# **BIODIVERSITY ACTION PLAN**

2021 - 2026

















## CONTENTS

1.	NTRODUCTION	4
	1.1 BACKGROUND	4
	1.1.1 The global context	5
	1.1.2 The national context	5
	1.1.3 The local context	6
	1.2 STRATEGIC AND ENVIRONMENTAL COMMITMENTS	7
	1.2.1 Environmental sustaimability framework	7
	1.2.2 Sustainable deveopment goals	7
	1.2.3 Nature Positive Universities	8
2.	BIODIVERSITY AND THE EMS	9
	2.1 SCOPE & INTERESTED PARTIES	9
	2.2 ROLES AND RESPONSIBILITIES	10
	2.3 GOVERNANCE	11
	2.4 INFLUENCING FACTORS	11
	2.5 LEGAL COMPLIANCE	12
	2.6 ASPECTS AND IMPACTS	12
3. ا	JH BIODIVERSITY STRATEGY	14
	3.1 BIODIVERSITY AT UH	14
	3.1.1 College Lane	14
	3.1.2 Hazel Grove	17
	3.1.3 De Havilland Campus	19
	3.2 AIM AND OBJECTIVES	22
;	3.3 ACTION TO DATE	22
	3.4 ACTION PLAN	27
	3.5 MONITORING AND REPORTING	30
4. /	APPENDIX	32
	Appendix 1. Governance structure	32
	Appendix 2. Legal compliance register	33
	Appendix 3. Aspects and Impacts Register	34
	Annendix 4 Plants list at College Lane and De Havilland	36

### **Document Control**

Owner	Thomas Andrews / Nar	Thomas Andrews / Nanna Blomquist		
Consultation	Biodiversity working gr	Biodiversity working group		
Approval	Tracey Russell			
Date of Implementation	Mar 2021	Date Valid until	Feb 2026	

### Revisions

Version No.	Date of Issue	Details of changes
2	April 2022	Amendments and layout
3	December 2022	Addition of Nature Positive Pledge

### 1. INTRODUCTION

The University of Hertfordshire Biodiversity Action Plan sets out our approach to biodiversity and how we aim to deliver our vision to enhance biodiversity, engage and educate the community, and to contribute to biodiversity conservation on campus and further afield. It considers the various internal and external risks and impacts associated with biodiversity, and details how we manage these in line with our broader sustainability and legal commitments, and how the process is governed, monitored, and reported to ensure continual improvement.

### 1.1 BACKGROUND

Coined by biologists in the 1980s as a contraction of biological diversity, the term usually refers to the variety of life on Earth as a whole. The U.N. Convention on Biological Diversity (CBD) breaks it down as follows:

"Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part. This also includes diversity within species, between species and of ecosystems.

Biodiversity provides four main types of benefits to humans: nutritional, cultural, health, and climate-related, and allows us to live happy and healthy lives. Healthy and functional ecosystems play a crucial role in sustaining human livelihoods through providing necessities and benefits such as food, water, energy sources and carbon sequestration, known as 'ecosystem services.' See image below.



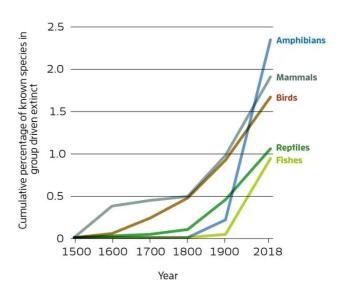
Fig 1. Biodiversity provides four main types of benefits to humans: nutritional, cultural, health, and climate-related.

Source: Landscape News

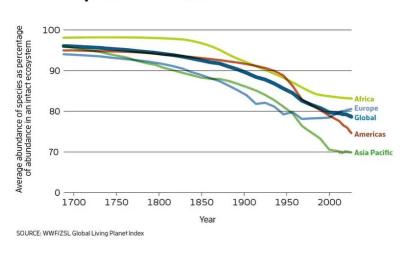
### 1.1.1 THE GLOBAL CONTEXT

Current rates of ecosystem degradation are unprecedented and unsustainable, and this is largely due to human intervention. More than 70 per cent of ice-free land is now under human control, and the mass of human-made infrastructure exceeds all biomass. Humans and domesticated animals make up more than 90 per cent of the mammalian mass on the planet. Our actions are contributing to a mass extinction that could see up to a million species disappear in the coming decades. During the 20th century, extinction rates were about 100 times higher than they would have been without humans significantly altering most of the planet's surface<sup>1</sup>.

### Extinctions since 1500



### Loss of species richness



SOURCE: IPBES Global Assessment Report on Biodiversity and Ecosystem Services

Fig 2. Extinction levels and loss of species richness since 1700. Sources listed above.

In response to this The Rio Conventions (2014) pledged a global commitment to protect and significantly slowdown the current rate of biodiversity loss. This pledge was endorsed by the 2002 World Summit on Sustainable Development. More recently, the UN Environmental Management Group has released a report supporting the global biodiversity agenda and delivering the post 2020 global biodiversity framework.

### 1.1.2 THE NATIONAL CONTEXT

The UK Biodiversity Strategy was launched by DEFRA (2011) to identify areas to focus conservation work. The priorities included reducing environmental pressures and improving knowledge about biodiversity (DEFRA, 2011). Furthermore, DEFRA (2011), outlined goals including restoration of degraded ecosystems and encouraging more individuals to become engaged with biodiversity.

<sup>&</sup>lt;sup>1</sup> https://news.globallandscapesforum.org/44538/biodiversity-101-why-it-matters-and-how-to-protect-it/

Building on this, the UK Governments 25-year Environmental Plan (DEFRA, 2018) set out to be "first generation to leave our natural environment in a better state than we found it" as an ambition to combat the UK biodiversity degradation and decline, with a "biodiversity net gain approach" to future infrastructure to help deliver this outcome. The Environmental Act 2021 provides the legal framework for delivering the above ambitions.

### 1.1.3 THE LOCAL CONTEXT

The University of Hertfordshire campuses are located in Hatfield in the borough of Welwyn and Hatfield, Hertfordshire. Biodiversity in Hertfordshire is experiencing a similar decline to the rest of the UK. Evidence analysed in the 2020 State of Nature report by Herts and Middlesex Wildlife Trust provided a stark warning on biodiversity, "there is work to be done".

Their data shows biodiversity is being lost at an alarming rate and this is closely interlinked with climate change (Three species becoming extinct every two years in Hertfordshire) (Herts and Middlesex Wildlife Trust, 2020). The two issues of climate change and biodiversity loss are connected. Not only is biodiversity affected by Climate Change but climate change is accelerated by biodiversity loss. In Hertfordshire, climate change appears to be exacerbating already existing issues of over-abstraction of ground water, urbanisation, and poor woodland management (Herts and Middlesex Wildlife Trust, 2020).

Whilst the University of Hertfordshire (UH) campus habitats are limited in their diversity and wilderness, the habitats can still play an important role for many species listed in the Hertfordshire State of Nature report, and whilst the list of species might not be diverse, the campuses do support abundance of numbers for certain insects, plants, trees and bird species (see appendix 1). Some examples include: Blue Tit (Cyanistes caeruleus), Wood Speedwell (Veronica officinalis), Snowdrop (Galanthus), Pig-Nut (Conopodium majus), Blackbird (Turdus merula), Robin (Erithacus rubecula), Honey Bee (Apis mellifera), Bumble Bee (Bombus), Honeysuckle (Lonicera periclymenum), Storksbill (Erodium cicutarium). In addition, whilst the urban habitat is poor for most wildlife, there is growing evidence that urban areas like those found on De Havilland Campus may be more important for some species than rural areas. Hedgehogs have declined significantly nationally, and this decline has also been recognised in the Hertfordshire records. However, hedgehogs are showing more stability in urban areas and with the right management could benefit from the environments created on the University campuses.

On a University level, as an Higher education institution, UH provides an ideal opportunity to educate and engage students, staff and the wider community about the wildlife surrounding them whilst improving the natural environment through net gain and other initiatives. To assist locally in combating the current net loss of habitats and help improve on the marginal habitat recovery witnessed by DEFRA, 2018, UH has produced a Biodiversity Strategy which will be delivered through a campus specific action plans which will be able to positively contribute towards the progress currently being achieved at the University.

### 1.2 STRATEGIC AND ENVIRONMENTAL COMMITMENTS

Biodiversity is a core component of our Sustainability agenda, and Sustainability is a recurring green thread through the themes and pillars of the University's <u>Strategic Plan 2020-2025</u>. The University's Environmental Sustainability Framework which sets the foundations for its sustainability approach, which makes the following commitments relating to biodiversity:

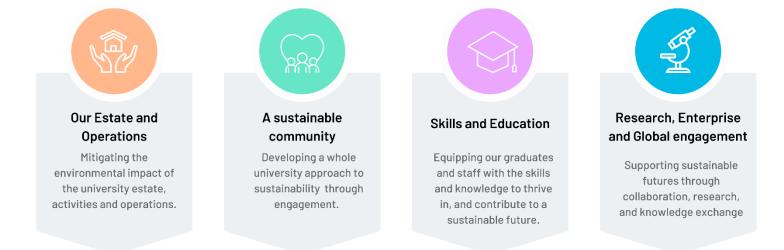
• Creating and enhancing biodiversity and wildlife habitats on our campuses.

### 1.2.1 ENVIRONMENTAL SUSTAIMABILITY FRAMEWORK

The strategic plan for Sustainability is structured through the University' Environmental Sustainability Framework which provides a framework for embedding environmental sustainability holistically across all of the university's activity areas. The framework identifies our main environmental impact areas and defines our four pathways through which our commitments will be delivered:



Fig 3. The Environmental aspects and impacts of the university's estate, activities, and operations.



**Fig 4.** The University of Hertfordshire's four Pathways through which the Environmental Sustainability commitments will be delivered.

### 1.2.2 SUSTAINABLE DEVEOPMENT GOAL

# 1 NO POVERTY 3 GOOD HEALTH AND WELL-BEING 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

# Find the second second



Fig 5. The Sustainable Development Goals by pillar.

The Sustainable Development Goals offer another framework to help institutions embed Sustainability across their operations. While this and the other UH environmental management plans fall mainly under the Environmental Pillar of the framework, it provides context for the interconnected nature of the wider sustainability considerations which also include economic and social aspirations. While Biodiversity relates directly to goal 15 (Life on Land) and 14 (life below waster), it also underlies each of the 17 Sustainable Development Goals (SDGs), from eliminating hunger and reducing inequalities to supporting sustainable communities and livelihoods around the world.

### 1.2.3 NATURE POSITIVE UNIVERSITIES

In December 2022 we pledged to becoming a founding member of <u>Nature Positive Universities</u>, thereby committing to being part of an important journey towards a liveable planet for us all. Nature Positive Universities was founded by the United Nations Environment Programme (UNEP) and University of Oxford in partnership with the UN Decade on Ecosystem Restoration. The initiative was launched at the Montreal COP15 in December 2022. Nature

Positive means restoring species and ecosystems that have been harmed by the impacts of a university and its activities and enhancing the university's positive impacts on nature. This refers to everything a university does, from its teaching and research work to the operations and supply chains that keep it running. Becoming a Nature Positive University will involve incorporating a biodiversity baseline, targets, actions and annual reporting, all of which we aim to deliver through our Biodiversity Action Plan.

### 2. BIODIVERSITY AND THE EMS

The University of Hertfordshire operates an externally certified Environmental Management System (EMS) to manage its environmental risks and drive continual improvement. The EMS is certified against the ISO:14001 standards, and currently holds Eco Campus Platinum status. The EMS provides the plan, do, check, act framework which enables the University to not only manage its environmental risks, but to also strive for continual improvement. The EMS is implemented through its relevant management plans, including the Biodiversity Action Plan.

This Biodiversity Action Plan (BAP) sets out how the university approaches and plans to deliver it's biodiversity vision. While legal compliance is not the primary driver for developing a BAP, it is important to consider, and as such the plan and associated objectives are incorporated into our Environmental Management System to ensure compliance and continuous improvement. This section explains how the BAP is held to account through our EMS.

### 2.1 SCOPE & INTERESTED PARTIES

The sites covered by this Action Plan include:

- College Lane
- De Havilland Campuses

The Bayfordbury campus BAP and Management Plan will be a separate document as this campus has specialist habitat requirements. The BAP will comprise of a number of Species Action Plans (SAPs) that cover key species groups and a Habitat Action Plan (HAP) that covers key habitats. Species and habitats selected for biodiversity action are those which are included in the UK BAP (DEFRA, 2011) or those for which greater provision on campus could considerably enhance their local conservation

The management of Biodiversity at the University is the responsibility of key stakeholders from across the University, with roles and responsibilities outlined in the next section.

### 2.2 ROLES AND RESPONSIBILITIES

The key stakeholders can be found in the table below.

Department / Title	Duty
Department of Estates	<ul> <li>Ensure Legal compliance for the Biodiversity on the campuses</li> <li>Responsible for the management of Biodiversity through partners and contractors</li> <li>To provide accurate and timely reporting</li> <li>To support the wider University on awareness, training, and educational projects</li> <li>To support with implementing the Biodiversity Action Plan</li> <li>To ensure information on Biodiversity is accessible and up to date</li> </ul>
Environment & Sustainability Team	<ul> <li>Organise internal and external audits</li> <li>Work with Estates to set objectives and targets</li> <li>Ensure relevant documentation is up to date within the EMS.</li> <li>Support with engagement on Biodiversity topics</li> </ul>
Academic Schools	<ul> <li>To support Estates with information and advice</li> <li>To work with Estates to carry out assessments and surveys where this could be part of academic work</li> </ul>
External Biodiversity Adviser	To provide expert support on Biodiversity and provide guidance on our approach
Environment & Sustainability Working Group	<ul> <li>To maintain momentum on operational procedures that the EMS holds.</li> <li>Look at trends and patterns from data and monitor environmental targets and programmes.</li> <li>Draft-the UH environmental performance report</li> <li>Look at Environmental awareness opportunities.</li> <li>Identify areas where the HSS Team can advise and support.</li> </ul>
Environment and Sustainability Steering Group	<ul> <li>Agree objectives and targets for the EMS</li> <li>Identify resources required to maintain EMS</li> <li>Ensure the EMS is implemented and maintained</li> <li>Monitor the performance of the EMS against the targets and objectives set</li> <li>Review and revise the Institution's Environment, associated policies, strategies, and Action Plans.</li> <li>Approve the Environmental Performance Report</li> </ul>

### 2.3 GOVERNANCE

The EMS, Climate Vision, and any associated objectives, including Biodiversity, are governed by stakeholders across the University through our Environment and Sustainability (E&S) working and steering groups. The EMS governance structure can be found in Appendix 1 and on HertsHub.

### 2.4 INFLUENCING FACTORS

There are many external and internal factors that influence the generation and management of waste which need to be considered when considering biodiversity on camp. Some examples are outlined in this PESTEL analysis chart.

	External	Internal
Political	<ul> <li>Union influence</li> <li>Changes in Biodiversity laws and policies</li> <li>Environmental league tables potentially impacting reputation</li> <li>Brexit changes impact on policy</li> </ul>	- Strategic plan - Governance structure - Staffing - Changes in site utilisation
Economic	- Changes to taxes / incentives - Sub-contractor costs - Funding	- Budgets - Cost of sub-contracting
Social	- NGO, community, and media pressures and expectations - Societal pressures	- Staff and student expectation - Stakeholder and partner expectation
Technological	- Technological advancements in e.g. carbon sequestration through tree stock	- Training - Access to innovation
Legal	- Lack of knowledge, understanding and accountability of legal  - Resistance to comply due to extra resources required requirements can lead to non- compliance	<ul> <li>Prosecution for non-compliance</li> <li>Costs associated with tax, levies and fines</li> <li>Increased costs of compliance may detract funding from other areas</li> <li>Lack of enforcement from regulatory bodies can make it difficult to demonstrate the need to comply</li> </ul>
Environmental	- Regulations and laws - Weather and climate	- Land use / local biodiversity - Local weather / weather events

### 2.5 LEGAL COMPLIANCE

One of the components of this Action Plan is ensuring the University meets all the relevant legal requirements associated with Biodiversity. There are a number of pieces of legislation which the University must comply with, which are listed below and detailed further in Appendix 2, as well as in the University's EcoCampus Legal Register:

- Town and Country Planning (Tree Preservation) (England) Regulations SI 2012/605
- Wildlife and Countryside Act 1981 (c. 69)
- Conservation of Habitats and Species Regulations SI 2010/490
- Protection of Badgers Act 1992
- Countryside and Rights of Way Act 2000 Chapter 37
- The Wild Mammals Protection Act 1996
- The Environment Act 2021

### 2.6 ASPECTS AND IMPACTS

Activities that interact, or have a potential to interact with the environment are considered to be environmental aspects. How the aspect alters the environment, whether positively or negatively, is considered an impact, and it is the duty of the university to put measures in place to eliminate or mitigate these risks as much as possible. While the main global threats to biodiversity include changes in land and sea use, overexploitation, climate change, pollution, and invasive species, not all of these are applicable in a UH context. Being a thriving University, however, spanning 200 hectares, and supporting 25,000 students and 3,500 members of staff, the University can have a significant impact on the immediate and local biodiversity.

The main aspects associated with Biodiversity are:

- Construction that removes or impacts biodiversity
- The use of chemicals and pesticides that can harm biodiversity
- Ground maintenance that impacts biodiversity such as clearing, mowing, coppicing
- Pollution that can negatively impact biodiversity e.g. particulate pollution from cars and machinery
- The disturbance of biodiversity from human interaction
- Improper management of existing Biodiversity
- Invasive species

The main impacts associated with these activities are:

- Loss of habitat
- Loss of biodiversity
- Impact on wider region
- Loss of carbon sinks

The main consequences from these impacts are:

- Damage to the environment
- Contribution to global warming and climate change
- Impact on well-being
- Breach of legal / non-legal obligations
- Financial cost to the organisation
- Reputational cost

The aspects and impacts register of Biodiversity as well as the ongoing mitigation controls in places to minimise / eliminate the associated risks can be found in the Appendix 3.

### 3. UH BIODIVERSITY STRATEGY

The aim of the UH Biodiversity strategy is to enhance biodiversity across the entire university estate and to engage students, staff, and the public about the importance of biodiversity as a key part of the sustainability agenda.

### 3.1 BIODIVERSITY AT UH

Geographically, the University of Hertfordshire has three main campuses spread across
Hertfordshire in the borough of Welwyn and Hatfield comprising of Woodland and Urban habitats at
the College Lane and DeHavilland Campuses and rural and woodland habitats at Bayfordbury
Campus. No part of the University estate within Welwyn Hatfield falls within an Archaeological
Priority Area or Conservation Area; nor does it include any listed buildings or scheduled monuments.
Most parts of the University estate are already developed to varying degrees and have been subject
to extensive ground disturbance. They are therefore relatively unlikely to be of archaeological
interest.

### 3.1.1 COLLEGE LANE

The University of Hertfordshire College Lane Campus encompasses the University's teaching buildings, the Learning Resources centre, the Forum and student residences as seen in Figure 6.



Fig 6. Aerial photo of College Land Campus

There is a combination of grassland and other trees (separate to Hazel Grove Woods) placed around the campus. In total there are 872 trees on the College Lane Campus species mix is dominated by Quercus robur (pedunculate oak), Platanus x hispanica (London plane), Fraxinus excelsior (European ash) and Betula pendula (silver birch). Remaining species include Acer saccharinum (silver maple), Tilia x vulgaris (common lime), Betula utilis (Himalayan birch), Cerasus avium (syn. Prunus avium) (wild cherry), Acer platanoides (Norway maple) and Tilia cordata (small-leaved lime), along with a

vast array of less represented species (Tim Mayo Associates, University of Hertfordshire Tree Survey, 2020). Figure 7.

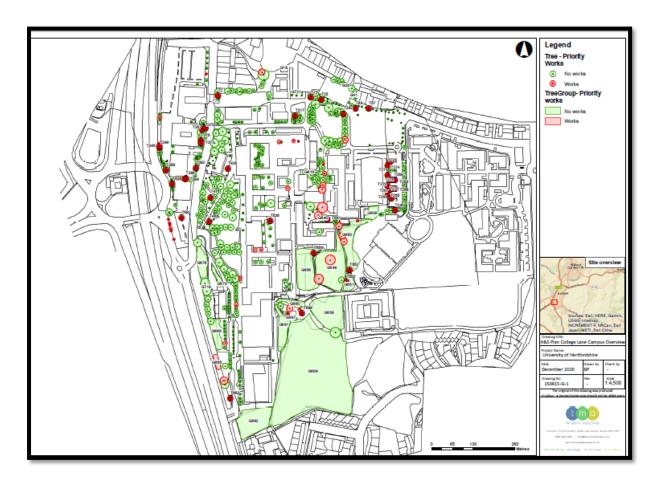


Fig 7. Tree location on College Lane

Key wildlife sites on College Lane are identified in Figure 5 with lists of the species found in those areas and the ecosystems that support these species. An extensive list of plants on College Lane can be found in Appendix 4.

### **Hazel Grove**

Hornbeam (Carpinus betulus)

Raspberries (Rubus idaeus)

Lords and Ladies (Arum maculatum)

Oak (Quercus)

Yellow Archangel (Lamium galeobdolon)

Long Tailed Tit (Aegithalos caudatus)

Great Tit (Parus major)

### The Oval Ponds

Man-made pebble bed ponds with water insects

### The Oval Lawn

Honey Bee (Apis mellifera)

Bumble Bee (Bombus)

Bulbous Buttercup

### The Forum

Forget-Me-Not (Myosotis sylvatica)

Native Woodland Bluebells (Hyacinthoides non-scripta)

Garlic-mustard (Alliaria petiolata)

Speckled Wood Butterfly (*Pararge aegeria*)

Planted Barberry (Berberis)

Sycamore (Acer pseudoplantanus)

### **Main Reception**

Honey Bee (Apis mellifera)

Bumble Bee (Bombus)

Honeysuckle (*Lonicera periclymenum*)

Storksbill (*Erodium* cicutarium)

Cranesbill (Geranium)

### **Roof Garden**

**Bee Orchids** 

### **College Lane Amphitheatre**

Honey Bee (Apis mellifera)

Bumble Bee (Bombus)

Cranesbill (Geranium)

Bulbous Buttercup (Ranunculus bulbosus)

### **Across Campus**

A mix of tree species are found across the campus totalling 872 individual trees of a variety of species both native and non-native.

### **Spiral Bridge**

White Stonecrop

### **Bus Stops**

Sticky Moles/ Mouse Ear (Cerastium glomeratum)

Star of Bethlehem (*Ornithogalum*)

Toadflax (Linaria vulgaris)

Cow Parsley (Anthriscus sylvestris)

Speed Wells (Veronica)

White Dead Nettle (*Lamium album*)

### Fig 8. wildlife locations around College Lane Campus

### 3.1.2 HAZEL GROVE

Hazel Grove is a 3.875 ha urban broad-leaved and semi-natural ancient woodland with a variety of tree species (Woodland Trust, 2020); predominantly Hornbeam (Carpinus betulus) and Oak (Quercus robur) and number of common wildflowers; snowdrops, Bluebells (Endymion non-scriptus), Wood anemone (Anemone nemorosa), and Yellow Archangle (Lamium galeobdolon) which is known as an Ancient woodland indicator species. Bats, Badger and insects are known to reside close to the woods and the wood is apparently used for butterfly transects. The woodland occupies a prominent hillside position overlooking the lower lying Colne Valley to the west and is an important landscape feature. The wood is now surrounded entirely by urban development and is divided into two by a security fence, half owned by the University of Hertfordshire and the other by Welwyn Hatfield Borough Council. The wood is an important local landscape feature within the grounds of the University proving a feeling of peace and tranquillity within the site. Permissive paths run through the wood.



Fig 9. Bluebells in Hazel Grove

It appears that the wood was extensively coppiced until approximately 1947; most management then ceased until the early part of the 21st century when limited coppicing was resumed following the preparation in 2000 of a detailed management plan that followed English Nature's guidelines for site management. Some of the coppice particularly in the north appears to be older than 8-9 years but not as old as the areas that were last coppiced after the second world war. It may be that this area was coppiced around 15-20 years ago.



Fig 10. Aerial view of College Lane and Hazel grove highlighted in blue.

Managing and protecting Hazel Grove is key, woodland wildlife is struggling. The Hertfordshire State of Nature report highlights what has been lost over the last 50 years and just how many species are now threatened with extinction in Hertfordshire. If we want to halt and reverse the decline, it is important to act now and focus on reinstating conservation management of existing habitats as well as creating and connecting habitats across the county (Herts and Middlesex Wildlife Trust, 2020).

The 2010-2030 Hazel Grove Management Plan is still functioning as a management document but requires a review to ensure the approach is still working as intended.

### ONGOING HAZEL GROVE MANAGEMENT

### RIDE MANAGEMENT

Vegetation is cut along the woodland rides to allow access. Cuttings are either chipped and added to paths or removed for composting; width of the rides are 1-1.5 metres. Any vegetation overhanging this area is removed. Timber boards marking ride boundaries were previously realigned where necessary, but this is being reassessed due to vandalism.

### VEGETATION MANAGEMENT

Vegetation is managed to ensure undesirable species, such as willow, ash, elder and cherry, do not become established in coppiced area. Care is taken to ensure coppice stools, regenerating trees (esp. hornbeam and oak) and buddleia are not damaged. Vegetation is either stacked or removed is and handled according to our current waste management policy.

### CONTROL OF SYCAMORE

Sycamore seedlings and saplings are removed.

### 3.1.3 DE HAVILLAND CAMPUS



The De Haviland campus was developed on a Brown Field site Figure 11. The site is largely an urban environment with areas of amenity grassland, horticultural trees (410 trees located onsite) and bushes, as shown in Figure 13. According to the Hertfordshire Landscape Character Assessment the campus and surrounding sites is classed as having poor biodiversity condition and moderate strength to move to a more biodiverse space. The assessment lists the site as a requirement to improve and restore as the approach to management biodiversity onsite. There is a potential for green roofing, which is considered to be a highly effective approach to enhance biodiversity on this campus (Hertfordshire County Council, 2021). Enhancing existing green space and incorporating more areas of wild-flowers will increase the potential for biodiversity.



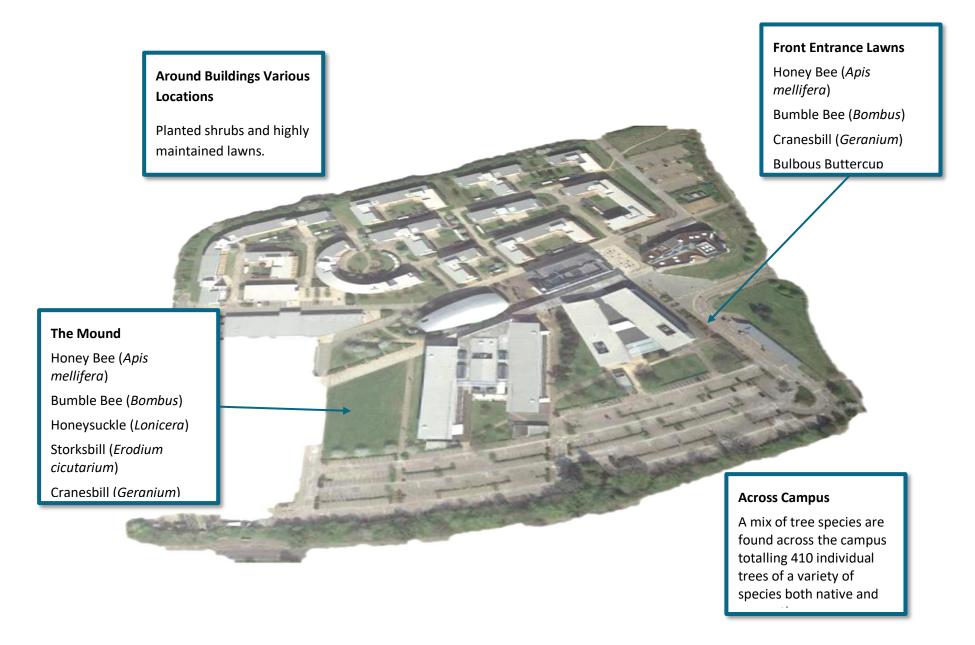
Fig 11. Aerial view of De Havilland Campus



Fig 12. Tree location on De Havilland Campus

Figure 13 below shows the key locations on the De Havilland campus where species have been recorded. When implementing the BAP, these sites will be a vital part in for enhancing the wildlife alongside new ideas that will be identified.

Fig 13. Key Biodiversity on De Havilland Campus



### 3.2 AIM AND OBJECTIVES

The aim of the Biodiversity Strategy is to enhance biodiversity across the entire university estate and to engage students, staff, and the public about the importance of biodiversity as a key part of the sustainability agenda.

The UH Biodiversity objectives are:

**Objective 1:** To promote biodiversity by conserving, protecting, and enhancing existing wildlife habitats and creating new ones. This will be enabled through specific habitat and key species management plans.

**Objective 2:** To avoid or mitigate activities that may damage habitats or key species. This will be managed through our legal and internal compliance obligations.

**Objective 3:** To collect and report data on biodiversity for monitoring and to inform action, including a biodiversity baseline assessment.

**Objective 4:** To provide biodiversity education and engagement opportunities for the UH community, including students, staff, and other interested parties. To promote links between the biodiversity agenda with health and well-being where appropriate.

### 3.3 ACTION TO DATE

The University of Hertfordshire has already taken action on each of these objectives through a number of initiatives and activities. These include:

**Objective 1.** To promote biodiversity by conserving, protecting, and enhancing existing wildlife habitats and creating new ones.

- Wildflower Management Areas
- Managing Bee orchids
- Site audits have been carried out to identify potential areas for conservation and improvement action. These can be seen in figures 17 and 18.
- Hazel Grove woodland Management Plan



Fig 14. Example of a Bee Orchid

**Objective 2:** To avoid or mitigate activities that may damage habitats or key species.

• The University's Environmental Management System details a Compliance Register, which is updated regularly and any changes to waste legislation cascaded to relevant staff.

**Objective 3:** To collect data on biodiversity for monitoring, reporting and to inform action.

- Annual Tree surveys
- Annual flora survey on CL

**Objective 4:** To provide biodiversity communication, education, and engagement opportunities for the UH community.

- Biodiversity Walk
- Community Gardens
- Seasonal events e.g. Fungi & bat walk
- Information boards around campus



Fig 15. The Biodiversity walk on College Lane



Fig 16. Community garden being worked on by Students



Fig 17. Fungi walk as part of Biodiversity engagement

Fig 18. Suggested conservation of College Lane Campus

### **Hazel Grove**

Improve biodiversity in woodland by coppicing and canopy reduction of Oak (Quercus)- more light

### The Oval Ponds

Ensure ponds are kept clear of invasive species of flora or fauna

### The Oval Lawn

Bulbous Buttercup (Ranunculus bulbosus) grow in good established grass land – propose reduced cutting programme with only paths cut into grass

### The Forum

Garlic-mustard (Alliaria petiolata)

grows well on banks - increase natural spread, increased soil reach.

### **Main Reception**

Bulbous Buttercup (Ranunculus bulbosus) grow in good established grass land – propose reduced cutting programme with only paths cut into grass

### **College Lane Amphitheatre**

Bulbous Buttercup (Ranunculus bulbosus) grow in good established grass land – propose reduced cutting programme with only paths cut into grass

### **Across Campus**

Follow the established tree maintenance programme

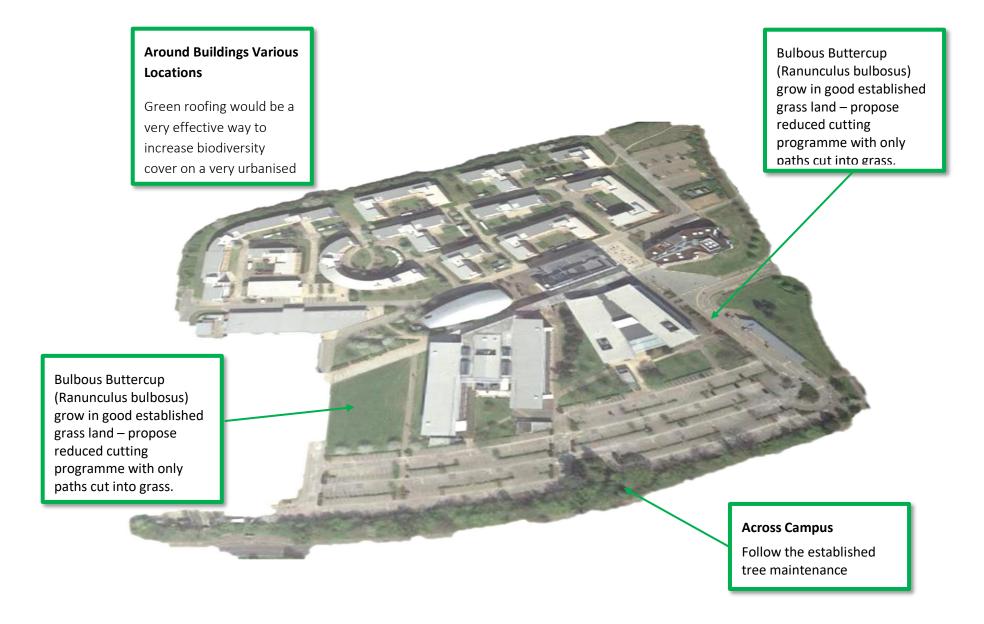
### **Spiral Bridge**

White Stonecrop (Sedum album) bare ground area - good indicators. Less competition. Areas of bare ground can be created to aid in biodiversity.

### **Bus Stops**

Many of the flora species found in these areas would require wildflower management and regeneration and Seed Wells Grow well on bare ground - good indicator species, would not grow on established grassland.

Fig 19. Suggested conservation on De Havilland Campus



### 3.4 ACTION PLAN

This plan sets out actions which will be carried out as part of this Biodiversity Action Plan, as well as the KPIs proposed to measure progress against each action where relevant. The actions have been categorised by species and habitat. All planned activities and scope of these activities are subject to feasibility and modification, legislation, budget, best practice and guidance changes, facility, and technology developments.

Species / Habitat	Action	Date	Campus	Who	КРІ		
Objective 1:	<b>Objective 1</b> : To promote biodiversity by conserving, protecting, and enhancing existing wildlife habitats and creating new ones						
	Repair bird boxes where possible or install new boxes where a need has been identified (funding dependant)	Following survey (see below)	CL & DH	Facilities / Creative Arts?	No. of boxes repaired / installed		
Birds	Ensure no hedgerow or tree cutting activities are undertaken during nesting season	Ongoing	CL & DH	Facilities & Grounds team	Included in grounds management plan		
	Enhance bird nesting sites in all future campus redevelopments	Ongoing	All campuses	Capital projects	Number of new bird nesting sites		
Mammals	Take action to provide safe areas for any mammals identified in the surveys	Survey dependant (see below)	All	HSS / Facilities	No of actions taken		
	Install insect hotels – to be made by CA / architecture students	As often as possible	All	HSS / Facilities / CA	Number of bug hotels installed		
	Leave piles of wood and vegetation in situ for insects where appropriate	Ongoing	All	Facilities / Grounds	In grounds management plan		
Insects and Pollinators	Review mowing plan so that insects and pollinators have more access to wildflower meadows	Apr 22 / ongoing	All	Facilities / Grounds	Incorporated into mowing plan		
	Bi-Annually pollinator and invertebrate surveys	Yearly	All	LMS	Completed Surveys		
	Review existing and new builds for potential incorporation of green roof and/or brown roof installation	Oct 22	All	Capital projects / Facilities	Completed review		
Meadows and	Create programme of Bulb Flower planting including a cyclical nature of blooms	April 2022	CL & DH	Facilities and Grounds Team	Programme created		

amenity grassland	Review the planted wildflower meadows to ensure that the areas	February – April	CL & DH	Facilities and	Reviewed annually?
Brassiana	are being appropriately managed and over growth has been reduced	annually		Grounds Team	
	Identify areas which can be turn into wild areas e.g. the grass behind the forum or more areas around the coppice.	July 2021	CL & DH	Facilities and Grounds Team and HSS Team	Survey completed?
	Bee Orchids: update locations on HertsHub / move signs	March-April Annually	CL	Facilities, Grounds Team and HLS.	Update
	All green waste should be composted, and relevant documentation provided. (Green waste is defined of as the arisings from grass cuttings and all pruning works including any tree trunks or branches)	August 2022	All	Estates and Ground Maintenan ce Team	Agree with grounds
	Explore the possibility of composting on site	Oct 22	All	Estates and Ground Maintenan ce Team	Proposal
Ponds	Liaise with Derwent to enhance biodiversity potential of pond outside oval (not managed by UH)	September - December 2021	CL (U Living)	ULiving – Fulcrum / Derwent	Discuss with Derwent
	Reinstate the College Lane Coppice Management Plan	September 2022	CL	Estates and Grounds Team	Coppicing Plan
	Review the Hazel Grove Management Plan to ensure it is still working as intended	Nov 2022	CL	Facilities, Grounds, and LMS	Plan reviewed
Woodland	Create a management plan for tree planting which outlines short-, mid-, and long term objectives, including funding, based on surveys and site tours	Nov 22	CL & DH	Estates and Grounds Team, LMS	Plan completion
	Leave piles of dead wood in situ, where practical and safe to do so.	Ongoing	CL & DH	Grounds Team	Agree with grounds team
	Ensure walkways through Hazel Grove are clear and easily accessible	Ongoing	CL	Grounds Team	Agree with grounds team

<b>Objective 2:</b> To avoid or mitigate activities that may of	damage habitat	s or key spe	cies.	
Ensure that surveys for protected species are completed prior to developments	Prior to developme nt	All	Capital projects	Surveys completed
Review the application of pesticide, specifically on when and how they are applied. Explore environmentally friendly alternatives	January 2022	All	Estates and Ground Maintenanc e Team	Pesticide plan
Objective 3: To collect data on biodiversity for monit	oring, reporting	and to info	rm action.	
Set scope and methodology for a biodiversity baseline assessment.	April 2023	All	LMS & Estates	
Complete bird surveys	April 22 (yearly)	All	LMS & Estates	Bird report
Survey existing boxes and the condition of these / if they are in the right locations?	Aug 22	CL & DH	Estates	Survey report
Explore possibility of carrying out a mammal survey	Oct 22	CL	LMS	Meeting to discuss / research
Complete bat surveys to see if we have bats on campus	Oct 22	CL	LMS & Estates	Bat report
Hedgehog surveys as part of Hedgehog Friendly Campus	Yearly	CL & DH	LMS & Estates	Number of surveys
Survey locations of Bee Orchids and curate a list of areas identified as viable for transforming	March-April Annually	CL	Facilities, Grounds and LMS.	Completed survey
Conduct bi-annual review of trees where coppicing could enhance surrounding biodiversity and encourage undergrowth recovery	Ongoing / bi-annually	CL	Estates and Grounds Team / LMS	
Complete annual tree survey including the Oak trees, ash, and hornbeam in Hazel Grove	Refer to Estates Schedule	CL & DH	Estates and Grounds Team	
<b>Objective 4:</b> To provide biodiversity communication, community.	education, and	engagemer	nt opportunitie	s for the UH
Promote the Big Bird Count for RSPB by engaging staff and students	Every Jan	All campuse s	HSS	Bird count campaign
Take part in Hedgehog Friendly Campus Certification	Yearly	All	HSS	Certification
Ensure that Coppice Management Plan is communicated to stakeholders	Ahead of coppicing	CL	Estates and MarComms	Comms delivered
Litter pick walks around Hazel Grove	Ongoing	CL	Estates & Grounds Team	Number of litter picks
Organise Biodiversity Walks for College Lane – promote through Staff network, Herts Hub and other platforms	Ongoing	CL	Estates	Number of walks

Review interpretation boards and ensure they are in the correct locations	August 2021	CL & DH	Estates	Project completion
No Mow May / rewilding communication and information campaigns	May / Yearly	CL & DH	Estates	Campaign delivered
Organise a series of seasonal engagement activities such as Hedgehog surveys, winter and spring-watch etc.	Ongoing	All	E&S	Number of activities
Identify training and education needs within key interested parties to help meet the aims of the BAP, and providing support where appropriate.	Yearly update	All	LMS	Training assesment

### 3.5 MONITORING AND REPORTING

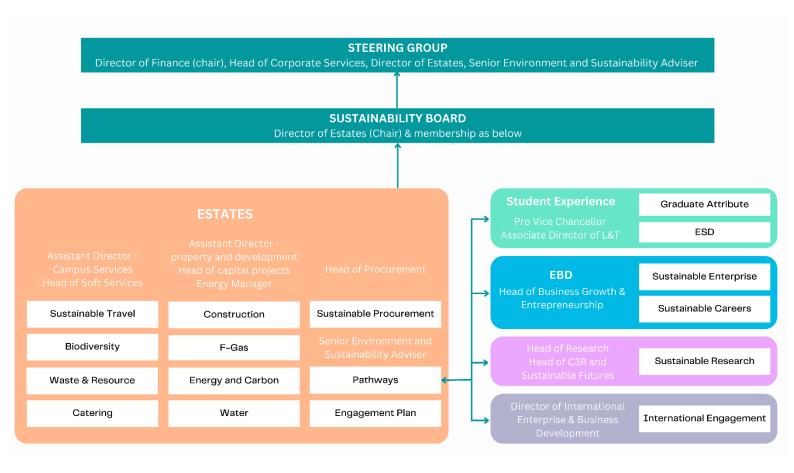
This Biodiversity Action Plan sets out a range of actions to be taken on biodiversity which will also be tracked via the KPIs annually as set out below. Each of the actions will be listed as objectives in a biodiversity working document and will be reviewed annually by relevant stakeholders and fed back to the wider EMS working group at regular intervals. At the end of the Plan period, the Biodiversity working group will report progress back to the Environmental and Sustainability Working Group in order to inform a decision on what action is required to meet the overarching targets, and to ensure continual improvement. Biodiversity Baseline to be included once this has been measured.

Key Perform	ance Indicator	Status / date
	Annual survey on existing bird boxes and the condition of these / if they are in the right locations?	
	Number of bird boxes repaired or installed	
Birds	Annual bird survey completed and reported	
	Number of channels / platforms through which Bird Big Count for RSPB is promoted	
	Number of new bird nesting sites	
	Meeting / research to explore possibility of mammal survey	
	Bat survey carried out and reported	
Mammals	Hedgehog survey carried out annually as part of Hedgehog friendly campus	
	Hedgehog Friendly Capus certification level	
	Number of actions taken to provide safe areas for any mammals identified in the surveys	
	Bi-annual invertebrate and pollinator survey report	
Insects and Pollinators	Number of bug hotels installed	
rollillators	Grounds management plan to include policy on leaving piles of wood and vegetation in situ for insects where appropriate	

Mowing plan to consider insects and pollinators access to wildflower meadows Review of possibility on incorporating green roofs on structures and buildings Create programme of Bulb Flower planting including a cyclical nature of blooms Annual review of planted wildflower meadows to ensure that the areas are being appropriately managed and over growth has been reduced Report on areas which can be turn into wild areas e.g. the grass behind the forum or more areas around the coppice.  Survey of bee orchid location - annually Report on Bee Orchid locations - annually Comms update on Bee Orchid locations - annually Agree with grounds team to compost all green waste and relevant documentation provided. Meeting / research to explore possibility of on-site composting  Ponds  Metting with Derwent to discuss pond biodiversity  Write coppicing management plan Survey report of trees ahead of coppicing Review the Hazel Grove Management Plan  Create tree planting management plan Agree with contractors to leave piles of wood in situ into grounds management plan Agree with contractors to ensure path in Hazel Grove is clear and accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use Discuss with grounds to management plan  Number of litter picks / number of volunteers Biodiversity walks communication / delivered Review of interpretation boards No Mow May communication Number of biodiversity training course attended by involved members of staff e.g. tree management etc.			1
buildings Create programme of Bulb Flower planting including a cyclical nature of blooms Annual review of planted wildflower meadows to ensure that the areas are being appropriately managed and over growth has been reduced Report on areas which can be turn into wild areas e.g. the grass behind the forum or more areas around the coppice.  Survey of bee orchid location - annually Report on Bee Orchid locations - annually Comms update on Bee Orchid locations - annually Agree with grounds team to compost all green waste and relevant documentation provided. Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan Survey report of trees ahead of coppicing Review the Hazel Grove Management Plan Create tree planting management plan Agree with contractors to leave piles of wood in situ into grounds management plan Agree with contractors to ensure path in Hazel Grove is clear and accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan Agree with grounds to limit pesticide use Discuss with grounds to limit pesticide use Discuss with grounds to limit pesticide use Discuss with grounds to limit pesticide use Communication of coppice management plan Number of litter picks / number of volunteers Biodiversity walks communication / delivered Review of interpretation boards No Mow May communication Number of biodiversity training course attended by involved members			
of blooms Annual review of planted wildflower meadows to ensure that the areas are being appropriately managed and over growth has been reduced Report on areas which can be turn into wild areas e.g. the grass behind the forum or more areas around the coppice.  Survey of bee orchid location - annually Report on Bee Orchid locations - annually Comms update on Bee Orchid locations - annually Agree with grounds team to compost all green waste and relevant documentation provided. Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan Survey report of trees ahead of coppicing Review the Hazel Grove Management Plan  Create tree planting management plan Agree with contractors to leave piles of wood in situ into grounds management plan Agree with contractors to ensure path in Hazel Grove is clear and accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan Agree with grounds to limit pesticide use Discuss with grounds to limit pesticide use Discuss with grounds to limit pesticide use Discuss with grounds to annually Hedgehog Friendly Capus programme delivered Communication of coppice management plan Number of litter picks / number of volunteers Biodiversity walks communication / delivered Review of interpretation boards No Mow May communication Number of biodiversity training course attended by involved members			
Are being appropriately managed and over growth has been reduced Report on areas which can be turn into wild areas e.g. the grass behind the forum or more areas around the coppice.  Survey of bee orchid location - annually Report on Bee Orchid locations - annually Comms update on Bee Orchid locations - annually Agree with grounds team to compost all green waste and relevant documentation provided. Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan Survey report of trees ahead of coppicing Review the Hazel Grove Management Plan  Create tree planting management plan Agree with contractors to leave piles of wood in situ into grounds management plan Agree with contractors to ensure path in Hazel Grove is clear and accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan Agree with grounds to limit pesticide use  Discuss with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually Hedgehog Friendly Capus programme delivered Communication of coppice management plan  Number of litter picks / number of volunteers  & Education Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		, -	
Meadows and amenity grasslands  Survey of bee orchid location - annually  Report on Bee Orchid locations - annually  Comms update on Bee Orchid locations - annually  Agree with grounds team to compost all green waste and relevant documentation provided.  Meeting / research to explore possibility of on-site composting  Ponds  Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		are being appropriately managed and over growth has been reduced Report on areas which can be turn into wild areas e.g. the grass behind	
Report on Bee Orchid locations - annually  Comms update on Bee Orchid locations - annually  Agree with grounds team to compost all green waste and relevant documentation provided.  Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		* *	
Agree with grounds team to compost all green waste and relevant documentation provided.  Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members	-	Report on Bee Orchid locations - annually	
documentation provided.  Meeting / research to explore possibility of on-site composting  Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Comms update on Bee Orchid locations – annually	
Ponds Meeting with Derwent to discuss pond biodiversity  Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		, ,	
Write coppicing management plan  Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Meeting / research to explore possibility of on-site composting	
Survey report of trees ahead of coppicing  Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members	Ponds	Meeting with Derwent to discuss pond biodiversity	
Review the Hazel Grove Management Plan  Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Write coppicing management plan	
Create tree planting management plan  Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Survey report of trees ahead of coppicing	
Agree with contractors to leave piles of wood in situ into grounds management plan  Agree with contractors to ensure path in Hazel Grove is clear and accessible  Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Review the Hazel Grove Management Plan	
management plan Agree with contractors to ensure path in Hazel Grove is clear and accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually Hedgehog Friendly Capus programme delivered Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members	Woodland	Create tree planting management plan	
accessible Tree survey report for CL and DH - annual  Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members			
Policy to survey for endangered species in construction plan  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		·	
Compliance  Agree with grounds to limit pesticide use  Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Tree survey report for CL and DH - annual	
Discuss with grounds team use of environmentally alternatives to pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Policy to survey for endangered species in construction plan	
pesticides  RSPB Big Bird Count campaign - annually  Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Number of litter picks / number of volunteers  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members	Compliance	Agree with grounds to limit pesticide use	
Hedgehog Friendly Capus programme delivered  Communication of coppice management plan  Engagement & Education  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		·	
Communication of coppice management plan  Engagement & Education  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		RSPB Big Bird Count campaign - annually	
Engagement & Education  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Hedgehog Friendly Capus programme delivered	
& Education  Biodiversity walks communication / delivered  Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Communication of coppice management plan	
Review of interpretation boards  No Mow May communication  Number of biodiversity training course attended by involved members		Number of litter picks / number of volunteers	
No Mow May communication  Number of biodiversity training course attended by involved members	& Education	Biodiversity walks communication / delivered	
Number of biodiversity training course attended by involved members		Review of interpretation boards	
· · · · · · · · · · · · · · · · · · ·		No Mow May communication	
		Number of biodiversity training course attended by involved members of staff e.g. tree management etc.	

### 4. APPENDIX

### **APPENDIX 1. GOVERNANCE STRUCTURE**



### APPENDIX 2. LEGAL COMPLIANCE REGISTER

Legislation	Summary and relevance
Town and Country Planning (Tree Preservation) (England) Regulations SI 2012/605	The Regulations give the Local Planning Authority (LPA) the power to allocate a Tree Preservation Order (TPO) which prohibits the cutting down, uprooting, topping, lopping, wilful damage, or wilful destruction of trees without the LPA's consent.
Wildlife and Countryside Act 1981 (c. 69)	The act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and to interfere with places used for shelter or protection, or to intentionally disturb animals occupying such places. It an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and to intentionally uproot such plants without authorisation. The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9. It also provides a mechanism making any of the above offences legal through the granting of licenses by the appropriate authorities. The act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity. It provides for the notification of Sites of Special Scientific Interest (SSSI) by reason of their flora, fauna, geological or physiological features.
Conservation of Habitats and Species Regulations	The Regulations cover the designation of habitat sites and classification of sites as special areas of conservation (SAC) and special protection areas (SPA) under Directive 92/43/EEC on conserving natural habitats and wild fauna and flora.
SI 2010/490	In instances where damage could occur, special nature conservation orders, prohibiting any person from carrying out damaging activities may be used.
	The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.
	The Regulations require competent authorities to consider or review planning permission, applied for or granted, affecting a European site, and, subject to certain exceptions, restrict or revoke permission where the integrity of the site would be adversely affected.
Protection of Badgers Act 1992	The Act makes it an offence to kill, injure, ill-treat or take badgers unless it can be proved that it was under an exempt condition or a licence was obtained. Licences can be obtained from a conservation body if certain conditions are met.

Countryside and Rights of Way Act 2000 Chapter 37	The Act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).
The Wild Mammals Protection Act 1996	This Act makes it an offense for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
The Environment Act 2021	This Environment Act 2021has two main functions:  1. To give a legal framework for environmental governance in the UK.  2. To bring in measures for improvement of the environment in relation to waste, resource efficiency, air quality, water, nature and biodiversity, and conservation.  The vast majority of this Act does not make any immediate changes for organisations other than regulators. Changes to duties for businesses and other organisations are expected in subsequent legislation made under this Act.

### **APPENDIX 3.** ASPECTS AND IMPACTS REGISTER

Aspect	Impact	Consequences	Risk Owner	Mitigation controls
Construction that removes or impacts biodiversity	Loss of habitat Loss of biodiversity Impact on wider region Loss of carbon sinks	Damage to the environment  Contribution to global warming and climate change  Impact on well-being  Breach of legal / non-legal obligations  Financial cost to the organisation  Reputational cost	Estates / capital projects	Carry out proper assessments prior to construction
The use of chemicals and pesticides that can harm biodiversity	Loss of habitat Loss of biodiversity Impact on wider region	Damage to the environment Breach of legal / non-legal obligations Financial cost to the organisation	Estates / Contractors	Use pesticides sparingly Use environmentally- friendly pesticides where possible Don't spray when rain is forecast

		Reputational cost		
Ground maintenance that impacts biodiversity such as clearing, mowing, coppicing	Loss of habitat Loss of biodiversity Impact on wider region Loss of carbon sinks	Damage to the environment  Contribution to global warming and climate change  Impact on well-being  Breach of legal / non-legal obligations  Financial cost to the organisation  Reputational cost	Estates / Contractors / working group	Develop and work according to site management plans
Pollution that can negatively impact biodiversity e.g. particulate pollution from cars and machinery	Loss of habitat Loss of biodiversity Impact on wider region	Damage to the environment Financial cost to the organisation Reputational cost	Estates	Care to be taken to reduce particulate pollution on site.  Travel plan.
The disturbance of biodiversity from human interaction	Loss of habitat Loss of biodiversity	Damage to the environment Impact on well-being Breach of legal / non-legal obligations Financial cost to the organisation Reputational cost	Estates / E&S	Include as consideration in BAP. Signs and barriers
Improper management of existing Biodiversity	Loss of habitat Loss of biodiversity	Damage to the environment Impact on well-being Breach of legal / non-legal obligations Financial cost to the organisation Reputational cost	Estates / contractors	Follow management plan

Invasive species	Loss of habitat Loss of biodiversity Impact on wider region	Invasive species are capable of causing extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats.	Estates / contractors / LMS	Ensure no invasive species are planted, and existing invasive species are dealt with accordingly to stop the spread
---------------------	---	--	-----------------------------------	---

### APPENDIX 4. PLANTS LIST AT COLLEGE LANE AND DE HAVILLAND

Latin	English	Comments
Acer campestre	Field Maple	
Acer platanoides	Norway Maple	ornamental
Acer pseudoplatanus	Sycamore	
Acer saccharinum	Silver Maple	ornamental
Achillea millefolium	Yarrow	
Aegopodium podagraria	Ground Elder	
Aesculus hippocastanum	Horse Chestnut	
Aethusa cynapium	Fool's Parsley	
Agave americana	Centuryplant	ornamental
Agrimonia eupatoria	Agrimony	
Agrostis stolonifera	Creeping Bent	
Ajuga reptans	Bugle	
Alchemilla sp.	Lady's Mantle	
Alliaria petiolata	Garlic Mustard	
Allium subhirsutum	Hairy Garlic	
Allium ursinum	Ramsons	planted
Alnus glutinosa	Alder	
Alnus incana	Grey Alder ?	
Alopecurus myosuroides	Black Grass	
Anacamptis pyramidalis	Pyramidal Orchid	

Anagalis arvensis	Scarlet Pimpernel	
Anemone blanda/appenina		planted?
Anemone nemorosa	Wood Anemone	
Anemone x hybrida	Japanese Anemome	planted?
Anisantha sterilis	Barren Brome	
Anthriscus sylvestris	Cow Parsley	
Anthyllis vulneraria	Kidney Vetch	sown?
Aphanes arvensis agg.	Parsley Piert	
Aquilegia vulgaris	Columbine	planted?
Arabidopsis thaliana	Thale Cress	
Arabis caucasica		planted
Arctium minus agg.	Greater Burdock	
Arrhenatherum elatius	False Oat-grass	
Artemisia vulgaris	Mugwort	
Arum maculatum	Lords-and-Ladies	
Ballota nigra	Black Horehound	
Bellis perennis	Daisy	
Berberis darwinii	Darwin's Barberry	ornamental
Berberis thunbergii	Thunberg's Barberry	ornamental
Betula pendula	Silver Birch	
Borago officinalis	Borage	planted
Bromus hordeaceus	Soft Brome	
Brunnera macrophylla	Siberian Bugloss	planted?
Buddleja davidii	Butterfly Bush	
Calendula officinalis	Pot Marigold	
Caltha palustris	Marsh Marigold	planted
Calystegia sepium	Hedge Bindweed	
Calystegia silvatica	Large Bindweed	
Campanula rapunculoides	Creeping Bellflower	planted?
Capsella bursa-pastoris	Shepherd's Purse	
Cardamine flexuosa	Wavy Bitter-cress	
Cardamine hirsuta	Hairy Bittercress	
Carex pendula	Pendulous Sedge	
Carpinus betulus	Hornbeam	

Castanea sativa	Sweet Chestnut	
Catalpa bignonioides	Indian Bean Tree	ornamental
Ceanothus		ornamental
Centaurea cyanus	Cornflower	planted
Centaurea montana	Perennial Cornflower	planted
Centaurea nigra agg.	Common Knapweed	
Centaurea scabiosa	Greater Knapweed	
Cerastium fontanum	Common Mouse-ear	
Cerastium glomeratum	Sticky Mouse-ear	
Chaenorhinum minus	Small Toadlax	
Chaerophyllum temulum	Rough Chervil	
Chamerion angustifolium	Rosebay	
Cichorium intybus	Chicory	planted
Cirsium arvense	Creeping Thistle	
Cirsium vulgare	Spear Thistle	
Clarkia amoena		planted
Clematis vitalba	Traveller's Joy	
Conium maculatum	Hemlock	
Conopodium majus	Pignut	
Convolvulus arvensis	Field Bindweed	
Conyza canadensis	Canadian Fleabane	
Conyza sumatrensis	Guernsey Fleabane	
Coronopus squamatus	Swine-cress	
Cornus sanguinea	Dogwood	
Cornus sericea/alba		planted
Corylus avellana	Hazel	
Cotoneaster horizontalis	Wall Cotoneaster	
Crataegus monogyna	Hawthorn	
Crepis capillaris	Smooth Hawksbeard	
Crepis vesicaria	Beaked Hawksbeard	
Crocus tommasinianus	Early Crocus	planted?
Cynosurus cristatus	Crested Dogstail	
Cyrtomium sp.		planted?
Dactylis glomerata	Cocksfoot	

Dactylorhiza fuchsii	Common Spotted Orchid	
Daucus carota	Wild Carrot	
Dianthus barbatus	Sweet William	
Dianthus sp.		planted
Digitalis purpurea	Foxglove	
Dipsacus fullonum	Wild Teasel	
Echium vulgare	Viper's Bugloss	
Elytrigia repens	Common Couch	
Epilobium ciliatum	American Willowherb	
Epilobium hirsutum	Great Willowherb	
Epilobium montanum	Broad-leaved Willowherb	
Epilobium parviflorum	Hoary Willowherb	
Epilobium tetragonum	Square-stemmed Willowherb	•
Eranthis hyemalis	Winter Aconite	planted?
Erigeron acer	Blue Fleabane	
Erodium cicutarium	Common Storksbill	
Erophila verna agg.	Common Whitlowgrass	•
Escallonia macrantha		ornamental
Eschscholtzia californica		planted?
Euphorbia helioscopia	Sun Spurge	
Euphorbia lathyris	Caper Spurge	
Euphorbia peplus	Petty Spurge	
Fatsia japonica		ornamental
Festuca rubra agg.	Red Fescue	
Ficaria verna subsp. verna	Lesser Celandine	
Foeniculum vulgare	Fennel	
Fragaria vesca	Wild Strawberry	
Fraxinus excelsior	Ash	
Fumaria officinalis	Common fumitory	
Galanthus nivalis	Snowdrop	
Galega officinalis	Goat's Rue	
Galium aparine	Cleavers	
Galium mollugo	Hedge Bedstraw	
Galium verum	Lady's Bedstraw	
<u> </u>	•	•

Geranium dissectum	Cut-leaved Cranesbill	
Geranium molle	Dovesfoot Cranesbill	
Geranium pratense	Meadow Cranesbill	
Geranium pusilum	Small-flowered Cranesbill	
Geranium pyrenaicum	Hedgerow Robert	
Geranium robertianum	Herb Robert	
Geum urbanum	Herb Bennet	
Glechoma hederacea	Ground Ivy	
Hedera helix	lvy	
Helleborus foetidus	Stinking Hellebore	
Helminthotheca echioides	Bristly Oxtongue	
Heracleum sphondylium	Hogweed	
Hirschfeldia incana	Hoary Mustard	
Holcus lanatus	Yorkshire Fog	
Hordeum murinum	Wall Barley	
Hyacinthoides x massartiana		
Hyacinthoides non-scripta	Bluebell	
Hypericum androsaemum	Tutsan	
Hypericum calycinum	Rose of Sharon	ornamental
Hypericum perforatum	Perforate St. John's Wort	•
Hypochaeris radicata	Catsear	
llex aquifolia	Holly	
Iris foetidissuma	Stinking Iris	
Lamiastrum galeobdolon	Yellow Archangel	
subsp. montanum		
Lamium album	White Dead-nettle	
Lamium purpureum	Red Dead-nettle	
Lapsana communis	Nipplewort	
Larix decidua	European Larch	
Lathyrus latifolius	Broad-leaved Everlasting Pea	
Lathyrus pratensis	Meadow Vetchling	
Lavandula sp.		ornamental
Leontodon hispidus	Rough Hawkbit	
Lepidium campestre	Field Pepperwort	
		1

Lepidium didymus	Lesser Swine-cress	
Lepidium draba	Hoary Cress	
Leucanthemum vulgare	Ox-eye Daisy	
Linaria purpurea	Purple Toadflax	
Lobularia maritima	Sweet Alison	planted?
Lolium perenne	Perennial Ryegrass	
Lonicera nitida	Wilson's Honeysuckle	ornamental
Lonicera periclymenum	Honeysuckle	
Lotus corniculatus	Birdsfoot Trefoil	
Luzula campestris	Field Wood-rush	
Lythrum salicaria	Purple Loosestrife	
Mahonia sp.		ornamental
Malcolmia maritima	Virginia stock	planted?
Malva moschata	Musk Mallow	
Malva sylvestris	Common Mallow	
Malus pumila	Cultivated Apple	ornamental
Malus sylvestris	Crab Apple	
Matricaria chamomilla	Scented Mayweed	
Matricaria discoidea	Pineappleweed	
Medicago arabica	Spotted Medick	
Medicago lupulina	Black Medick	
Medicago sativa	Lucerne	planted?
Melilotus officinalis	Ribbed Melilot	
Melissa officinalis	Balm	
Mercurialis perennis	Dog's Mercury	
Mimulus guttatus		ornamental,
		spreading
Moehringia trinervia	Tree-nerved Sandwort	
Muscari armeniaca	Garden Grape-hyacinth	planted?
Myosotis arvensis	Field Forgetmenot	
Myosotis sylvatica	Wood Forgetmenot	
Narcissus pseudonarcissus	Wild Daffodil	
Nigella damascena		planted?
Ophrys apifera	Bee Orchid	

Ornithogalum umbellatum?	Star-of-Bethlehem	planted?
Oxalis articulata/debilis	Pink Sorrel	
Papaver dubium	Long-headed Poppy	
Papaver pseudoorientale	Oriental Poppy	planted?
Papaver rhoeas	Common Poppy	
Pentaglotis sempervirens	Green Alkanet	
Persicaria sp.		
Phleum bertolinii	Smaller Catstail	
Phleum pratense	Timothy	
Pilosella officinarum	Mouse-ear Hawkweed	
Plantago lanceolata	Ribwort Plantain	
Plantago major	Greater Plantain	
Platanus x hispanica	London Plane	ornamental
Poa angustifolia	Narrow-leaved Meadow-grass	;
Poa annua	Annual Meadow-grass	
Poa nemoralis	Wood Meadow-grass	
Poa pratensis	Smooth Meadow-grass	
Poa trivialis	Rough Meadow-grass	
Polygonum aviculare	Knotgrass	
Potentilla reptans	Creeping Cinquefoil	
Poterium sanguisorba subsp.	Salad Burnet	sown?
balearica		
Primula veris	Cowslip	
Primula vulgaris	Primrose	
Primula x polyantha		planted
Prunella vulgaris	Self-heal	
Prunus avium	Wild Cherry	
Prunus spinosa	Blackthorn	
Pteridium aquilinum	Bracken	
Pulicaria dysenterica	Common fleabane	
Pyrus salicifolia		ornamental
Quercus robur	Pedunculate Oak	
Ranunculus acris	Meadow Buttercup	
Ranunculus bulbosus	Bulbous Buttercup	

Ranunculus repens	Creeping Buttercup	
Reseda luteola	Weld	
Rhinanthus minor	Yellow Rattle	
Ribes sanguineum	Flowering Currant	
Ribes uva-crispa	Gooseberry	
Rosa canina	Dog Rose	
Rubus armeniacus		
Rubus fruticosus agg.	Bramble	
Rubus idaeus	Raspberry	
Rumex acetosa	Common Sorrel	
Rumex crispus	Curled Dock	
Rumex obtusifolius	Broad-leaved Dock	
Rumex sanguineus	Wood Dock	
Sagina procumbens	Procumbent Pearlwort	
Salix caprea	Goat Willow	
Salix caprea/cinerea	Goat/Grey Willow	
Sambucus nigra	Elder	
Sarcococca sp.		ornamental
Saxifraga granulata	Meadow Saxifrage	unknown origin
Scorzoneroides autumnalis	Autumn Hawkbit	
Scrophularia nodosa	Common Figwort	
Sedum album	White Stonecrop	
Sedum rupestre	Large Rock Stonecrop	
Senecio erucifolius	Hoary Ragwort	
Senecio jacobaea	Common Ragwort	
Senecio squalidus	Oxford Ragwort	
Senecio vulgaris	Groundsel	
Sherardia arvensis	Field Madder	
Silene dioica	Red Campion	
Silene latifolia	White Campion	
Sinapis arvensis	Charlock	
Sison amomum	Stone Parsley	
Sisymbrium officinale	Hedge Mustard	
Solidago canadensis/gigante	a	
		•

Sonchus arvensis	Corn Sow-thistle	
Sonchus asper	Rough Sow-thistle	
Sonchus oleraceus	Smooth Sow-thistle	
Sorbaria sp.		ornamental
Sorbus aria agg.	Whitebeam	planted
Sorbus aucuparia	Rowan	
Stachys sylvatica	Hedge Woundwort	
Stellaria graminea	Lesser Stitchwort	
Stellaria holostea	Greater Stitchwort	
Stellaria media	Common Chickweed	
Symphoricarpos albus	Snowberry	ornamental
Symphoricarpos x chenaultii		
Tanacetum parthenium	Feverfew	
Taraxacum agg.	Dandelion	
Tilia x europaea	Common Lime	planted
Torilis japonica	Hedge Parsley	
Tragopogon pratensis	Goatsbeard	
Trifolium campestre	Hop Trefoil	
Trifolium dubium	Lesser Trefoil	
Trifolium pratense	Red Clover	
Trifolium repens	White Clover	
Tripleurospermum inodorum	Scentless Mayweed	
Trisetum flavescens	Yellow Oat-grass	
Tristagma uniflorum	Ipheion	planted
Tulipa sp.		ornamental
Tussilago farfara	Coltsfoot	
Ulmus glabra	Wych Elm	
Urtica dioica	Common Nettle	
Urtica urens	Small Nettle	
Valerianella carinata	Keeled-fruited Cornsalad	
Verbascum thapsus	Great Mullein	
Verbena bonariensis	Vervain	planted
Veronica arvensis	Wall Speedwell	
Veronica chamaedrys	Germander Speedwell	

Veronica filiformis	Slender Speedwell	
Veronica hederifolia subsp.	Ivy-leaved Speedwell	
lucorum		
Veronica montana	Wood Speedwell	
Veronica officinalis	Heath Speedwell	
Veronica persica	Common Field Speedwell	
Veronica polita	Grey Field Speedwell	
Veronica serpyllifolia	Thyme-leaved Speedwell	·
Veronica x franciscana	Hedge Veronica	ornamental
Viburnum lantana	Wayfaring-Tree	
Viburnum tinus		ornamental
Vicia sativa	Common Vetch	
Vicia sepium	Bush Vetch	
Vicia tetrasperma	Smooth Tare	
Vinca major	Greater Periwinkle	
Viola odorata	Sweet Violet	
Viola reichenbachiana	Wood Dog Violet	
Viola riviniana	Common Dog Violet	
Viola tricolor	Wild Pansy	
Vulpia bromoides	Squirrel-tail Fescue	
Vulpia myuros	Ratstail Fescue	