning permission is granted.

Wildlife and Countryside Act 1981 (as amended)

Key piece of legislation consolidating existing wildlife legislation to incorporate the requirements of the Bern Convention and Birds Directive. It includes additional protection measures for species listed under the Conservation of Habitats and Species Regulations 2017 (as amended) and includes a list of species protected under the Act. It also provides for the designation and protection of Sites of Special Scientific Interest (SSSI).

Development which would adversely affect a SSSI is not acceptable except only in special cases, where the importance of a development outweighs the impact on the SSSI when planning conditions or obligations would be used to mitigate the impact. Developments likely to impact on a SSSI will likely require an Environmental Impact Assessment (EIA).

The Impact Risk Zones dataset is a GIS tool which details zones around each SSSI according to the particular sensitivities of the features for which it is notified and specifies the types of development that have the potential to have adverse impacts. Natural England uses the Impact Risk Zones to make an initial assessment of the likely risk of impacts on SSSIs and to quickly determine which consultations are unlikely to pose risks and which require more detailed consideration. Local Planning Authorities (LPAs) have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI.

Further information on specific legislation relating to species protected under the Wildlife and Countryside Act 1981 (as amended) is detailed below, under Protection of Protected Species and Habitats.

Environment Act (2021)

The Environment Act (2021) makes a provision for biodiversity net gain to be a condition of planning permission in England. Planning applications will need to demonstrate a 10% biodiversity net gain can be met. A biodiversity net gain plan must be submitted and must include:

- (a) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat
- (b) the pre-development biodiversity value of the onsite habitat,
- (c) the post-development biodiversity value of the onsite habitat,
- (d) any registered offsite biodiversity gain allocated to the development and the biodiversity value of that gain in relation to the development,
- (e) any biodiversity credits purchased for the development,

Countryside and Right of Way Act 2000

Amends and strengthens the Wildlife and Countryside Act 1981 (as amended). It also details habitats and species for which conservation measures should be promoted.

Natural Environment and Rural Communities Act 2006

Section 40 of the Act places a duty on local planning authorities to conserve and enhance biodiversity in England whilst carrying out their normal functions. Section 41 comprises a list of Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) which should be considered.

Section 41 details 56 HPI, including (but not limited to) arable field margins, traditional orchards, hedgerows, eutrophic standing waters, ponds, rivers, lowland calcareous grassland, lowland dry acid grassland, lowland meadows, purple moor-grass and rush pastures, lowland heathland, open mosaic habitats on previously developed land, coastal and floodplain grazing marsh, lowland fens, lowland raised bog, reedbeds, lowland beech and yew woodland, lowland mixed deciduous woodland, wet woodland, and wood-pasture and parkland.

Impacts to HPI are of material planning consideration.

The LPA will need to have particular regard to any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy prepared by Natural England.

Hedgerows Regulations 1997

Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the LPA, which are also the enforcement body for offences created by the Regulations. LPA permission is normally required before removing hedges that are at least 20 m in length, more than 50 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The regulations **do not** apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Hedgerow is a HPI.

Management of Hedgerows Regulations 2024

For all hedgerows defined as 'important' in the Regulations:

- It is a requirement to take all reasonable steps to establish and maintain green cover on land within 2m of the centre of an important hedgerow.
- No cultivation or application of fertilisers or pesticides to land within 2m of the centre of an important hedgerow, unless:
- Pesticides are used through spot application to control the spread of broad-leaved dock, creeping thistle, curled dock, giant hogweed, Himalayan balsam, Japanese knotweed, common ragwort, rhododendron or spear thistle.
- The land is being cultivated to establish a green cover where it does not already exist.
- Written permission has been given to cultivate the land in order to enhance the environment, improve public or agricultural access, or for reasons relating to livestock or crop production.
- Without cultivation there is a risk to human or animal health and safety.
- Cultivation, fertilisers or pesticides are being applied to treat a serious cause of harm to plant health or a serious pest or weed infestation, or to prevent the development of any such cause of harm or infestation.

The Regulations define an important hedgerow as any hedgerow growing on land used for agriculture where the hedgerow has a continuous length of 20m or more; or a continuous length of <20m and, at each end, meets (whether by intersection or junction) another hedgerow. It applies to any stretch of hedgerow (even if smaller than 20m) that forms part of a hedgerow meeting the above definition. The exception is if the hedgerow is within the curtilage of, or marking the boundary of the curtilage of, a dwelling.

The requirements of the Regulations do not apply to:

- Land either side of an important hedgerow if the hedgerow is less than five years old.
- Land forming part of a parcel of ≤2ha as measured within permanent boundary features.
- Casting up of a traditional hedgerow bank between September and February (inclusive).
- Land on the side of an important hedgerow facing a dwelling where the hedgerow marks a boundary of the curtilage of the dwelling.

- Land used for an allotment as defined by the Allotments Act 1925.

Wild Mammals (Protection) Act 1996

Under this act wild mammals are protected from the intentional unnecessary suffering by crushing and asphyxiation.

ODPM Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System (2005)

The Government's Office of the Deputy Prime Minister (ODPM) Circular 06/05 (ODPM 2005) presents the legal requirement for planning authorities with regard to statutory designated sites. Planning approval should not be granted where impacts to statutory designated sites that are not connected to the site maintenance for nature conservation, or will have a significant effect on the site's conservation objectives and/or affect the site's integrity. Permission may be granted if the proposed development overrides public interest.

The presence of a protected species is a material planning consideration. The Circular clearly outlines that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted. Otherwise, all relevant considerations may not have been addressed in making the decision.

Biodiversity Opportunity Areas (BOAs)

To assist in delivering the government's Biodiversity 2020 strategy, the Surrey Nature Partnership has identified seven BOAs where improved habitat management, habitat restoration and recreation of HPIs is the key focus to enhancing the connectivity of habitats for SPIs to deliver biodiversity objectives at a landscape scale. The location of these is presented in the South East Biodiversity Strategy's website (Surrey Nature Partnership, 2022). The project promotes a collaborative approach across a number of regional and local organisations.

Developments within or adjacent to BOAs should be designed in consideration of the BOA objectives.

Protection of protected species and habitats

Amphibians

Natterjack toad, pool frog and great crested newt are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are also afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Natterjack toad, common toad, great crested newt and northern pool frog are also SPIs.

Reptiles

Smooth snake and sand lizard are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Adder, grass snake, common lizard and slow-worm are all protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). All UK reptile species are SPIs.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This includes damage and destruction of their nests whilst in use, or construction. Species listed under Schedule 1 of the Act, such as barn owl, are afforded protection from disturbance during the nesting season.

The following 49 bird species are SPIs: lesser redpoll, aquatic warbler, marsh warbler, skylark, white-fronted goose, tree pipit, scaup, bittern, dark-bellied brent goose, stone-curlew, nightjar, hen harrier, northern harrier, hawfinch, corncrake, cuckoo, Bewick's swan, lesser spotted woodpecker, corn bunting, ciril bunting, yellowhammer, reed bunting, red grouse, herring gull, black-tailed godwit, linnet, twite, Savi's warbler, grasshopper warbler, woodlark, common scoter, yellow wagtail, spotted flycatcher, curlew, house sparrow, tree sparrow, grey partridge, wood warbler, willow tit, marsh tit, dunnoek, Balearic shearwater, bullfinch, roseate tern, turtle dove, starling, black grouse, song thrush, ring ouzel and lapwing.

Badger

Badger is protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to kill or injure a badger; to damage, destroy or block access to a badger sett; or to disturb badger in its sett. The Act also states the conditions for the Protection of Badgers licence requirements.

Bats

All bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as detailed above. Bats are further protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Deliberately or recklessly damage or destroy any structure or place which bat(s) use for shelter or protection.
- Disturb bat(s) while occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which they use for shelter or protection.

Greater horseshoe, lesser horseshoe, Bechstein's bat and barbastelle bats are Annex II species for which Special Areas of Conservation have been designated.

Furthermore, seven bat species are SPIs, covered under Section 41 of the NERC Act 2006. These include barbastelle, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, lesser horseshoe and greater horseshoe.

Beaver

Beaver is provided under Conservation of habitats and Species Regulations 20217 (as amended). Beaver is also afforded additional protection under the Wildlife and Countryside Act 1981, as amended.

Hazel dormouse

Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended), including obstruction to a place of shelter or rest.

Hazel dormouse is also a SPI.

Otter

Otter is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended). Otter is also a SPI.

Water vole

Water vole is fully protected from capture, killing or injury; damage, destruction or blocking access to a place of shelter; disturbance whilst in a place of shelter or possessing, selling any part of a water vole, dead or alive under the Wildlife and Countryside Act 1981 (as amended).

Water vole is also a SPI.

Other mammals

Hedgehog, brown hare, mountain hare, pine marten, harvest mouse, polecat and red squirrel are all SPIs.

The following mammals are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended): wildcat, brown hare (Schedule 5A), mountain hare (Schedule 5A), pine marten and red squirrel.

Invertebrates

Seventy invertebrate species are fully or partially listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These are tentacled lagoon-worm, lagoon sandworm, medicinal leech, trembling sea-mat, Ivell's sea anemone, pink sea-fan, starlet sea anemone, marine hydroid, white-clawed crayfish, fairy shrimp, lagoon sand shrimp, tadpole shrimp, rainbow leaf beetle, mire pill beetle, spangled diving beetle, lesser silver water beetle, Moccas beetle, violet click beetle, stag beetle, Bembridge beetle, purple emperor, northern brown argus, pearl-bordered fritillary, chequered skipper, large heath, small blue, mountain ringlet, marsh fritillary, high brown fritillary, Duke of Burgundy, silver-spotted skipper, wood white, large copper, heath fritillary, Glanville fritillary, large tortoiseshell, swallowtail, large blue, silver-studded blue, adonis blue, chalkhill blue, black hairstreak, white-letter hairstreak, brown hairstreak, Lulworth skipper, Norfolk hawk, southern damselfly, reddish buff, Fisher's estuarine moth, barberry carpet, fiery clearwing, black-veined moth, Sussex emerald, Talisker burnet moth, Slender scotch burnet, New Forest burnet, wart-biter grasshopper, mole cricket, field cricket, New Forest cicada, fan mussel, Defolin's lagoon snail, Roman snail, freshwater pearl mussel, glutinous snail, sandbowl snail, lagoon sea-slug, northern hatchet-shell, fen raft spider, and ladybird spider.

A total of 598 (excluding molluscs) invertebrates are Species of Principal Importance. These include: beetles (including stag beetle), butterflies (high brown fritillary, large heath, small blue, white-letter hairstreak, brown hairstreak, damselflies (southern damselfly), moths (marsh moth), ants, bees etc. Impacts to SPI must be considered by the LPA when assessing planning applications.

Higher and lower plants (rare/notable species)

Creeping marshwort, Lady's-slipper orchid, Early gentian, Killarney fern Fen orchid, Floating water-plantain, Slender naiad, Shore dock and Yellow marsh-saxifrage are listed under Schedule 5 of the Conservation of Habitats and Species Regulations 2017 (as amended) making it illegal to be in position or control, transport, sell or exchange or offer to sell or exchange any live or dead plant, or part of a plant.

On hundred and eighty-three plant species are listed under Schedule 8 of the Wildlife and Countryside Act 1981, as amended which makes it illegal for a person to intentionally pick, uproot or destroy any wild plant listed under Schedule 8.

One hundred and fifty-one higher plant species are listed as Species of Principal Importance.

Non-native invasive species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is a list of non-native plant and animal species for which Section 14 of the Act applies. It is an offence to release or allow to escape any animal listed under Schedule 9 Part I of the Act. These include, but are not limited to:

- Chinese mitten crab
- American signal crayfish
- Muntjac
- Edible dormouse
- Marsh frog
- Canada goose
- Egyptian goose
- Mink
- Ring-necked parakeet
- Grey squirrel
- European pond terrapin

Appendix 2: Biosecurity protocols

Biosecurity will be considered at the earliest stage when planning any field work, from surveying an area to removing non-native species. Some biosecurity measures can be as simple and as quick as making sure your equipment (including any sampling or survey equipment), footwear, PPE, and vehicle is clean.

- If practical do not take vehicles onto premises, keep to established tracks and park vehicles on hard standing.
- Arrive at the site with clean equipment, footwear and vehicle.
- Ensure equipment and footwear is clean (visually from soil and debris) before leaving the site.
- Ensure vehicle is kept clean - in particular, remove any accumulated mud before leaving the site.
- Make use of facilities provided on the site to clean footwear/equipment.
- Keep access to a minimum.

Visits will be planned so that the highest risk site is visited last (NNSS: GB Non-native Species Secretariat, 2023).



Appendix 3: European protected species checklist

[EPS checklist V3 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

European Protected Species and woodland operations. (V4) Complete all sections of the Checklist			
Checklist		Details	
1	Are you within, or close to, the known mapped range of any of the protected species OTHER THAN BATS which are potentially everywhere? Tick any that apply. See distribution maps in the Good Practice Guidance for each species - ☐ Dormice ☐ Otters ☐ Great crested newts ☐ Sand lizards ☐ Smooth snakes	YES NO	Name of Wood: Grid Reference:
2	Does your wood contain any of the following habitats? Tick any that apply. ☐ Old trees with holes and crevices which might be used bats ☐ Species rich scrub/coppice, early growth stage plantations and forest interfaces ☐ Rivers on which otters might be found ☐ Ponds which might be occupied by great crested newts ☐ Open areas on heathy soils	YES NO	Area: (ha)
3	Have any of the protected species been recorded in this wood or on adjoining sites? Tick any that apply. Indicate which sources of information you have checked: ☐ National Biodiversity Network (www.nbn.org.uk) ☐ Local Biological Records Centre ☐ Local Wildlife Trust ☐ Other Specify Other:	YES NO	Date of Assessment:
4	Have your inspections or any expert surveys found any of the following signs or evidence? Tick any that apply. ☐ Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts) ☐ Sightings (or echo-location) ☐ Potential breeding or roosting sites (e.g. veteran trees, old trees with crevices, riverside hollow trees, ponds, timber stacks, large fallen deadwood) ☐ Confirmed breeding or roosting sites (i.e. evidence of sites actually being used) Details:	YES NO	Name of Assessor:
CHECK POINT If you have answered NO to ALL of the above then only bats need to be considered in your operations. If you have answered YES to any of the above then the species concerned must be considered as well as bats.			
5	Do the operations comply with Good Practice for bats and any other species found (or likely to be found in your wood) or can the operations be modified to do so? Details: Use reverse of form to expand as required:	YES NO	Notes A licence is not required but continue to sections 6 and 7 below
6	Whether or not a licence is required... Has the information been communicated to operators (including the location of breeding sites and sensitive areas)? Tick any that apply. ☐ Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan) ☐ Shown to operators and/or their supervisor ☐ Marked with paint or hazard tape ☐ Shown on the site plan Other means:	YES NO	You may commit an offence if you do not tell your operators about the protected species in your wood.
7	Have arrangements for supervision been made to ensure Good Practice guidance is complied with during the operations? Details:	YES NO	You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.

Appendix 4: Timing of works to reduce impacts on protected species

This calendar presents the optimal season for undertaking works to minimise impact to protected species, or species of conservation concern. It will be used as guidance only and is based on current industry best-practice. Your ecologist will provide you with an indication of specific mitigation measures which are necessary to satisfy legal and planning requirements for your project. Mitigation for species including Schedule 1 bird species, badger, bats, hazel dormouse, otter, water vole and great crested newt can only be done once a mitigation licence has been issued by Natural England. This will also detail the timing of works to minimise impacts to these. For mitigation licences all activities must be undertaken under supervision of a suitably qualified and/or licensed ecologist and where mitigation licenses are in place, these may only be undertaken by the named ecologist or an accredited agent.

Species/species group	January	February	March	April	May	June	July	August	September	October	November	December
Birds			Can be undertaken under the supervision of an ecologist									
Badger	Construction of artificial setts						Sett closure					As Jan - Jun
Bat			Day, hibernation or night roost; low impact roosts									
			Maternity roost						Maternity roost			
Hazel dormouse	Above ground clearance				Stump and root clearance and translocation				All vegetation		As Jan - March	
Otter												
Water vole	Avoidance measures		Trapping and exclusion						Trapping and exclusion		Avoidance measures	
Great crested newt	Pond management		Translocation, hand search and destructive search								Pond management	
Reptiles	Above ground clearance		Capture and translocation, precautionary method of working for small areas of vegetation clearance								Above ground clearance	

	Optimal time to minimise impacts		Sub-optimal time to minimise impacts		Works impacting species will not occur
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