

October 2025

Woodland Survey Report and Management Plan for the Canterbury Campus, University of Kent



**Durrell Institute of
Conservation and Ecology
(DICE) Biodiversity
Consulting**

On behalf of the University of Kent
Sustainability and Landscape and
Grounds Teams, supported by Research
England UK Innovation & Research



DICE
University of Kent

Version control

Date	Prepared by	Checked by	Notes
09/09/2025	Laura Kor	Bob Smith	First draft for discussion with Grounds and Sustainability Teams
31/10/2025	Laura Kor	N/A	Final report incorporating feedback from Grounds Team, Sustainability Team, and Biodiversity Working Group

Suggested citation: Kor, L., Rampling, E., Seaman, D., Smith, B. (2025). Woodland Survey Report and Management Plan for the Canterbury Campus, University of Kent. University of Kent. Canterbury, UK: DICE Biodiversity Consulting.

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Abbreviations

Abbreviation	Definition
AWI	Ancient Woodland Indicator
BNG	Biodiversity Net Gain
DICE	Durrell Institute of Conservation and Ecology
ESC	Ecological Site Classification
GBIF	Global Biodiversity Information Facility
GIS	Geographic information systems
LandIS	Land Information System
NVC	National Vegetation Classification
UKHab	UK Habitat
UoK	University of Kent
WCA	Woodland Condition Assessment

Introduction

1.1. Background

The University of Kent's (UoK) Canterbury Campus covers an area of approximately 120 ha (300 acres) with a mosaic of woodland and grassland habitats alongside university facilities and horticultural areas. The Campus is known to support over 1,000 species of flora and fauna, forming part of a wider landscape of importance for biodiversity.

In 2016, a Woodland Management Strategy was created for the Canterbury Campus (Land Use Consultants (LUC), 2016). Following nine years of its implementation, the University's Grounds Team are seeking to understand what progress has been made, the current condition of the woodlands, and priorities for management going forward.

1.2. Aim and approach

The Innovation Team at the Durrell Institute of Conservation and Ecology (DICE) was commissioned to undertake woodland surveys in the Canterbury Campus. This work was supported by the UoK Grounds Team and Research England's Expanding Excellence in England (E3) Fund, UK Research and Innovation. Surveys were designed to inform the following questions:

- What are the UK Habitat (UKHab) classifications and any other relevant designations of the woodlands on campus?
- What is the ecological condition of the woodlands?
- Has the coppicing rotation supported the health of the woodlands and led to greater vegetation diversity?
- Which features of the woodlands should be managed better to support wildlife?
- Is there a priority of works that could be undertaken to support wildlife and the condition of the woodlands on campus?
- Are there any management practices that could be undertaken to make the woods more resilient, particularly to the effects of climate change?

In addition, the Innovation Team provided training to relevant staff and students on the surveying methods used while undertaking this work.

1.2.1. Survey area

The following woodland sites were included in this project (Figure 1a):

- Brotherhood Wood;
- Parkwood;
- Bluebell Wood;
- Pocket Ancient Woodlands along Giles Lane and Parkwood Road.

As coppice woodland, these areas have been divided into coupes – woodland blocks defined to inform rotational coppicing. The c.0.4 ha coupes are shown in Figure 1b. The coupe IDs have been updated to include an indication of the woodland they fall within, with a new coupe added to Bluebell Wood (BW11), where a mature, unmanaged hedgerow has become an extension to the woodland.

1.2.2. Coppicing regime

Coppicing is a traditional woodland management method that relies on the ability of many species to regrow from stumps after felling (Harmer, et al., 2010). Aside from timber production, in-cycle coppicing is used as a tool to increase biodiversity by creating more structural diversity. The 2016 Woodland Management Strategy suggested that following an initial reinstatement of coppicing of one coupe in each woodland every other year, a 7-20 year coppice rotation should then be established depending on growth. Coppicing progress to date is shown in the Appendix.

1.2.3. Methodology

Habitat classification and mapping

We used the UK Habitat Classification system (UKHab Ltd, 2024) to classify woodland types. This is a hierarchical coding system for surveying and classifying habitats, which was designed to improve consistency in habitat mapping across the UK. The UKHab classification underpins the Biodiversity Metric which is used for the application of Biodiversity Net Gain (BNG) (Defra, 2024). It is designed for producing maps with geographic information systems (GIS), with standardised symbology to facilitate interpretation.

We undertook habitat surveys in Spring (May 2025) to classify the Campus woodlands according to the UKHab system, with additional information added on the National Vegetation Classification (NVC) documented where relevant. The QGIS software package was used to create and manage our habitat data.

Condition assessment and botanical recording

We applied the Woodland Condition Assessment (WCA) method, which was developed by the England Woodland Biodiversity Group and Forest Research to assess woodland condition in a standardised way (Forestry Commission, Natural England, and Woodland Trust, 2024). It was designed for sites with no statutory designation (e.g. not a Site of Special Scientific Interest) and is suitable for use in line with the Statutory Biodiversity Metric. The WCA applies an app-based tool in three stages: desk phase, plot surveys, and woodland walk. We used desktop and mobile devices to utilise this app at all three stages. Plot surveys were undertaken in two rounds during spring (May 2025) and summer (July-August 2025), with the coupes used to define plot locations (Figure 1b).

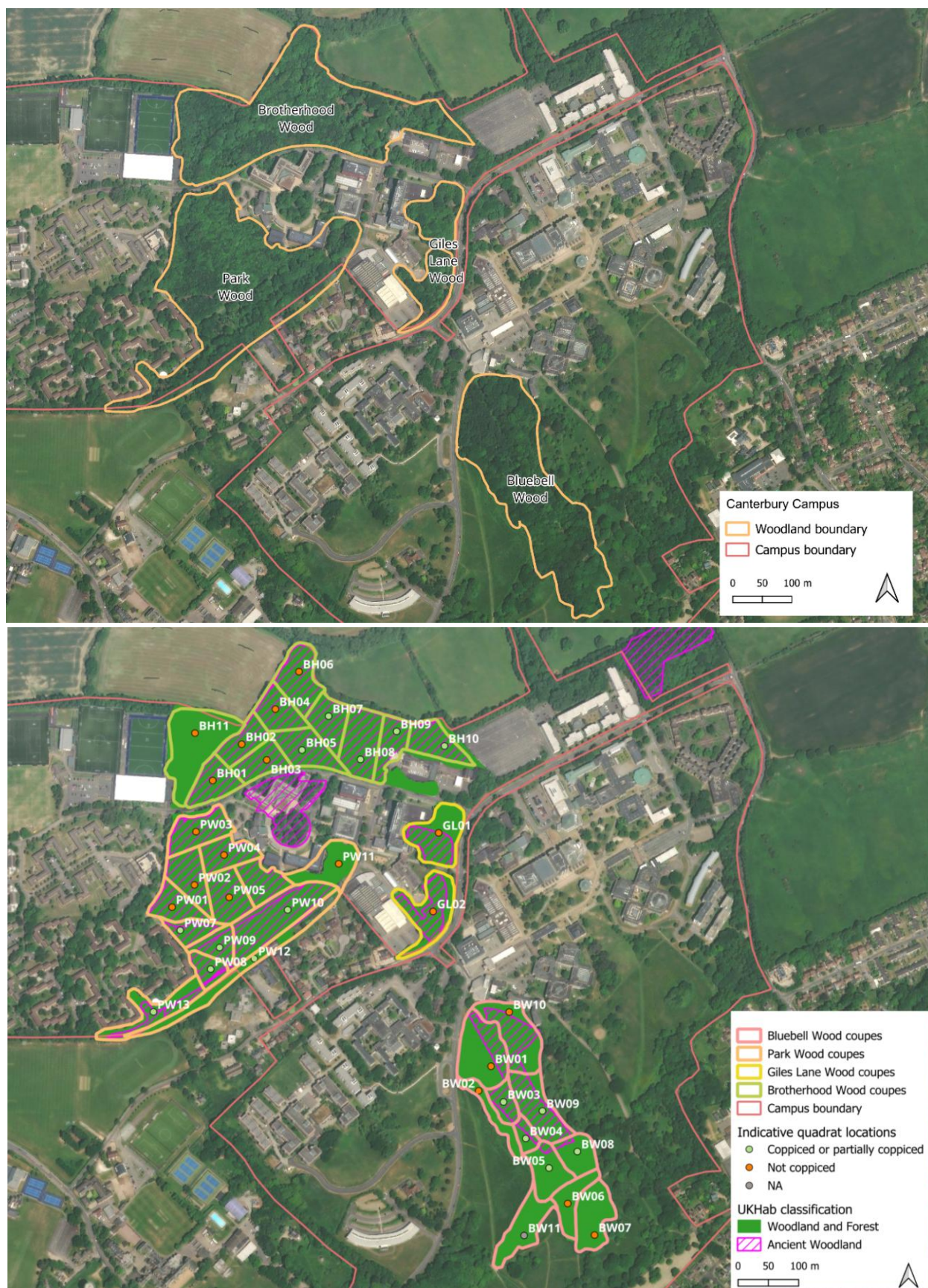


Figure 1. (a) Boundary of woodlands included in this study and (b) coupes defined for coppicing with the quadrat locations used for the Woodland Condition Assessment. Areas mapped as woodland and forest are *w1f7 Other lowland mixed deciduous woodland*.

To determine if the coppicing rotation applied since 2016 has led to greater diversity, we analysed whether the coppicing status (i.e. whether coppiced or not) of each coupe was related to the scores of relevant indicators from the WCA. Based on the expected benefits of coppicing, the indicators that were chosen for this analysis were those related to woodland structure, regeneration, ground flora, and cover of native trees and shrubs. We modified the WCA scoring system, which is usually applied at the whole woodland level, to be applied at an individual plot level so as to differentiate between areas which had been coppiced or not.

In addition to documenting characteristics for the WCA, we recorded a list of plant species observed. This is to inform the University of Kent's biodiversity baseline and give a more holistic picture of the woodlands' ecology, including the presence of ancient woodland indicator species.

It should be noted that while this report provides a basemap of woodlands and their condition in the Canterbury Campus, habitat assessments for planning consent are likely to require specific surveys.

Training

Training was delivered on ecological habitat classification, focusing on UKHab. This included a classroom session in December 2024 and an in-field session in January 2025, to which staff on the Grounds and Sustainability Teams were invited, alongside students in the Conservation and Sustainability Societies at the UoK. All attendees were subsequently invited to join field surveys to solidify their knowledge and expand skills in WCA and botanical identification.

2. Results

2.1. Site description

The Canterbury Campus is approximately 2 km northeast of Canterbury city. The site is classified as having a warm, moderately exposed and slightly dry climate (Forest Research, 2025). According to the Land Information System (LandIS), underlying soils are loamy, with Bluebell and Giles Lane Woods having freely draining slightly acid loamy soils, while Parkwood and Brotherhood Wood have loamy soils with naturally high groundwater (Hallett, et al., 2017).

All surveyed woodlands on site are included in Natural England's Ancient Woodland Inventory (Figure 1b) and have therefore been continuously present since at least 1600 AD. The nature of human management and intervention has varied through time, affecting the current ecology of the woodlands. There are signs that significant areas were converted to sweet chestnut coppice at some point in the last few hundred years (a non-native species in the UK) and the creation of features such as ditches and woodbanks – earthwork structures historically used as property boundaries – has introduced topographic variation.

In line with the WCA methodology, we used the MAGIC tool (Natural England, 2025) to undertake a desk-based assessment of habitats in the surrounding landscape. This found that 31.2% of the 10,000 ha area surrounding the central point of Campus are habitat types which are considered “favourable landcover” based on WCA definitions. This is primarily deciduous woodland (2,917.8 ha) and good quality semi improved grassland (74.1 ha).

2.2. Woodland habitat types and species

Field surveys found that all four woodlands on the Canterbury Campus fall under the UKHab classification *w1f7 Other lowland mixed deciduous woodland*. Lowland broadleaved woodland is considered a Priority Habitat type and includes most established semi-natural woodland in southern and eastern England. Relevant secondary codes are listed in each woodland description below.

While there is variation in the species composition between and within the woodlands on the Canterbury Campus, most areas surveyed can be considered as *W10 Quercus robur-Pteridium aquilinum-Rubus fruticosus* woodland communities under the NVC (Hall, et al., 2004). This is in line with the surveys undertaken in 2016. W10 occurs mainly in the lowlands of southern Britain, and is a vegetation community where pedunculate oak is the most common tree species and silver birch is abundant in younger stands. This is a description which generally fits the woodlands on Campus, with some areas showing local variation, particularly through the prominence of hornbeam and sweet chestnut. Bluebells (*Hyacinthoides non-scripta*) were recorded as

a dominant ground flora species in many areas in spring, and bramble (*Rubus fruticosus*), bracken (*Pteridium aquilinum*) and honeysuckle (*Lonicera periclymenum*) were abundant later in the year, with the woodlands therefore most closely fitting the *W10a Typical sub-community*.

A total of 104 unique vascular plant species were observed across all the woodland sites (see Appendix for full list). This includes 30 considered to be ancient woodland indicator species, classified based on the species listed as ancient woodland vascular plant indicator species in the South East by the Nature Conservancy Council (Sansum, et al., 2009) and/or included in the criteria for local wildlife sites in Kent as ancient woodland indicators (Kent Wildlife Trust, 2022).

2.2.1. Fauna

Records of species observations on the Canterbury Campus from 2015 onwards were downloaded from the Global Biodiversity Information Facility (GBIF, 2025). This indicates that over 600 species have been recorded on site, 376 of which are animals, mostly invertebrates. Within the woodlands, species recorded which are listed under The Conservation of Habitats and Species Regulations 2010 (Schedule 2, 4 and 5) and/or The Wildlife and Countryside Act 1981 are: common firecrest (*Regulus ignicapilla*), redwing (*Turdus iliacus*), common pipistrelle (*Pipistrellus pipistrellus*), great crested newt (*Triturus cristatus*), common toad (*Bufo bufo*), palmate newt (*Lissotriton helveticus*), and smooth newt (*Lissotriton vulgaris*). There was also a previous record of green sandpiper (*Tringa ochropus*), but as a wading bird, this is likely to have been a flyover. See Appendix C for more details.

In addition to the desk-based review, features such as mammal dens and setts were recorded if observed during habitat surveys. This noted the presence of active badger setts, as well as widespread rabbit warrens and suspected fox dens, with further detail in the woodland descriptions below.

2.3. Woodland condition

A total of 38 plot surveys were undertaken using the WCA methodology in spring and summer 2025. Results indicate that Park Wood, Bluebell Wood and Giles Lane pocket woodlands are of moderate condition, while Brotherhood Wood achieved a good condition score.

The scores were based on an assessment of woodland attributes which are important to wildlife and can be altered by management. A breakdown of how each woodland scored against each of these attributes is shown in Table 1. This was based on combining observations in individual plots (10 m radius each) across the woodlands, alongside the desk-based review.

Table 1. Results of the Woodland Condition Assessment (WCA) for each woodland on the Canterbury Campus

Feature	Park Wood	Brotherhood Wood	Bluebell Wood	Giles Lane Wood
OVERALL CONDITION	Moderate (35)	Good (39)	Moderate (34)	Moderate (35)
Age distribution of trees	Good	Good	Good	Good
Herbivore damage	Good	Good	Good	Good
Invasive plant species	Poor	Good	Poor	Poor
Number of native tree and shrub species	Good	Good	Good	Good
Cover of native tree and shrub species	Moderate	Good	Moderate	Poor
Open space in woodland	Good	Moderate	Moderate	Good
Proportion of favourable land cover	Good	Good	Good	Good
Woodland regeneration	Good	Good	Good	Moderate
Tree health	Moderate	Moderate	Moderate	Moderate
Vegetation and ground flora	Poor	Moderate	Poor	Moderate
Woodland vertical structure	Poor	Moderate	Poor	Good
Veteran trees	Moderate	Moderate	Moderate	Poor
Amount of deadwood	Good	Good	Good	Good
Size of woodlands	Moderate	Moderate	Moderate	Poor
Woodland disturbance	Good	Good	Good	Good

2.3.1. Park Wood

Park Wood is a broadleaved woodland approximately 6.3 ha in size, with adjacent land primarily consisting of residential buildings on campus. Oak and sweet chestnut are generally the dominant canopy species, with some areas more abundant in birch, sycamore, and hornbeam. There are two ponds in the woodland, at the southeastern and northwestern ends (Jennison Pond in PW11 and Woody's culvert in PW03). Jennison Pond was largely dry at the time of survey and overshadowed by adjacent trees and willows growing within the pond. The ground flora of Park Wood is varied. During surveys, large areas were characterised by bare ground with thick leaf litter and occasional bramble, bracken, honeysuckle, and bluebells (e.g. PW03, PW10); some coupes were carpeted with bluebells and wood anemone in spring (e.g. PW01); while thick nettle growth was found in PW13, indicating localised soil nutrient enrichment.

Relevant secondary codes from UKHab are:

- 28 Ancient woodland site;

- 211 Coppice with standards.

A total of 51 vascular plant species were recorded in Park Wood. This included 15 ancient woodland indicator species and one non-native invasive species (cherry laurel).

The woodland achieved a score of 35 out of a possible 45 on the WCA, and is therefore considered to be of moderate condition. The following areas scored poorly and should be a focus of management:

- Invasive plant species, particularly the presence of cherry laurel;
- Vegetation and ground flora, with many of the plots not having a recognisable woodland NVC plant community at ground layer;
- Woodland vertical structure, with numerous survey plots only having one or two storeys of vegetation.

2.3.2. Bluebell Wood

Bluebell Wood is a broadleaved woodland approximately 5.1 ha in size, adjacent to grassland habitats, with campus buildings next to the northeastern corner. It is a very varied woodland, reflecting historic changes in management. This includes various plantation areas in the southern end (hornbeam in BW05 and Norway maple in BW07), presence of large old oaks in east (BW09 and BW10), areas dominated by birch in the west (BW01), with wood banks and historic coppicing throughout. An additional coupe (BW11) was added to this survey in addition to those defined in 2016. This is due to the growth and expansion of an unmanaged hedgerow in the southwestern edge of the woodland, which now forms an extension to the woodland site (Figure 1b).

In recent years, tree planting has occurred adjacent to Bluebell Wood, which is likely to form extensions to the woodland habitat in future years. This includes trees on the grassland to the west of the woodland (adjacent to BW02) and an orchard in the southwestern corner (between BW11 and BW06).

There are some areas of wetland habitat in the Bluebell Wood, including an ephemeral stream running through the middle and two ponds where great crested newts have been previously recorded (Upper Elliot Pond in BW01/10 and Lower Elliot Pond in BW08). The ponds lack active management. Both had excessive algal growth, and there was evidence of human disturbance adjacent to Lower Elliot Pond. There is public access throughout the woodland, with well-used paths and signs of human activity, including litter and informal paths through vegetation.

Relevant secondary codes from UKHab are:

- 28 Ancient woodland site;
- 29 Plantation, relevant in the southern end of the woodland;
- 211 Coppice with standards.

A total of 69 vascular plant species were recorded in Bluebell Wood. This included 14 ancient woodland indicator species and three non-native invasive species (rhododendron, cherry laurel and giant rhubarb). Signs of rabbit activity were noted, including warrens and droppings, as well as a suspected badger latrine.

The woodland achieved a score of 34 out of a possible 45 on the WCA, and is therefore considered to be of moderate condition. The following areas scored poorly and should be a focus of the woodland management plan:

- Invasive plant species, particularly due to the presence of rhododendron and cherry laurel, with periwinkle and giant rhubarb also recorded;
- Vegetation and ground flora, with many of the plots not having a recognisable woodland NVC plant community at ground layer;
- Woodland vertical structure, with numerous survey plots only having one or two storeys of vegetation.

2.3.3. Brotherhood Wood

Brotherhood Wood is a broadleaved woodland approximately 5.8 ha in size, at the northern end of the Canterbury Campus. It is bordered by agricultural fields to the north and campus infrastructure to the south. The oldest and most natural habitat type in the woodland consists of oak-hornbeam communities, with stands of sweet chestnut also present. Ancient management features such as boundary banks and ditches are present throughout the site, as are more recent areas of human activity, such as for forest schools.

Relevant secondary codes from UKHab are:

- 28 Ancient woodland site;
- 211 Coppice with standards.

A total of 61 vascular plant species were recorded in Brotherhood Wood. This included 24 ancient woodland indicator species and one non-native invasive species (snowberry). Numerous trees, particularly mature oaks, may be considered veteran due to their size and other features such as the presence of small holes and plants growing on the trunks and branches. Signs of rabbit activity were noted, including warrens and droppings. There is an active badger sett in the western end of the woodland and latrines were noted in other parts of the woodland.

The woodland achieved a score of 39 out of a possible 45 on the WCA, and is therefore considered to be of good condition.

2.3.4. Giles Lane Wood

Giles Lane Wood now consists of two groups of trees between university buildings and Giles Lane road. These have a small total area of approximately 1.4 ha but provide

screening to the adjacent buildings, as well as connecting habitat patches between other woodland sites on Campus. Despite their small size and degraded nature, the pocket woodlands support a mix of trees and shrubs of varying ages with 31 vascular plant species recorded. This included seven ancient woodland indicator species and two non-native invasive species (cherry laurel and rhododendron). Signs of rabbit activity were noted, including warrens and droppings.

Relevant secondary codes from UKHab are:

- 28 Ancient woodland site.

The woodland achieved a score of 35 out of a possible 45 on the WCA, and is therefore considered to be of moderate condition. The following areas scored poorly:

- Invasive plant species, particularly the presence of cherry laurel and rhododendron;
- Cover of native tree and shrub species, with <50% of canopy trees in surveyed plots being native (primarily due to dominance of sweet chestnut);
- Size of woodland, which is less than 5 ha.

2.4. Effect of coppicing

As with many other native broadleaved woodlands in Britain, the woodland sites on the Canterbury Campus had been left to grow substantially beyond a normal coppice rotation over many decades. This is known as *stored coppice*. Rotational coppicing was formally re-established following the 2016 Woodland Management Plan (Appendix). This uses a *coppice with standards approach*, where the lower storey of woodland is cut while a partial overstorey of trees are left to grow. Coppicing is commonly suggested as a method of regeneration, but its effectiveness is impacted by factors such as the tree and shrub species present, age of parent stool, and browsing pressures (Harmer, et al., 2010).

We assessed whether the coppicing status of a plot affected the outcome of relevant WCA indicators (see Methods section). Coppiced coupes were found to generally support a greater diversity of native tree and shrub species (Figure 1). However, this was not a significant difference. There was also no clear variation in the summed condition scores between the two management statuses, but coupes which had been coppiced less often received poor condition scores.

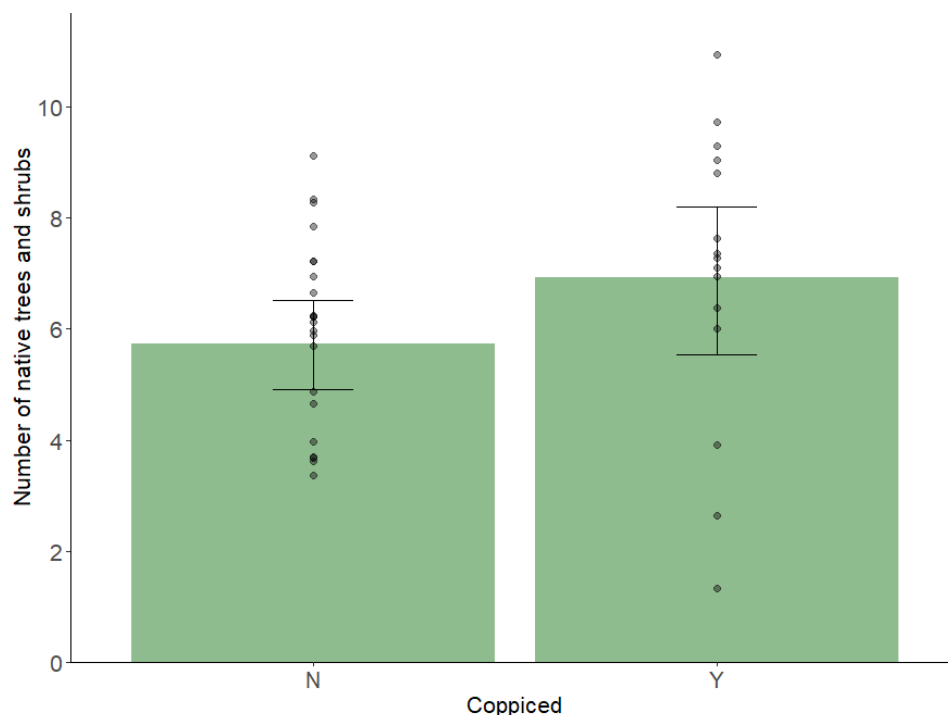


Figure 2. Comparison of the number of native tree and shrub species recorded within quadrat plots between coppiced and non-coppiced coupes. Bars show mean number of species with confidence intervals; points show raw data for each plot.

This indicates potential marginal benefits of coppicing on indicators such as woodland structural diversity and native species diversity. However, it is important to note that the WCA was developed as a general condition assessment tool, not specifically to test the outcomes of coppicing. To specifically assess environmental and biodiversity outcomes of coppicing, surveys which incorporate environmental indicators and faunal taxonomic groups that rely on the woodlands should also be undertaken (e.g. woodland birds and mammal species).

2.5. Anticipated climate change impacts

Under predicted climate change scenarios, the online Ecological Site Classification (ESC) tool anticipates that conditions on the Canterbury Campus will change to very warm, moderately exposed and moderately dry climate conditions by 2050.

While there is uncertainty associated with the impacts of climate change on woodlands, based on the likely climatic drivers in southeast England and the lowland mixed broadleaved woodland habitat type present, the following changes are possible (Ray, et al., 2010):

- Woodland community shifts as drier summers lead to range restriction on areas with more drought-prone soils.
- Composition of woodland vegetation changes as milder winters, springs and summers lead to increased colonisation by beech and sycamore, over ash, oak and elm (Table 2).

- Age and growth structure alters as drier summers lead to loss of seeding regeneration and establishment, while warmer and drier summers coupled with increased frequency of winter gales increases mortality of older trees.

With 2025 being one of the warmest and driest summers recorded, the impacts of drought stress were visible during summer surveys. This included leaf browning and dropping (physiological impact) and premature wilting of ground flora (physical impact). This is likely to affect plant growth and productivity, as well as increase susceptibility to pests.

Potential measures to increase woodland resilience to climate change impacts such as drought are therefore included in the Woodland Management Plan, with the predicted changes in tree species suitability in Southeast England shown in Table 2.

Table 2. Changes in tree species suitability in Southeast England for low and high emissions scenarios, taken from Forest Research's *Climate change: impacts and adaptation in England's woodlands* (Ray, et al., 2010)

Tree species	Southeast England				Conifers	Baseline	2050 (L)	2050 (H)	2080 (H)
	Baseline	2050 (L)	2050 (H)	2080 (H)		Baseline	2050 (L)	2050 (H)	2080 (H)
Broadleaves					Conifers				
Alder					Corsican pine				
Ash					Douglas fir				
Beech					European larch				
Downy birch					Japanese larch				
Pendunculate oak					Norway spruce				
Poplar					Scots pine				
Rauli					Sitka spruce				
Roble					Western hemlock				
Silver birch					Grand fir				
Sessile oak					Lodgepole pine				
Sweet chestnut					Noble fir				
Sycamore					Red cedar				
Wild cherry									
Aspen									
Norway maple									
Wych elm									

Very suitable
 Suitable
 Marginal
 Unsuitable

3. Woodland Management Plan

3.1. Vision

The woodlands on the Canterbury Campus will be sustainably managed to create structurally diverse habitats that conserve ancient woodland features, enhance biodiversity, and increase resilience to environmental change. They will also serve as a valuable resource for education, research, community engagement, and the wellbeing of students and staff at the University of Kent.

3.2. Objectives

Based on this vision and the results of the woodland surveys undertaken, the following key objectives have been defined for this management plan:

1. Improve woodland structural diversity through continued implementation and management of coppicing, selective thinning, and potential ride or glade creation.
2. Reduce the extent and impact of invasive plant species (particularly rhododendron and cherry laurel) through targeted control measures.
3. Restore and manage woodland ponds to improve their ecological value.
4. Support and expand the use of the woodlands as an educational resource.
5. Promote woodland use to support mental and physical wellbeing and community engagement through thoughtful infrastructure and outreach events.
6. Enhance the diversity and cover of native ground flora by reducing shading, minimising disturbance, and where appropriate, encouraging natural regeneration or enrichment planting.
7. Increase resilience to environmental change, including climate change, pests, and diseases.

A plan outlining the actions required, their timing and frequency, relevant locations for deployment, and suitable monitoring and evaluation is presented below. Responsibility for each objective has also been suggested. This includes the UoK's Landscape and Grounds Team, Sustainability Team, Conservation Society, Biodiversity Working Group, DICE, and external contractors.

The plan is followed by referenced explanations of actions which were considered to require more detailed information.

3.3. Woodland action plan (2025-2035)

Objective	Action	Timing and frequency	Relevant locations	Responsibility	Suggested monitoring
1. Improve woodland structural diversity	a) Continue rotational coppicing in selected coupes and undertake enrichment planting where required b) Undertake selective thinning to create gaps for regeneration in high forest areas c) Create and manage rides, glades and woodland edges to maintain open, sunny areas and graded boundaries d) Maintain deadwood habitats	Coppicing: annually in designated coupes Thinning: 5-10 year cycle Rides/glades: mow/clear on 2-3 yr cycle	a) As per Appendix A b) Areas with no regeneration and not managed as coppice (e.g. plantations in Bluebell Wood) c) Selected tracks and woodland edges d) Throughout	External contractor Landscape and Grounds Team	Maintain records of coppicing and thinning activity per coupe. Ongoing. Assess canopy cover and understorey development as part of updated WCA. Every 3 years.
2. Control invasive plant species	a) Map and prioritise invasive hotspots (especially of rhododendron, cherry laurel) b) Remove by cutting, stump treatment, or excavation c) Consider management of other potentially problematic species d) Follow up with annual monitoring and spot treatments to prevent regrowth	Initial clearance in Y1-3 Follow-up annually (Y4-10)	All woodlands except Brotherhood For dense bracken, mainly Bluebell Wood	Conservation Society External contractor during coppicing Landscape and Grounds Team	Maintain records of invasive species control. Ongoing.
3. Restore and manage woodland ponds	a) Desilt selected ponds where necessary b) Remove excessive scrub/shading from pond edges c) Create varied pond margins (gradual slopes, log piles) and plant suitable vegetation for water quality maintenance e) Control invasive aquatic plants	Restoration in Y1-3 Ongoing maintenance every 2-3 years	See existing pond plans	Landscape and Grounds Team External contractor for desilting (3a)	Assess regeneration and ground flora as part of updated WCA. Every 3 years.

4. Expand educational use	<ul style="list-style-type: none"> a) Continue annual public engagement events (walks, talks) through Bioblitz b) Continue and encourage further use by university courses, schools, and community groups d) Develop interpretation boards and digital resources, linked with QR codes e) Provide regular updates in the UoK Staff Newsletter and on social media channels 	<p>Resources developed in Y1–3</p> <p>Educational use ongoing, public events annually</p>	All woodlands, except Giles Lane	<p>Biodiversity Working Group</p> <p>Sustainability Team</p> <p>Landscape and Grounds Team</p> <p>Durrell Institute of Conservation and Ecology</p>	<p>Maintain records of public events, campus-based student projects, and media posts. Ongoing.</p> <p>Gather feedback through surveys. After each public event.</p>
5. Promote use for wellbeing and outreach	<ul style="list-style-type: none"> a) Create trails with waymarking and signs to guide visitors on woodland walks b) Install natural-style benches and rest areas in less ecologically sensitive zones c) Host guided walks and volunteer days d) Explore potential research collaborations on wellbeing benefits of natural environments 	<p>Infrastructure installed in Y2-3</p> <p>Events periodically throughout period</p> <p>Suggest student projects annually</p>	All woodlands, except Giles Lane	<p>Conservation Society</p> <p>Biodiversity Working Group</p> <p>Durrell Institute of Conservation and Ecology</p>	<p>Visual inspection of trails. Annually.</p> <p>Maintain records of new infrastructure established. Ongoing.</p>
6. Enhance native ground flora	<ul style="list-style-type: none"> a) Reduce shading by coppicing and thinning b) Minimise trampling via path management/signage e) Introduce competition and disturbance in certain monoculture areas (e.g. of bracken or ivy) 	<p>Linked to coppice cycles</p> <p>Disturbance in Y3-4 and 7-8</p> <p>Path management ongoing</p>	<ul style="list-style-type: none"> a) As per 2a and 2b b) Link to interpretation boards in 4d 	<p>Landscape and Grounds Team</p> <p>Conservation Society</p>	Assess ground flora and ancient woodland indicator species as part of updated WCA. Every 3 years.
7. Increase resilience to environmental change	<ul style="list-style-type: none"> a) Diversify age structure and species mix b) Retain and protect veteran trees c) Monitor for pests/diseases (ash dieback, oak decline, etc.) d) Trial climate-resilient native species in enrichment planting, potentially linking to student research 	<p>Continuous across plan, in conjunction with actions under objective 1</p> <p>Monitoring annually</p>	<ul style="list-style-type: none"> a-c) All woodlands d) Select locations in or adjacent to woodlands 	<p>Landscape and Grounds Team</p> <p>Sustainability Team</p> <p>Durrell Institute of Conservation and Ecology (6d)</p>	<p>Assess woodland structure, pests and disease in WCA. Every 3 years.</p> <p>Map veteran trees. Baseline Y1, condition every 5 years.</p> <p>Survival of new planting. Annually.</p>

3.4. Supporting information for woodland actions

1. Improve woodland structural diversity

Many of the actions proposed under Objective 1 (and Objective 3) relate to creating or maintaining open and edge habitats in the woodlands. This helps increase biodiversity by providing supporting habitats for both woodland specialists and non-woodland specialists (Harmer, et al., 2010). Such areas can be permanent or temporary, with a summary shown in Table 3.

Table 3. Examples of relevant open and edge habitats in woodland and relevant actions from this Woodland Management Plan (adapted from Harmer, et al., 2010)

Type	Open areas	Edge habitats
Temporary	Coppice (1a.) Thinning (1b.)	Coppice (1a.) Thinning (1b.) Ride widening (1c.)
Permanent	Ponds and wet areas (3) Tracks and rides (1c.)	Ponds and wet areas (3) Tracks and rides (1c.) Graded woodland edges (1c.)

Expanded actions:

- a) Continue rotational coppicing, as first defined in the 2016 Woodland Management Plan and detailed in Appendix A. Inspect stools for regrowth and replace with new planting if required.
 - i. It is understood that coppicing may be externally contracted. This should still be undertaken with reference to the UoK's specification document and in conversation with the Landscape and Grounds Team to ensure ecological sensitivity.
 - ii. During coppicing works, invasive species sighted should be responsibly removed.
- b) Selectively thin trees to reduce density and create more habitat diversity in high forest areas (stands of trees grown to maturity and not managed as coppice).
- c) Create and manage rides, glades and woodland edges to maintain open, sunny areas and graded boundaries. This can be achieved by heavier thinning in defined areas to create glades and small gaps.
- d) Maintain a variety of deadwood habitats including large branches on living trees, standing dead trees, and fallen wood on the ground. Focus on provision of large pieces of deadwood and form in clumps in dappled or partial shade rather than scattered evenly. Further guidelines here: (Forestry Commission, 2008).

2. Control invasive plant species

Non-native invasive species are species that have been introduced to an area and cause detrimental impacts. In a woodland context, the invasives highlighted in this report (e.g.

rhododendron and cherry laurel) outcompete native plants with knock-on effects on the species they support, and should therefore be controlled. The UK Government has a list of invasive non-native (alien) plant species in England and Wales for which legal restrictions apply (Defra, 2020).

Other species – both native and non-native – can also have negative transformative effects. Within the campus woodlands this includes sycamore and bramble. Their management may be considered in certain areas, such as areas where their rapid growth following coppicing inhibits the regeneration of other species.

Expanded actions:

- a) Map and prioritise hotspots of invasive species (especially of rhododendron, cherry laurel) by undertaking a walkover survey and documenting this e.g. in the campus sensitivity map.
- b) Undertake clearance using cut-and-paint, stump treatment, or mechanical removal depending on scale and dispose of vegetation responsibly. All relevant UK Government requirements must be complied with (Defra, 2020).
- c) Consider management of other potentially problematic species such as sycamore, bramble and bracken. While bramble is a common and important native species, its growth following canopy opening can inhibit regeneration of trees and suppress ground flora. Control measures include cutting and pulling.
- d) Follow up with annual monitoring and spot treatments to prevent regrowth. Re-establish cleared areas with natural regeneration or enrichment planting of native shrubs (e.g. hazel, hawthorn, holly).

3. Restore and manage woodland ponds

Woodland ponds can support a wide variety of plant and animal species and add structural diversity. Ponds are present in Park Wood and Bluebell Wood, some with records of great crested newts. However, they are not in a good condition to be wildlife rich. Several actions for their improvement are suggested here, and should be built on using the concurrent pond management efforts being undertaken at the UoK, as outlined in the draft Landscape and Biodiversity Strategy 2025-2025. The Freshwater Habitats Trust is a useful source of more detailed information on pond management (Freshwater Habitats Trust, undated).

- a) Desilt selected ponds where succession has reduced open water, ensuring part of pond remains undisturbed.
- b) Remove excessive scrub and overhanging trees to increase light while retaining some shade for balance.
- c) Create varied pond margins (gradual slopes, log piles) and plant suitable native vegetation for water quality maintenance. Install log piles, marginal vegetation, and deadwood for invertebrates and amphibians.

- d) Control invasive aquatic plants if present. All relevant UK Government requirements must be complied with (Defra, 2020).

4. Expand educational use

Woodlands on the Canterbury Campus are used by a wide range of people. As such, they provide a valuable opportunity for the engagement of University staff, students, and members of the public on wildlife and other relevant topics. Responsibility for the actions which fall under this objective is relevant to all parties in the Biodiversity Working Group.

- a) Continue annual public engagement events (walks, talks) through Bioblitz, in collaboration with DICE and other members of the Biodiversity Working Group.
- b) Continue and encourage further responsible use by university courses, schools, and community groups.
- c) Develop interpretation boards and digital resources, linked with QR codes. This can be designed to serve both an educational purpose (e.g. highlighting certain species) and practical (e.g. indicating routes to minimise trampling as per 5b).
- d) Provide regular updates in the UoK Staff Newsletter and on social media channels. This is likely to be primarily led by the Landscape and Grounds Team to provide contextual information on relevant work the team does across seasons.

5. Promote use for wellbeing and outreach

Time in nature can have a range of impacts on people, with research undertaken at DICE highlighting the wellbeing benefits of woodlands. As a valued asset for students, staff, and the local community, the Campus woodlands can further enhance its wellbeing impacts through actions such as creating thoughtful infrastructure and outreach opportunities.

- a) Trails of varying lengths can be designed with waymarking and signs to guide visitors on woodland walks. This would also serve the purpose of discouraging trampling from veering off paths (6b). Addition of waymarking and interpretive signage would link to other objectives (4c).
- b) Install natural-style benches and rest areas in less ecologically sensitive zones to allow visitors to spend more time in the woodlands.
- c) Host guided wellbeing walks in the woodlands and volunteer days. The latter could be led by the Conservation Society and linked to undertaking actions required as part of this plan (e.g. invasive species control, 2b).
- d) Explore potential research collaborations on wellbeing benefits of natural environments, especially through offering student projects at DICE.

6. Enhance native ground flora

It is likely that actions under Objective 1 will result in improved light and soil moisture that will improve the overall growth of ground flora. However, in addition to coppicing and thinning, additional actions may be considered to encourage greater establishment and diversity of ground flora. In ancient woodland, it is not considered necessary to introduce ground flora through planting as recolonisation should occur readily with the correct management (Kirby, undated), but if done should use local provenance seeds.

- a) Reduce shading in areas with suppressed ground flora by thinning and coppicing. While coppicing involves cutting trees to the stool, thinning focuses on selective removal of stems, with both having the effect of allowing more light to reach the ground.
- b) Minimise trampling of ground flora by clear path routing and signage where appropriate.
- c) In certain areas, just one or two species may dominate the ground flora.
 - i. This is not always undesirable (e.g. bluebells and wood anemone swaths are encouraged). However, in certain areas where species such as bracken, bramble or ivy dominate, disturbance can help allow opportunities for other species to emerge
 - ii. Disturbance activity should cause physical damage to the targeted plants and expose mineral soils. This should be limited to a maximum of 40% disturbed ground within the targeted area
 - iii. Bear in mind that some of the ground may have been bare soil or just litter-covered and take care not to damage any special plants

7. Increase resilience to environmental change

The impacts of climate change are already being seen in Kent and are projected to continue with temperature increases, lower summer rainfall, increased risk of heavier showers and flooding, and increased storm frequency and wind speeds. This will affect all woodland types, creating risks such as from pests and diseases, windthrow, drought stress, with knock-on effects on overall vegetation community structure. It is therefore important to consider climate change in the management of ancient and native woodland and form contingency plans to deal with impacts

- a) Diversify age structure through thinning and coppicing and diversify species mix of native and climate-resilient options through enrichment planting (see Table 2).
 - i. Further guidelines: (Ray, et al., 2010) and (Berry, et al., 2020).
- b) Identify and record veteran trees to retain and monitor them. Generally, it is best not to actively manage such trees, but in certain circumstances actions may be beneficial e.g. halo-thinning, establishing fencing to protect from trampling.
 - i. Further guidelines here: (Natural England, 2000)

- c) Monitor for pests/diseases (ash dieback, oak decline, etc.) and adapt management accordingly.
 - i. Forest Research have a list of resources that provide guidance on specific diseases: (Forest Research, undated)
- d) It is recommended that woodland planting continues to focus on native species. However, choices could focus on species anticipated to remain suitable in the area under projected climate change scenarios. In addition, small-scale trials of seeds with potentially more climate-resilient provenance can be considered.
- e) Based on predicted climate scenarios on Campus, the Ecological Site Classification (ESC) tool, and Table 2:
 - i. Native and naturalised species likely to be ecologically suitable are: pedunculate oak, sessile oak, wild service tree, hornbeam, small-leaved lime, holly, certain willows, sweet chestnut, Norway maple; and Scots pine.
 - ii. While some of these species are already abundant in campus woodlands, others (e.g. wild service tree, small-leaved lime, Scots pine) have either have only a few individual records, or are not known to be present and may therefore be considered. NB: Scots pine is not native in SE England.
 - iii. Native species which are present in campus woodlands, but are anticipated to decrease in suitability under projected changes are: silver birch, beech, and ash.
 - iv. As these are all relatively abundant in campus woodland canopies, passive measures to decrease their presence could begin to be considered.

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Appendix

A. Coppicing rotation plan and progress

Academic year	Brotherhood Wood	Park Wood	Bluebell Wood	
2014/15	3 & 5*			
2015/16	Mark out coupes		9, 3 & 4	
2016/17	10	Mark out coupes		
2017/18		10		
2018/19	9			
2019/20	9	12		
2020/21	8		5 & 8	
2021/22		13		
2022/23	5			
2023/24		8		
2024/25	7			
2025/26		9	9, 3 & 4	
2026/27	3			
2027/28		6		
2028/29	1			
2029/30		5		
2030/31	6		5 & 8	
2031/32		7		Coupe complete
2032/33	4			Partially complete
2033/34		4		Not coppiced

B. List of plant species recorded during woodland surveys

Family	Species	Common name	Notes	Bluebell Wood	Brotherhood Wood	Giles Lane	Park Wood
Adoxaceae	<i>Sambucus nigra</i>	Elder		Y	Y	Y	Y
Adoxaceae	<i>Viburnum opulus</i>	Guelder-rose	AWI*	N	Y	N	Y
Adoxaceae	<i>Viburnum rhytidophyllum</i>	Wrinkled Viburnum	Non-native	N	Y	N	N
Apiaceae	<i>Anthriscus sylvestris</i>	Cow Parsley		Y	N	N	N
Apiaceae	<i>Conopodium majus</i>	Pignut	AWI	N	Y	N	N
Apocynaceae	<i>Vinca major</i>	Greater Periwinkle	Non-native	N	N	N	Y
Apocynaceae	<i>Vinca minor</i>	Lesser Periwinkle	Non-native	Y	N	N	N
Aquifoliaceae	<i>Ilex aquifolium</i>	Holly	AWI*	Y	Y	Y	Y
Araceae	<i>Arum maculatum</i>	Lords-and-Ladies		Y	Y	Y	Y
Araliaceae	<i>Hedera helix</i>	Common Ivy		Y	Y	N	Y
Asparagaceae	<i>Hyacinthoides non-scripta</i>	Bluebell	AWI; WACA 1981 Sch8	Y	Y	Y	Y
Asparagaceae	<i>Ruscus aculeatus</i>	Butcher's-broom	AWI	Y	N	N	N

Asteraceae	<i>Cirsium arvense</i>	Creeping Thistle		N	Y	N	Y
Asteraceae	<i>Cirsium eriophorum</i>	Woolly Thistle		N	Y	N	N
Asteraceae	<i>Cirsium vulgare</i>	Spear Thistle		N	N	N	Y
Asteraceae	<i>Jacobaea vulgaris</i>	Common Ragwort		Y	Y	N	N
Asteraceae	<i>Taraxacum officinale</i>	Dandelion		N	Y	N	N
Athyriaceae	<i>Athyrium filix-femina</i>	Lady-fern		N	Y	N	N
Betulaceae	<i>Alnus glutinosa</i>	Alder	AWI*	N	N	N	Y
Betulaceae	<i>Betula pendula</i>	Silver Birch		Y	Y	Y	Y
Betulaceae	<i>Carpinus betulus</i>	Hornbeam	AWI	Y	Y	Y	Y
Betulaceae	<i>Corylus avellana</i>	Hazel		Y	Y	Y	Y
Brassicaceae	<i>Cardamine pratensis</i>	Cuckooflower; Lady's Smock		Y	N	N	N
Caprifoliaceae	<i>Lonicera periclymenum</i>	Honeysuckle		Y	Y	Y	Y
Caprifoliaceae	<i>Symphoricarpos albus</i>	Snowberry	Non-native invasive	N	Y	N	N
Caryophyllaceae	<i>Silene dioica</i>	Red Campion		Y	N	N	Y
Caryophyllaceae	<i>Stellaria holostea</i>	Greater Stitchwort		Y	Y	N	N
Convolvulaceae	<i>Convolvulus arvensis</i>	Field Bindweed		Y	N	N	N
Cornaceae	<i>Cornus sanguinea</i>	Dogwood		Y	N	N	N
Cyperaceae	<i>Carex pendula</i>	Pendulous Sedge	AWI*	Y	Y	N	Y
Cyperaceae	<i>Carex remota</i>	Remote Sedge	AWI	Y	N	N	N
Cyperaceae	<i>Carex sylvatica</i>	Wood-sedge	AWI	Y	N	N	Y
Dennstaedtiaceae	<i>Pteridium aquilinum</i>	Bracken		Y	Y	N	Y
Dioscoreaceae	<i>Dioscorea communis</i>	Black Bryony	AWI	Y	Y	N	N
Dryopteridaceae	<i>Dryopteris filix-mas</i>	Male-ferns		Y	Y	N	N
Euphorbiaceae	<i>Euphorbia amygdaloides</i>	Wood Spurge	AWI	N	Y	N	Y
Fabaceae	<i>Cytisus scoparius</i>	Broom		Y	N	N	N
Fagaceae	<i>Castanea sativa</i>	Sweet Chestnut	Non-native	Y	Y	Y	Y
Fagaceae	<i>Fagus sylvatica</i>	Beech		Y	Y	Y	Y
Fagaceae	<i>Fagus sylvatica 'Purpurea'</i>	Copper Beech	Non-native cultivar	N	Y	N	N
Fagaceae	<i>Quercus petraea</i>	Sessile Oak	AWI*	N	Y	Y	N
Fagaceae	<i>Quercus robur</i>	Pedunculate Oak		Y	Y	Y	Y
Geraniaceae	<i>Geranium robertianum</i>	Herb-Robert		Y	Y	N	N

Gunneraceae	<i>Gunnera tinctoria</i>	Giant-rhubarb	Non-native invasive	Y	N	N	N
Hypericaceae	<i>Hypericum androsaemum</i>	Tutsan	AWI	Y	N	N	Y
Hypericaceae	<i>Hypericum pulchrum</i>	Slender St John's-wort	AWI	N	Y	N	N
Iridaceae	<i>Iris pseudacorus</i>	Yellow Iris; Yellow Flag Iris		Y	N	N	Y
Juncaceae	<i>Juncus inflexus</i>	Hard Rush		N	N	N	Y
Lamiaceae	<i>Ajuga reptans</i>	Bugle		Y	Y	N	Y
Lamiaceae	<i>Lamium galeobdolon</i>	Yellow archangel	AWI	N	Y	N	N
Lamiaceae	<i>Lycopus europaeus</i>	Gypsywort		Y	N	N	N
Lamiaceae	<i>Prunella vulgaris</i>	Selfheal		Y	N	N	N
Lamiaceae	<i>Stachys sylvatica</i>	Hedge Woundwort		N	Y	N	N
Lamiaceae	<i>Teucrium scorodonia</i>	Wood Sage		Y	N	N	Y
Malvaceae	<i>Tilia cordata</i>	Small-leaved Lime	AWI*	N	Y	N	N
Oleaceae	<i>Fraxinus excelsior</i>	Ash		Y	Y	Y	Y
Oleaceae	<i>Ligustrum vulgare</i>	Wild Privet		Y	N	N	N
Onagraceae	<i>Circaea lutetiana</i>	Enchanter's-nightshade	AWI	N	Y	N	N
Orobanchaceae	<i>Melampyrum pratense</i>	Common Cow-wheat	AWI	N	Y	N	N
Poaceae	<i>Alopecurus pratensis</i>	Meadow Foxtail		Y	N	N	N
Poaceae	<i>Dactylis glomerata</i>	Cock's-foot		Y	N	N	N
Poaceae	<i>Holcus lanatus</i>	Yorkshire-fog		Y	N	N	N
Poaceae	<i>Melica uniflora</i>	Wood Melick	AWI	N	Y	N	N
Poaceae	<i>Poa annua</i>	Annual Meadow-grass		N	Y	N	N
Poaceae	<i>Poa trivialis</i>	Rough Meadow-grass		Y	N	N	N
Polygonaceae	<i>Rumex acetosa</i>	Common Sorrel		Y	N	N	N
Polygonaceae	<i>Rumex conglomeratus</i>	Clustered Dock		Y	Y	N	N
Polygonaceae	<i>Rumex sanguineus</i>	Wood Dock		Y	Y	Y	Y
Primulaceae	<i>Lysimachia nemorum</i>	Yellow Pimpernel	AWI	Y	Y	N	N
Ranunculaceae	<i>Anemone nemorosa</i>	Wood Anemone	AWI	Y	Y	Y	Y
Ranunculaceae	<i>Ranunculus acris</i>	Meadow Buttercup		Y	N	N	N
Ranunculaceae	<i>Ranunculus ficaria</i>	Lesser Celandine		N	N	N	Y

Ranunculaceae	<i>Ranunculus repens</i>	Creeping Buttercup		Y	Y	Y	N
Rhamnaceae	<i>Frangula alnus</i>	Alder Buckthorn	AWI	N	Y	N	N
Rhododendron	<i>Rhododendron sp.</i>	Rhododendron	Non-native invasive	Y	N	Y	N
Rosaceae	<i>Cotoneaster simonsii</i>	Himalayan Cotoneaster	Non-native	N	N	N	Y
Rosaceae	<i>Crataegus monogyna</i>	Hawthorn		Y	Y	Y	Y
Rosaceae	<i>Geum urbanum</i>	Wood Avens		Y	Y	N	Y
Rosaceae	<i>Malus sylvestris</i>	Crab Apples	AWI*	Y	Y	N	Y
Rosaceae	<i>Prunus avium</i>	Wild Cherry	AWI*	Y	Y	Y	Y
Rosaceae	<i>Prunus laurocerasus</i>	Cherry Laurel	Non-native invasive	Y	N	Y	Y
Rosaceae	<i>Prunus lusitanica</i>	Portugal Laurel	Non-native	N	N	Y	N
Rosaceae	<i>Prunus spinosa</i>	Blackthorn		N	N	Y	N
Rosaceae	<i>Rosa arvensis</i>	Field-rose	AWI*	N	Y	N	N
Rosaceae	<i>Rosa canina</i>	Dog-rose		Y	Y	Y	Y
Rosaceae	<i>Rubus fruticosus</i>	Brambles		Y	Y	Y	Y
Rosaceae	<i>Sorbus aucuparia</i>	Rowan	AWI*	N	Y	Y	Y
Rubiaceae	<i>Galium aparine</i>	Cleavers		Y	Y	Y	N
Salicaceae	<i>Populus tremula</i>	Aspen	AWI	N	Y	N	Y
Salicaceae	<i>Salix alba</i>	White Willow	Non-native	Y	N	N	N
Salicaceae	<i>Salix aurita</i>	Eared Willow		N	N	N	Y
Salicaceae	<i>Salix caprea</i>	Goat Willow		Y	N	N	Y
Salicaceae	<i>Salix cinerea</i>	Grey Willows		N	N	N	Y
Salicaceae	<i>Salix fragilis</i>	Crack-willow	Non-native	Y	N	N	N
Sapindaceae	<i>Acer campestre</i>	Field Maple	AWI*	Y	Y	N	Y
Sapindaceae	<i>Acer platanoides</i>	Norway Maple	Non-native	Y	Y	N	Y
Sapindaceae	<i>Acer pseudoplatanus</i>	Sycamore	Non-native	Y	Y	Y	Y
Sapindaceae	<i>Aesculus hippocastanum</i>	Horse-chestnut	Non-native	Y	N	Y	N
Scrophulariaceae	<i>Scrophularia nodosa</i>	Common Figwort	AWI	Y	Y	N	Y
Solanaceae	<i>Solanum dulcamara</i>	Bittersweet		N	Y	N	N
Taxaceae	<i>Taxus baccata</i>	Yew		N	N	Y	Y
Ulmaceae	<i>Ulmus minor</i>	English elm		N	N	Y	N
Urticaceae	<i>Urtica dioica</i>	Common Nettle		Y	N	Y	Y
Veronicaceae	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell		Y	N	N	N
Violaceae	<i>Viola reichenbachiana</i>	Early Dog-violet	AWI	Y	N	N	N
Total ancient woodland indicator species				15	24	7	15

Non-native status based on BSBI, 2025; invasive species based on Forestry Commission, et al, 2024 and Defra, 2024. Ancient woodland indicators (AWI) defined according to Kent Wildlife Trust, 2022 and Sansum, et al., 2009.

* these species are only considered AWI when they occur well within a wood and do not appear to have been planted

C. Designated species with records on Canterbury Campus

All species observations since 2015 on the Canterbury Campus were downloaded from the Global Biodiversity Information Facility (GBIF, 2025). These were filtered for species listed on The Conservation of Habitats and Species Regulations 2010 (Schedule 2, 4 and 5) and The Wildlife and Countryside Act 1981 (Schedule 1, 5 and 8) (JNCC, 2023), with records which were located within the woodlands indicated below.

Species	Common name	Designation	Bluebell Woods	Brotherhood Wood	Giles Lane Wood	Park Wood
<i>Ichthyaetus melanocephalus</i>	Mediterranean gull	WACA-Sch1_part1	N	N	N	N
<i>Milvus milvus</i>	Red kite	WACA-Sch1_part1	N	N	N	N
<i>Phoenicurus ochruros</i>	Black redstart	WACA-Sch1_part1	N	N	N	N
<i>Regulus ignicapilla</i>	Common firecrest	WACA-Sch1_part1	Y	N	N	N
<i>Tringa ochropus</i>	Green sandpiper	WACA-Sch1_part1	N	N	N	N
<i>Turdus iliacus</i>	Redwing	WACA-Sch1_part1	N	Y	N	N
<i>Turdus pilaris</i>	Fieldfare	WACA-Sch1_part1	N	N	N	N
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	HabReg-Sch2 WACA-Sch5_sect9.4b Sch5_sect9.5a Sch5_sect9.4c	N	N	N	N
<i>Triturus cristatus</i>	Great crested newt	HabReg-Sch2 WACA-Sch5_sect9.4b Sch5_sect9.5a Sch5_sect9.4c	Y	N	N	Y
<i>Bufo bufo</i>	Common toad	WACA-Sch5_sect9.5a	N	N	N	Y
<i>Lissotriton helveticus</i>	Palmate newt	WACA-Sch5_sect9.5a	Y	N	N	Y
<i>Lissotriton vulgaris</i>	Smooth newt	WACA-Sch5_sect9.5a	Y	N	N	N
<i>Rana temporaria</i>	Common frog	WACA-Sch5_sect9.5a	N	N	N	Y
<i>Hyacinthoides non-scripta</i>	Bluebell	WACA-Sch8	Y	Y	N	N

Overview of Wildlife and Countryside Act 1981

Protection	Relevant schedule
Birds All naturally occurring wild birds in Great Britain are protected from persecution. It is illegal to kill, injure or 'take' any wild bird, take or damage the nest of any wild bird whilst in use or being built. The eggs of all wild birds are also protected.	Schedules 1 – 4
Birds which are protected by special penalties The birds listed in Schedule 1 are further protected by Special Penalties all year round for those in Part 1 and during a specified closed season for those listed in Part 2.	Schedule 1
Birds which may be killed or taken	Schedule 2
Birds which may be sold	Schedule 3
Birds which must be registered and ringed if kept in captivity	Schedule 4
Animals which are Protected	Schedule 5 & 6
Animals which are protected Schedule 5 lists Animal Species that are protected under Section 9 which prohibits their intentional killing, injuring or taking, and prohibits their possession and the trade.	Schedule 5
Animals which may not be killed or taken by certain methods	Schedule 6
Plants which are protected	Schedule 8
Plants which are protected from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).	Schedule 8
Species Established in the Wild	Schedule 9
Animals which are established in the wild	Schedule 9 Part 1
Plants which are established in the wild	Schedule 9 Part 2