Woodland Management Plan

To be completed by the plan author:		
Woodland or Property name	**Mardley Heath**	
Woodland Management Plan case reference	**1895492**	
The landowner agrees this plan as a statement of intent for the woodland		**Yes**
Plan author name		

For FC Use only:				
Plan Period *(dd/mm/yyyy - Ten years)*	**Approval Date:**		**Approved until:**	
Five Year Review Date				

Revision No.	Date	Status (draft/final)	Reason for Revision

Template user support:

The functionality in this version of the management plan template has been downgraded to ensure compatibility with Word 2003. This document is not protected and as such rows can be added and deleted or copied and pasted from tables where needed.

UK Forestry Standard management planning criteria

Approval of this plan will be considered against the following UKFS criteria.
Prior to submission review your plan against the criteria using the check list below.

	UKFS management plan criteria	Minimum approval requirements	Author check ☑
1	**Plan Objectives:** Forest management plans should state the objectives of management and set out how an appropriate balance between social, economic, and environmental objectives will be achieved.	• Management plan objectives are stated. • Consideration is given to environmental, economic and social objectives relevant to the vision for the woodland.	Yes
2	**Forest context and important features in management strategy:** Forest management plans should address the forest context and the forest potential and demonstrate how the relevant interests and issues have been considered and addressed.	Management intentions communicated in ***Sect. 6*** of the management plan are in line with stated objective(s) ***Sect. 2***. Management intentions should take account of: • Relevant features and issues identified within the woodland survey (***Sect. 4***) • Any potential threats to and opportunities for the woodland, as identified under woodland protection (***Sect. 5***). • Relevant comments received from stakeholder engagement and documented in ***Sect. 7***.	Yes
3	**Identification of designations within and surrounding the site:** For designated areas, e.g. National Parks or SSSI, particular account should be taken of landscape and other sensitivities in the design of forests and forest infrastructure.	• Survey information (***Sect. 4***) identifies any designations that impact on woodland management. • Management intentions (***Sect. 6***) have taken account of any designations.	Yes
4	**Felling and restocking to improve forest structure and diversity:** When planning felling and restocking, the design of existing forests should be re-assessed and any necessary changes made so that they meet UKFS requirements. Forests should be designed to achieve a diverse structure of habitat, species and ages of trees, appropriate to the scale and context. Forests characterised by a lack of diversity, due to extensive areas of even-aged trees, should be progressively restructured to achieve age class range.	• Felling and restocking proposals are consistent with UKFS design principles (for example scale and adjacency). • Current diversity (structure, species, age structure) of the woodland has been identified through the survey (***Sect. 4***). • Management intentions aim to improve / maintain current diversity (structure, species, and ages of trees).	Yes
5	**Consultation:** Consultation on forest management plans and proposals should be carried out according to forestry authority procedures and, where required, the Environmental Impact Assessment Regulations.	• Stakeholder engagement is in line with current FC guidance and recorded in ***Sect. 7***. The minimum requirement is for statutory consultation to take place, and this will be carried out by the Forestry Commission. • Plan authors undertake stakeholder engagement (ref FC Ops Note 35) relevant to the context and setting of the woodland.	Yes
6	**Plan Update and Review:** Management of the forest should conform to the plan, and the plan should be updated to ensure it is current and relevant.	• A 5 year review period is stated on the 1st page of the plan. • ***Sect. 8*** is completed with 1 indicator of success per management objective.	Yes

Section 1: Property Details

Woodland Property Name		Mardley Heath	
Name	Welwyn Hatfield Borough Council	Owner	
Email		Contact Number	
Agent Name (if applicable)			
Email		Contact Number	
County	Hertfordshire	Local Authority	Welwyn Hatfield Council
Grid Reference (e.g. ST 625 785)	TL 246 182	Single Business Identifier	107142304
What is the total area of this woodland management plan? (In hectares)		40.71	
You have included an Inventory and Plan of Operations with this woodland management plan? (Please use the most up to date version (v4). Older versions may have to be returned.)		Yes	
You have listed the maps associated with this woodland management plan? (PLEASE NOTE: Google Maps/ images of maps will not be accepted because they are copyright protected and should not be used commercially without the appropriate licencing from Google).		1 – Designations 2 – Habitats 3 – Hazards, constraints and public access 4 – Species and stands 5 – Harvesting	
You have sent us your GIS shapefile data? (PLEASE NOTE: this is not mandatory, but it can help speed up the processing time of your application. Instructions on how to submit your shapefile(s) are included on the management plan GOV.UK page.)		Yes	
Do you intend to use the information within this woodland management plan and associated Inventory and Plan of Operations to apply for the following?		Felling Licence	Yes
		Thinning Licence	Yes
		Woodland Regeneration Grant	No

You declare that there is management control of the woodland detailed within the woodland management plan?	Yes
You agree to make the woodland management plan publicly available?	No

Section 2: Vision and Objectives

To develop your long-term vision, you need to express as clearly as possible the overall direction of management for the woodland(s) and how you envisage it will be in the future. This covers the duration of the plan and beyond.

2.1 Vision

Describe your long-term vision for the woodland(s). (*Suggest 300 words max*)

Mardley Heath will remain a vibrant mosaic of wooded and open habitats, where biodiversity thrives and the public enjoys a welcoming, safe, and inclusive recreational experience. Accessible, well-marked permissive trails and rights-of-way, complete with seating areas, will allow visitors of all abilities to appreciate the woodland's beauty throughout the year.

The ancient woodlands and wood pasture features will be preserved and maintained using traditional management techniques such as coppicing, pollarding, thinning, and the control of invasive species. These practices will ensure the long-term health and character of the site.

The former gravel extraction areas will continue transitioning into diverse broadleaf woodlands, dominated by oak and featuring large-crowned, stable trees that echo the wood pasture heritage of the site. Proactive management of young trees and natural regeneration will support this evolution.

Habitat diversity will be further enhanced by the management of glades, rides, heathlands, grasslands, and ponds. These habitats will sustain a wide array of locally significant wildlife, including rare invertebrates that reflect the site's past as an open wood pasture common.

Woodland products such as woodfuel arising from management operations will be harvested, where ground conditions allow, thus contributing to the local economy and helping to provide a small income to fund woodland conservation.

2.2 Management Objectives

State the objectives of management demonstrating how sustainable forest management is to be achieved. Objectives are a set of specific, quantifiable statements that represent what needs to happen to achieve the long-term vision.

No.	Objectives (include environmental, economic and social considerations)
1	Preserve and enhance the ancient woodlands and historic wood pasture features, ensuring their long-term ecological and cultural value, while promoting structural, age and species diversity in the woodland.
2	Support and guide the evolution of secondary woodland in former gravel extraction areas, fostering diverse and resilient habitats.
3	Protect and enrich the woodland's habitat diversity, including its glades, grasslands, heathlands, and ponds, to sustain a wide range of species.
4	Ensure the woodland remains a safe, welcoming, and inclusive space for public recreation, with accessible trails and amenities for all to enjoy.

Section 3: Plan Review – Achievements

Use this section to identify achievements made against previous plan objectives. This section should be completed at the 5 year review and could be informed through monitoring activities undertaken.

Objectives	Achievement
Preserve and enhance the ancient woodlands and historic wood pasture features, ensuring their long-term ecological and cultural value, while promoting structural, age and species diversity in the woodland.	To be filled in at 5 year midpoint review of 10 year plan.
Support and guide the evolution of secondary woodland in former gravel extraction areas, fostering diverse and resilient habitats.	To be filled in at 5 year midpoint review of 10 year plan.
Protect and enrich the woodland's habitat diversity, including its glades, grasslands, heathlands, and ponds, to sustain a wide range of species.	To be filled in at 5 year midpoint review of 10 year plan.
Ensure the woodland remains a safe, welcoming, and inclusive space for public recreation, with accessible trails and amenities for all to enjoy.	To be filled in at 5 year midpoint review of 10 year plan.

Section 4: Woodland Survey

This section is about collecting information relating to your woodland and its location, including any statutory constraints i.e. designations.

4.1 Description

Brief description of the woodland property:

Location

Mardley Heath is located in central Hertfordshire, near Welwyn Garden City. The A1(M) motorway abuts the wood at its west end, the settlement of Oaklands (which was developed on part of the former Welwyn Heath) lies around the south and south west sides with agricultural land to the north and north east.

To the north-west but now severed by the motorway lie other woodlands (including Ninning's Wood) once a historic part of the Heath. To the south-east but now separated by housing is Harmergreen Wood.

Mardley Heath forms a significant wooded backdrop to Oaklands and is prominently visible from the motorway and the London-Edinburgh mainline railway.

The wood is divided into two blocks lying north and south of Heath Road.

History of Management

Until legal enclosure by act of parliament in about 1810, Mardley Heath was unenclosed heathland and wood-pasture common used for pannage for pigs and as a source of timber and wood fuel. The existence of almost 50 hornbeam pollards indicate its former

use for grazing (probably by sheep and cattle). Not long after enclosure, the Heath was planted up and at the time of Bryant's map of 1822, a woodland with boundaries is clearly shown. By the late 19th century, Dolesbury Firs and Pottersheath Plantation are named and shown planted with conifers but the large central area of the modern Mardley Heath is also still clearly indicated as open woodland with many trackways, of which Heath Road is one. There are records of timber extractions and sales.

At some point in the mid-twentieth century, the land was acquired by Wallace-Inns, a gravel company who extracted sand and gravel throughout the central part of the site, leaving a belt of semi-natural woodland around the perimeter. This activity came to end in 1967 when the land was conveyed, un-restored, to the Rural District of Welwyn. In 1974, Welwyn Hatfield District Council acquired the land as a consequence of local government re-organisation. The largest pit on the north side of the site was used for land-fill until 1976 and a block of woodland adjacent to the London Road to the south of the woodland was conveyed to a developer in 1987 for further housing.

By the late 1970s, the open derelict pits and waste ground at Mardley Heath experienced illegal activities such as scramble bikes and 'old bangers', rubbish dumping, fly-tipping, etc. - whilst birch woodland had regenerated across much of the excavated land, creating a wooded 'moonscape' of hills and hollows with patches of open wet and dry grassland, seasonal ponds, bare gravel banks and a network of discrete pathways.

Progressively since the late 1980, small-scale management was carried out to better manage public access and enhance habitats. In the 1990s, the south pit was extended by felling birch and levelling the ground, then populated with heather turves rescued from reservoir refurbishment in Sherrardspark Wood, and seeds obtained from a heathland reserve in Surrey were sown in other areas. Also during the 1990s, a friends group was established which is now a key partner in the care of the site.

From 2000, management has continued to enhance the site by widening several paths, restoring existing pollards and creating new ones (mainly hornbeam and willow) and bringing areas of coppice back into rotation (mostly hornbeam and sweet chestnut). Glades have been managed and enlarged to encourage the regeneration of heathland species, and the former landfill area and other glades have been regularly cut. Two permanent ponds have been created, rhododendron and laurel have been controled while the secondary woodlands on gravel extraction areas have been thinned to promote oak and species diversity. Health and safety tree works have also been routinely undertaken, whilst two trails were created in 2010-2011.

Today, Mardley Heath still demonstrates its origins as a wood pasture common with its oak / hornbeam / sweet chestnut woodland, including coppice and pollards, surrounding a central area where birch, oak, sycamore, sweet chesnut and rowan are now regenerating on land formerly used for sand and gravel extraction.

Remnant heathland is rare in Hertfordshire with only 35 hectares remaining on the county. Much of the former heath at Mardley Heath has already been lost to housing so management to restore and enhance its ecological history is important in a county context.

Geology, soils and hydrology

Mardley Heath lies on the gravels and sands of the Reading beds which in the quarried areas are much disturbed and often exposed in large hummocks. The sands and gravels

overlie the clays and chalk of the London basin. The reserve lies at a general height of 115-120m above sea level but slopes to the south.

The soils are acidic in most of the wood, except in the south-east where chalk is closer to the surface, and more neutral conditions are evident in the vegetation. In the centre of the wood where mineral extraction has taken place, soil layers are very disturbed and there are areas where the sands have been removed down to the underlying clays leading to poorer drainage.

There is no flowing water on the Heath but the disturbed soils have left wet flushes and there are several permanent and seasonal ponds.

Vegetation

The original woodland across the entire site was primarily oak (Q. robur) with hornbeam, sweet chestnut and birch. This remains as a 'fringe' around the perimeter of the reserve and also through the centre, each side of Heath Road. Some of the oak grows as coppice (now mostly over-stored) indicating its past management. In the north-east corner known as Brokers Garden Wood, hornbeam and sweet chestnut grow more densely as coppice with few remaining oak standards, and are regularly coppiced. In the south-west of the wood, stands of mature oak and over-stored sweet chestnut coppice can be found, partly thinned and coppiced in 2024.

In the central southern area, outside the limit of gravel extraction, is a grove of mature beech known by some local residents as 'the cathedral', along with one of the densest concentrations of hornbeam pollards and an enormous beech pollard at the very edge of the pit (another one was recently lost).

Secondary birch woodland with emergent and older oak, sweet chestnut, sycamore and rowan grows in the central parts of each half of the Heath on extremely 'humpy' ground, demonstrating very well the natural woodland succession on disturbed acid soils. Hornbeam is notably scarce in the regeneration. In some areas, the birch is declining as it reaches the end of its natural lifespan (posing safety issues) and it is expected that oak with other broadleaves species will once again gradually form the dominant canopy vegetation.

Conifers are almost absent at Mardley Heath, except some very scattered pines in the eastern part of the southern block.

Much of the site has little under-storey with the exception of the regenerating hornbeam and sweet chestnut coppice areas (although some were already ageing when this management plan was written), but in the tongue of land extending south to the B197 London Road, shrub communities of elder, holly and thorn exist. Honeysuckle and clematis are also found in places throughout the woodland. On the east side of the wood south of Heath Road, distinct areas of mature hawthorn scrub indicate a history of once open grassland on the area named Heath Field on old maps.

Rhododendron and laurel remain, mainly in the south–west of the woodland but also scattered throughout the wood, despite several operations undertaken to remove them. Holly locally forms a very dense understorey, but has also been recently controled.

Heathy vegetation including heather (Calluna), heath speedwell, dog violets, heath bedstraw and rushes with low bramble is regenerating in the north pit beneath a light

canopy of silver birch and goat willow. A further area of heather re-established by planting is located close to the A1(M).

In the more open and sunny south pit, heather flowers well in a mixture with gorse, broom, rosebay, birch, willow and oak scrub, wood sage, heath speedwell, bramble and bracken. Originally re-introduced as turves, the heather has been used as a seed source for the cultivation of new plants for the site, but is now regenerating naturally in more open areas. Another smaller open glade on the south side is underlain by more neutral soil. Black knapweed, wild basil, twayblade and common spotted orchids and bird's-foot trefoil can be found here. Bluebells can also be found in several parts of the wood.

The largest area of open ground lies on the north side and comprises secondary grassland that has colonised imported soil used to cover the landfill site. Species here include teasel, ragwort, rosebay, centaury, St John's wort, creeping thistle, forget-me-not, musk mallow and other species of disturbed ground. This field is maintained by annual silage-cutting to remove nutrients and prevent reversion to scrub.

The site is also important for brambles. With approximately fifty species having been recorded, Mardley Heath is one of the richest sites in Hertfordshire for brambles.

Fauna

The Heath supports a diverse bird population, including woodpeckers (green woodpeckers are regularly seen 'anting' on the landfill area), nuthatch, tree creeper, goldfinches feeding on teasles in the North pit, various tits and summer migrants. Jays are especially common in winter, as are flocks of siskins feeding on birch. Moles, rabbits and grey squirrels are all present but do not appear to have a severe impact. Muntjac deer are rarely seen although they must be present.

Of special importance to the site are at least ten species of solitary 'mining' bees and wasps, attracted by the exposures of sands and gravels and short turf maintained by rabbits. Butterflies are recorded between April and September on a 'transect' walked by members of Friends of Mardley Heath. Purple emperor, silver-washed fritillary and purple hairstreak are woodland specialists that are returning to many woodlands, including the Heath.

Access

The site has open access throughout for pedestrians. There are also statutory public footpaths and bridleways. A multi-user trail suitable for horse-riders and cyclists as well as pedestrians follows the woodland perimeter and a shorter more-or-less level route parallel with Heath Road on its south side provides access suitable for visitors in wheelchairs or with buggies, leading from the car park to a viewing point above the south pit where an interpretative board tells the story of the site. Additional new interpretation boards are also provided at key entrances.

With its history as unenclosed heathland, few of the wood's perimeter boundaries are fenced or hedged, neither is there boundary fencing along Heath Road. This continues to make it very easy to enter the site on trail bikes. An eroded area close to the south pit is still used by BMX bikers. Their activities are not officially condoned so pits and ramps are levelled periodically.

4.2 Information

Use this section to identify features that are both present in your woodland(s) and where required, on land adjacent to your woodland. It may be useful to identify known features on an accompanying map. Woodland information for your property can be found on the Magic website and the Forestry Commission Land Information Search.

Feature	Within Woodland(s)	Cpts	Adjacent to Woodland(s)	Map No
Biodiversity - Designations				
Site of Special Scientific Interest	No	-	No	-
Special Area of Conservation	No	-	No	-
Tree Preservation Order	No	-	Yes	-
Conservation Area	No	-	No	-
Special Protection Area	No	-	No	-
Ramsar Site	No	-	No	-
National Nature Reserve	No	-	No	-
Local Nature Reserve	Yes	all	No	1
National Nature Reserve	No	-	No	-
National Nature Reserve	No	-	No	-
Higher Level Stewardship grant-funded land	No	-	No	-
Priority Habitats	Yes	all	No	2
Other (please Specify): County Wildlife Site designated in 1997	Yes	all	No	1
Notes				

Feature		Within Woodland(s)	Cpts	Map No	Notes
Biodiversity - European Protected Species					
Bat	Species (if known)	Yes	All	-	Not surveyed, although highly likely with presumed roosting sites in all compartments. According to Woodland Wildlife Toolkit, the wood is likely to shelter Barbastelle, Noctule, Soprano Pipistrelle and Brown Long-eared bat. Prior to any felling work, the area should be surveyed from the ground for potential bat roosting sites. If any are seen, the tree, together with its neighbours should be excluded from the work area. The timing of the work in areas of high bat roost potential will be kept to late Summer/ early Autumn to minimise the risk of disturbance.

Dormouse	No	-	-	No records but unlikely to be present due to the absence of significant areas of favourable habitats. Mentioned in the Woodland Wildlife Toolkit.
Great Crested Newt	No	-	-	No records in the ponds.
Otter	No	-	-	
Sand Lizard	No	-	-	
Smooth Snake	No	-	-	
Natterjack Toad	No	-	-	
Biodiversity – Priority Species				
Schedule 1 Birds	Species : ?	-	-	According to NBN Atlas, Turdus pilaris (Schedule 1 bird) has been observed in the wood, although the only record dates back to 1996.
Mammals (Red Squirrel, Water Vole, Pine Marten etc)	No	-	-	
Reptiles (grass snake, adder, common lizard etc)	Yes	-	-	Previous WMP and NBN Atlas mention the presence of Slow worm (section 41 species) in the wood.
Plants	No	-	-	No section 41 vascular plant/bryophyte species present in the wood according to NBN Atlas and previous WMP. Previous WMP mentions that Mardley Heath used to shelter the highest species diversity of Bramble (Rubus) on any site in Herts with over 50 species, although no *Rubus* species are considered as priority species.
Fungi/Lichens	No	-	-	Previous WMP mentions that regular foray lists indicate Marley Heath is one of Herts best woodland sites for lichens, with 45 species recorded in a 2011 lichen survey, but no section 41 species according to NBN Atlas.
Invertebrates (butterflies, moths, beetles etc)	Yes	All	-	Previous WMP mentions rarer woodland species returning in the wood, e.g. Purple Emperor, Purple Hairstreak & Silver-washed fritillary. NBN Atlas mentions observations of several section 41 species of butterflies including White-letter Hairstreak, Small Heath and White Admiral (although some observations are > 10 years ago). Mardley Heath is known to shelter solitary bees/wasps but habitats might become less favourable as exposed soil becomes rare in the gravel extraction

				land, and no observations of section 41 species are recorded in NBN Atlas.
Amphibians (pool frog, common toad)	Yes	All	-	Previous WMP mentions common toad, although not recently confirmed.
Other (please Specify):	No	-	-	
Historic Environment				
Scheduled Monuments	No	-	-	
Unscheduled Monuments	Yes	1.g, 2.d	3	According to the Hertfordshire Historic Environment Record online and Heritage Gateway, two unscheduled archaeological features have been identified at Mardley Heath: - MHT15375 – probable gravel and marl pits, though this record appears to relate to the more recent gravel extraction site. - MHT11757 – the location where a Palaeolithic flint cordate handaxe was discovered, reportedly found in a disused gravel quarry north of Heath Road. - In addition, two small Roman amphorae were recovered in 1908 from a gravel pit in Woolmer Green. Although the precise location was not recorded and the record (MHT4163) is unclear, this find suggests the potential for archaeological remains in the wider area.
Registered Parks and Gardens	No	-	-	
Registered Battlefields	No	-	-	
World Heritage Sites (UNESCO)	No	-	-	
Boundaries and Veteran Trees	Yes	All	-	Presence of veteran pollards (essentially hornbeam, locally willow) throughout the wood. Presence of several woodbanks, and veteran hornbeam coppards along the northern boundary. Limited presence of veteran trees otherwise.
Listed Buildings	No	-	-	
Burial Grounds	No	-	-	

Other (please Specify):	Yes	All	3	Gravel extraction land – "humpy" ground with exposed sands and gravels.
Landscape				
National Character Area (please Specify): 110 - Chilterns				
National Park	No	-	-	
National Landscapes (formerly AONBs)	No	-	-	
Other (please Specify):	No	-	-	Area 133b: Rableyheath Settled Upland - Welwyn Hatfield Landscape Character Assessment (April 2005)
People				
CROW Access	No	-	-	
Public Rights of Way (any)	Yes	All	3	Public bridleways and footpaths.
Common Land	No	-	-	
Other Access Provision	Yes	All	3	Permissive footpaths.
Public Involvement	Yes	All	-	Friends of Mardley Heath volunteer group
Visitor Information	Yes	All	-	Interpretive boards in car park and several locations across the wood.
Public Recreation Facilities	Yes	-	3	Public car park.
Provision of Learning Opportunities	No	-		
Anti-social Behaviour	Yes	All	-	Occasional unauthorised use by BMX bikes, quadbikes, littering, dog fouling.
Other (please Specify):	Yes	-	-	Local scout troop has a meeting hall in the SW corner of site.
Water				
Acid Vulnerable Catchments	No	-	-	
Watercourses	No	-	-	
Lakes	No	-	-	
Ponds	Yes	All	3	Several permanent and seasonal ponds
Other (please Specify):	No	-	-	

4.3 Habitat Types

This section is to consider the habitat types within your woodland(s) that might impact/inform your management decisions. Larger non-wooded areas within your woodland should be classified according to broad habitat type where relevant this information should also help inform your management decisions. Woodlands should be designed to achieve a diverse structure of habitat, species and ages of trees, appropriate to the scale and context of the woodland.

Feature	Within Woodland(s)	Cpts	Map No	Notes
Woodland Habitat Types				
Ancient Semi-Natural Woodland	Yes	All	2	
Planted Ancient Woodland Site (PAWS)	No	-	-	Only very scattered Scots pine in subcpt 2.f.
Semi-natural features in PAWS	No	-	-	
Lowland beech and yew woodland	No	-	-	
Lowland mixed deciduous woodland	Yes	All	2	
Upland mixed ash woods	No	-	-	
Upland Oakwood	No	-	-	
Wet woodland	No	-	-	
Wood-pasture and parkland	Yes	All	-	Former wood pasture features (incl. pollarded hornbeams)
Other (please Specify):	Yes	2	-	Mature hawthorn scrub on former heathy grassland
Non Woodland Habitat Types				
Blanket bog	No	-	-	
Fenland	No	-	-	
Lowland calcareous grassland	No	2	-	small neutral-calcareous glade
Lowland dry acid grassland	No	-	-	
Lowland heath land	Yes	All	-	restored on gravel extraction land
Lowland meadows	No	-	-	
Lowland raised bog	No	-	-	
Rush pasture	No	-	-	
Reed bed	No	-	-	
Wood pasture	Yes	All	-	Pollarded hornbeams
Upland hay meadows	No	-	-	
Upland heath land	No	-	-	

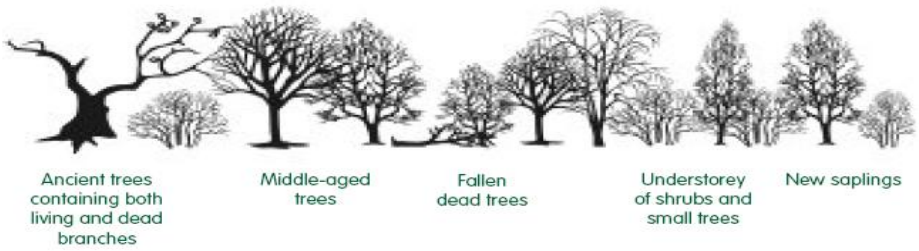
Unimproved grassland	Yes	1	4	grassland established over former tip
Peat lands	No	-	-	
Wetland habitats	No	-	-	
Other (please Specify):	Yes	All	-	Exposed gravel and gravel sand

4.4 Structure

This section should provide a snapshot of the current structure of your woodland as a whole. A full inventory for your woodland(s) can be included in the separate Plan of Operations spreadsheet. Ensuring woodland has a varied structure in terms of age, species, origin and open space will provide a range of benefits for the biodiversity of the woodland and its resilience. The diagrams below show an example of both uneven and even aged woodland.

Woodland Type (Broadleaf, Conifer, Coppice, Intimate Mix)	Percentage of Mgt Plan Area	Age Structure (even/uneven)	Notes (i.e. understory or natural regeneration present)
Woodland not or little affected by gravel extraction works (including ancient woodland)	42%	Mostly uneven	Dominated by oak (standards and overstood coppice), sweet chestnut (overstood and rejuvenated coppice), hornbeam (overstood and rejuvenated coppice, coppards and pollards)
Secondary woodland growing on gravel extraction areas	45%	Mostly even	Dominated by birch, mixed with oak, sweet chestnut, sycamore, rowan
Open areas with scrub, incl. hawthorn areas	13%	-	

Uneven-aged woodland – many wildlife habitats because of high diversity



Even-aged woodland – tidy but of low diversity

Section 5: Woodland Protection

Woodlands in England face a range of threats; this section allows you to consider the potential threats that could be facing your woodland(s). Use the simple Risk Assessment process below to consider any potential threats to their woodland(s) and whether there is a need to take action to protect their woodlands.
Note: To add more tables, copy the table and paste below.

5.1 Risk Matrix

The matrix below provides a system for scoring risk. The matrix also indicates the advised level of action to take to help manage the threat.

Impact	High	Plan for Action	Action	Action
	Medium	Monitor	Plan for Action	Action
	Low	Monitor	Monitor	Plan for Action
		Low	Medium	High
		Likelihood of Presence		

5.2 Plant Health

Threat	Ash dieback *(Chalara fraxinea)*
Likelihood of presence	High
Impact	Low
Response	Ash trees are uncommon in the woodland, but ash dieback will be monitored especially near footpaths and areas used by the public, in order to reactively take appropriate measures to preserve the safety of workers and the public frequenting the area. Where more than 50% of the crown is infected and the trees are a safety issue (if located near footpaths and areas used by the public), felling should be considered. Where less than 50% of the crown is infected, trees should be regularly monitored. Healthy ash trees showing no signs of disease, and diseased or dead trees posing no safety issues should be preserved to support species diversity and increase the presence of dead wood within the woodland.

Threat	Acute oak decline (AOD)
Likelihood of presence	Medium
Impact	High
Response	Oaks dominates the canopy in the ancient woodland areas, and should also become the primary species in the secondary woodlands developing on the former gravel extraction areas, where they have been regenerating.

	While AOD has not been detected in the wood and few oaks appear unhealthy, the disease could severely impact woodland biodiversity, landscape, and safety. However, the financial impact would be limited, as most areas are not suitable for harvesting. AOD remains poorly understood, and current guidance from Forest Research emphasises the importance of recording the number and location of symptomatic trees, as well as assessing the severity of their condition. Infected trees should generally be left in place and monitored unless there is an immediate safety concern. However, if a small number of trees appear to be infected, especially if they belong to the same oak species, it may be advisable to fell and destroy the infected trees. This approach aims to reduce the risk of spreading the disease to healthy trees and to keep inoculum levels low. Sightings of symptomatic trees should be reported to the Forestry Commission via the Tree Alert app or online via https://www.forestresearch.gov.uk/tools-andresources/tree-alert/ For more detailed guidance on managing AOD, visit: https://www.forestresearch.gov.uk/publications/managing-acute-oak-decline/

Threat	Oak Processionary Moth (OPM)
Likelihood of presence	Medium
Impact	Medium
Response	OPM has not yet been identified in Mardley Heath, but it is likely to colonise the area in the coming years due to its ongoing expansion. Oaks will be monitored, and any sightings of OPM will be reported using the Tree Alert app. Where necessary and feasible, appropriate safety measures such as the destruction of the nests will be implemented to manage the impact of this pest.

Threat	Sweet chestnut blight *(Cryphonectria parasitica)*
Likelihood of presence	Low
Impact	High
Response	Sweet chestnut is a prominent species at Mardley Heath, often dominating the coppice in the rare harvestable areas of the woodland. It is also regenerating in the secondary woodlands on gravel extraction areas.

	Sweet chestnut Blight is a destructive disease of sweet chestnut trees caused by the ascomycete fungus *Cryphonectria parasitica*. The fungus can spread rapidly in infected bark, stems or branches are soon girdled and dead bark becomes visible as a sunken canker. Orange fruiting bodies can become visible on the bark, leaves start to wilt and turn brown whilst hanging on to the branch, and general discolouration of the bark can appear. A pale-brown mycelial forms in the inner bark. If any symptoms are spotted, they will be reported via TreeAlert. If confirmed with Forest Research, coppicing will concentrate on cutting and remove areas showing signs of decline as priority within compartments affected and look to enrich with more robust native broadleaved species.

Threat	Ink disease *(Phytophtora cinnamomi)*
Likelihood of presence	Low
Impact	High
Response	Sweet chestnut Ink disease is a destructive disease of sweet chestnut trees caused by the wide-range fungus *Phytophtora cinnamomi*. The disease it causes on sweet chestnut is known as ink disease because of the blackish colour of infected roots and associated soil. Reports of ink disease affecting sweet chestnut in the New Forest were first published in the 1930s and the incidence of the disease is probably increasing due to the milder winters and warmer summers which are likely to allow *P. cinnamomi* to become more widespread. Any blackened root material found below ground around sweet chestnut trees will be reported via TreeAlert so that Forest Research can investigate the presence of *P. cinnamomi*.

5.3 Deer

Species - Likelihood of presence	Muntjac – high Roe – medium Fallow - medium
Impact	Medium

Response	Deer are present at Mardley Heath but are rarely seen. Their impact on vegetation is difficult to assess, but they could hinder woodland regeneration in several ways: • Browsing natural regeneration in secondary woodland areas, particularly as birch declines and other tree and shrub species need to establish. • Browsing coppice regrowth, which is critical given the planned coppicing operations in this management plan. • Stripping bark and fraying on trees (for example suspicion of deer damage on the sweet chestnut coppice in subcompartment 1.h, in conjunction with grey squirrel). Deer management is particularly challenging at Mardley Heath due to the dense network of footpaths and the complex terrain left by gravel extraction works, making culling highly impractical in the wood. However, discussions should be undertaken with neighbouring estates to control deer around the wood. To further address challenges posed by deer, implementing protection measures is essential to support the regeneration of trees, shrubs, and coppice. These measures will include: • Constructing brash baskets or stacking brash around regenerating coppice stools. • Using protective shelters, such as tubes and wraps, on planted and naturally regenerating trees and shrubs. • Erecting temporary or permanent deer fences in areas where other methods are insufficient. Protective tubes will also aid in locating naturally regenerating and planted trees within dense vegetation, making their management more efficient. Plastic protection should be removed as soon as it is no longer needed to ensure that it does not inhibit growth or cause plastic pollution.

5.4 Grey Squirrels

Likelihood of presence	High
Impact	High
Response	Grey squirrels are abundant at Mardley Heath, where they significantly impact vegetation, particularly coppice regrowth and young trees. This is evident in subcompartments 1.h and 2.a, where sweet chestnut coppice regeneration has been severely damaged. Such damage compromises not only the health, quality and productivity of these stands but also public

	safety (in presence of weak and dying trees) and the natural evolution of secondary woodland on former gravel extraction sites, hindering its development into a healthy and diversified ecosystem. To address this, a comprehensive grey squirrel control plan is essential. This plan should identify opportunities, challenges, and practical strategies for managing the squirrel population. Effective control methods, including shooting and trapping, should be implemented and ideally coordinated with neighbouring woodlands to maximise impact and efficiency. Monitoring the impact of grey squirrels through standardised protocols is also critical. This approach will help assess the effectiveness of control measures and their impact on woodland vegetation, ensuring ongoing adjustments and improvements to the management strategy.

5.5 Livestock and Other Mammals

Threat	Rabbit, hare
Likelihood of presence	Medium
Impact	Low
Response	If significant damage is observed, rabbit/hare guards can be used on trees/shrubs planted or regenerating naturally in areas near fields. Low levels of grazing on heathland is generally beneficial.

5.6 Water & Soil

Threat	Soil erosion
Likelihood of presence	High
Impact	Low
Response	Wet soils are not a significant concern at Mardley Heath, particularly given the limited importance of timber harvesting in the wood. However, soil erosion is evident in the gravel extraction areas, where pit slopes are eroding, exposing tree roots and increasing the risk of trees being uprooted by wind. There is little to be done to prevent this erosion, however promoting the development of large-crowned, stable trees can help reduce wind sensitivity in trees growing in these areas. This can be achieved through halo-thinning, which prioritises the growth of trees that will form the future stand by releasing them from competition with shorter-lived species, such as birch.

Threat	Pollution incidents
Likelihood of presence	Low
Impact	Low
Response	To minimise environmental impact and pollution risks, all fuels, oils, and chemicals must be stored in work vehicles at all times. Refuelling should be conducted at the vehicle and away from permanent and seasonal ponds. All machinery with hydraulic hoses should carry an oil spillage kit to address potential leaks. Chemical product application will be avoided during rainy conditions, with extra care taken near ponds.

5.7 Environmental

Threat	Invasive species
Likelihood of presence	High
Impact	Medium (high in long term)
Response	The woodland's close proximity to residential areas leaves it particularly vulnerable to invasive garden species. Variegated archangel, rhododendron, and laurel are especially abundant, particularly along the woodland's edges, near roads, and residential boundaries. Garden waste, frequently discarded over fences, exacerbates this issue. These invasive plants pose a serious threat to the woodland's biodiversity and resilience, as they are likely to spread further, suppressing the growth and diversity of the ground flora, shrub layer, and natural regeneration. This is a significant concern in secondary woodlands, where rhododendron and laurel are notably present. The progressive opening of the canopy, as birch trees near the end of their lifespan and fall, creates favourable conditions for these invasive species to proliferate. Efforts to control rhododendron, laurel, and variegated archangel have been undertaken, with some success in limiting their spread. However, the woodland's complex terrain often restricts the use of mechanical methods, such as mini-diggers for stump and root removal, reducing the efficiency of these interventions compared to other woodlands. To mitigate these risks, invasive species will be closely monitored, and a combination of techniques will be employed to manage their spread. These include hand-pulling, cutting, stump removal where feasible, and the use of chemical treatments. Neighbouring residents should also be actively engaged to raise awareness about the risks and costs associated with invasive

	species in woodlands. Educating residents about how garden escapes can harm the local ecosystem will help foster a sense of shared responsibility. Efforts should focus on encouraging responsible disposal of garden waste and promoting the use of non-invasive plants in residential gardens. Holly, though a native and common species in many English woodlands, offering dense cover, nesting, hibernation opportunities, and food for birds and small mammals, can grow to extreme densities and heights at Mardley Heath. In these areas, it can overshadow coppice and shrubs, compete with mature trees, hinder natural regeneration, and suppress ground flora. This ultimately jeopardises the woodland's species diversity, age range, and structural diversity, and, as a result, its biodiversity and resilience. To mitigate these impacts, the presence and influence of holly in the woodland should be monitored. Where necessary, targeted control measures should be implemented to prevent it from dominating the ecosystem while ensuring it continues to contribute positively to the woodland's ecological balance.

Threat	Wind (increasing likelihood of winter storms coupled with heavier rainfall)
Likelihood of presence	High
Impact	Medium
Response	The woodland is predominantly flat with a low wind hazard, except along its southern boundaries, where it overlooks Oakland. Here, stands are more exposed, increasing the likelihood of trees falling onto properties. When thinning stands or enlarging rides, care will be taken to maintain wind resistance by retaining windfirm trees and avoiding the creation of excessively large gaps that could allow wind to rush deeply into the woodland. Gradually creating graduated edges facing the dominant wind direction can further protect the inner stands. This approach has been previously applied by coppicing sweet chestnut along the southern boundary, reducing the risk of larger trees falling onto nearby properties. In the secondary woodlands, declining silver birch on shallow soils is expected to lead to more frequent tree falls during windstorms. While this process supports the regeneration of species like oak, sycamore, and sweet chestnut, it presents safety concerns, particularly near footpaths. To address this, regular inspections of these areas will be conducted. Declining

	birches near high-traffic zones will be selectively felled to reduce hazards and encourage the growth of large-crowned, stable trees from longer-lived species, contributing to the woodland's structural stability and resilience.

Threat	Fire
Likelihood of presence	Low
Impact	Medium
Response	Lighting campfires in the woodland will be discouraged due to the risk of fires spreading and damaging the flora, coppice regrowth, and seedlings. This risk is heightened by the increasing likelihood of prolonged droughts due to climate change. The local fire brigade should be provided with a detailed map of the woodland, highlighting the best entrance points and any areas of surface water that could be used in case of a fire emergency. Seasonal "Fire" warning notices and prohibition signs will be erected when risks are high.

5.8 Social

Threat	Public access – residential boundaries
Likelihood of presence	High
Impact	Medium
Response	Mardley Heath is extensively used by local residents, with numerous public and permissive footpaths weaving through the woodland. It is bordered to the east and south by residential areas, with a public road running through it. To ensure public safety, trees along footpaths, roads, and residential boundaries will be regularly inspected, with any hazardous trees or limbs promptly removed. During maintenance and harvesting operations, appropriate safety measures, such as clear signage and sufficient labour resources, will be implemented to protect visitors. While trampling by walkers and dogs is not a major concern at Mardley Heath, some muddy footpaths lead to the creation of bypass trails as users avoid wet sections. Locally, this results in extensive trampling, which can hinder the development of ground flora, particularly in areas where rides have been widened to promote floral diversity. To address this, authorised footpaths should be clearly marked and, where practical, improved with drier, more even surfaces and defined boundaries. Enhancing the understorey and ground flora

	through targeted actions such as coppicing, thinning of the overstorey, and selective planting can further discourage visitors from straying off designated paths.

Threat	Anti-social behaviour
Likelihood of presence	Medium
Impact	Low
Response	Anti-social behaviours can occasionally be observed in the woodland: littering, dog fouling, dens being built with damage to vegetation and a few events of vandalism to signs and finger posts. However, the impacts are currently rather low. Quadbikes have also recently been observed on the heath. An unauthorised BMX area can be found in compartment 2. This has a limited impact on the woodland but poses health and safety issues. This area is monitored and managed periodically to discourage use.

5.9 Economic

Threat	Markets – operational costs
Likelihood of presence	Medium
Impact	Medium
Response	Firewood, chip wood and oak timber markets can fluctuate. While revenue from timber is not the primary focus of the council's woodland management, timber sales will be strategically timed to avoid market lows and capitalise on peaks. If market conditions deteriorate, the harvesting of the most affected products will be postponed. However, excessive delays in silvicultural operations to wait for market improvements can negatively impact the health and resilience of the woodlands and should be avoided. To minimise impact on the landscape and wildlife, operations will be small-scale. This approach may produce limited quantities of timber, complicating commercialisation. Therefore, whenever feasible, operations will be planned or combined to ensure that timber volumes are sufficient for marketability. Most silvicultural operations in the secondary woodlands over gravel extraction areas are unlikely to generate timber income, as the timber will not be extracted. These operations will still provide ecological and conservation benefits.

Threat	Hand cutters availability

Likelihood of presence	High
Impact	Medium
Response	Finding hand cutter teams for traditional harvesting methods, such as coppicing, pollarding, or felling large trees, has become increasingly difficult. This challenge threatens the continuation of these traditional management techniques and the maintenance of stand structures like coppice with standards in the wood. To address this, harvesting techniques should be diversified according to the specific requirements of each task. Consideration should be given to using machinery, such as harvesters and shears, in certain stands to complement traditional methods, mitigate safety risks, and enhance efficiency. However, the use of mechanised techniques in most gravel extraction areas is unlikely due to the challenging terrain. Similarly, certain types of trees and stands, such as very large trees, may not be suitable for mechanised operations. This limitation necessitates a reliance on manual methods for silvicultural activities in these areas, which may increase the costs of management.

5.10 Climate Change Resilience

Threat	Uniform structure, lack of species diversity
Likelihood of presence	Medium
Impact	Medium
Response	Mardley Heath shelters an interesting structural and species diversity. While a few species dominate most stands—oak in ancient woodlands and silver birch in secondary woodlands—they are almost always mixed with other species such as sweet chestnut, sycamore, hornbeam, hawthorn or willow. A few single-species stands exist, such as beech and sweet chestnut in sub-compartment 2.h or areas of pure birch in the gravel extraction areas, but these are limited in extent. **Promoting Species Diversity** Silvicultural operations, such as thinning, coppicing and respacing, will prioritise retaining and enhancing species diversity by favouring minority species and promoting their development. In secondary woodlands, longer-lived species like oak, sweet chestnut, and sycamore will be released from competition with ageing birch to allow them to mature into large-crowned, stable, and healthy trees as early as possible. Where species diversity is insufficient, site-appropriate species,

	even those currently absent from the woodland, such as wild cherry, small-leaved lime, whitebeam, or alder buckthorn, will be introduced through enrichment planting. These plantings will be protected from deer browsing to ensure successful establishment. **Enhancing Structural Diversity** Structural diversity, already improved through coppicing and pollarding during the past decades, will continue to be enhanced for resilience and biodiversity. Additional coppice areas will be brought into rotation, for example in sub-compartments 1.a, 2.e, and 2.h, while previously coppiced stands in sub-compartments 1.h, 2.a and 2.h will be rejuvenated. Canopy thinning will be carried out where necessary to ensure sufficient light reaches coppice stools, promoting vigorous regrowth, understorey development, and natural regeneration of trees and shrubs. Coppice regrowth will be protected from deer browsing, monitored, and supplemented with the planting of coppice species such as hornbeam, hazel, field maple or sweet chestnut, if necessary. **Pollarding** Additional pollards will be created/restored and monitored to evaluate their response, ensuring that this traditional practice continues to contribute to the woodland's structural complexity and biodiversity.

Section 6: Management Strategy

This section requires a statement of intent, setting out how you intend to achieve your management objectives and manage important features identified within the previous sections of the plan. A detailed work programme by sub-compartment can be added to the Plan of Operations.

Management Objective / Feature	Management Intention
Preserve and enhance the ancient woodlands and historic wood pasture features, ensuring their long-term ecological and cultural value, while promoting structural, age and species diversity in the woodland.	Overstood coppice stands, such as those in sub-compartments 1.a, 2.e, 2.h, will be brought back into rotation. Where standards are present and form a dense canopy, they will be thinned to allow enough light to reach the regenerating stools. Previously coppiced stands in sub-compartments 1.h, 2.a, 2.h will also be rejuvenated when their stems reach marketable diameters. To protect regenerating stools and new growth from deer browsing, methods such as piling brash over stools, constructing brash baskets, or erecting deer fencing will be employed. To ensure stool survival, particularly for older stools that may not respond well to coppicing, sap risers will be retained. This approach will also contribute to structural diversity, especially in areas dominated by pure coppice. Additionally, some stools will be left untouched to enhance diversity and aesthetic value, especially when their stems have started to develop veteran tree features. If coppice regrowth is insufficient, enrichment planting of site-suited coppice and standard species will be undertaken to bolster regeneration and diversify the woodland. Previously pollarded trees (particularly hornbeams and willows) will be closely monitored for survival and health. Where necessary, they will be rejuvenated and released from competition with surrounding trees that may impede their growth or survival. Some unrestored pollards will be re-pollarded, and where appropriate, new pollards will be created from young trees to further diversify the woodland structure, including in the vicinity of existing ones. Veteran hornbeam coppards along the earth-bank on the northern boundary will be rejuvenated progressively, with careful monitoring of their response to ensure their survival and continued contribution to the woodland's cultural value and ecological diversity. Silvicultural operations, such as thinning, coppicing and respacing, will prioritise retaining and enhancing species diversity by favouring minority species and promoting their development. If species diversity is insufficient, enrichment planting with site-suited broadleaved species will be undertaken to bring more species diversity in the stands.

	Archaeological features, such as earthbanks and unscheduled features, will be mapped. Their locations and any necessary protection measures will be clearly communicated to contractors to avoid accidental damage during management operations such as use of heavy vehicles, restocking, fencing, creation of tracks, etc.). Any management in the vicinity of these recorded monuments and features, or any suspected historic and archaeological feature, will follow the Historic environment guidance for forestry in England (https://www.gov.uk/government/publications/historic-environment-guidance-for-forestry-in-england/historic-environment-guidance-for-forestry-in-england). The main strategies to preserve these features are to avoid ground disturbance when operating heavy machinery or felling trees (or to mitigate impacts where avoidance is not possible), and to remove trees that could damage the features if uprooted or fallen.
Support and guide the evolution of secondary woodland in former gravel extraction areas, fostering diverse and resilient habitats.	Timber harvesting is unlikely to be feasible in the former gravel extraction areas due to challenges associated with timber extraction. Consequently, producing high-quality timber is not a priority in these stands. However, the complex topography and shallow soils in these areas make trees more susceptible to windthrow, particularly when growing in dense stands that limit their ability to develop resistance to strong winds. While the natural decline of birch will gradually create opportunities for longer-lived species like oak, sweet chestnut, and sycamore to establish themselves, many of these trees currently exhibit tall, slender growth forms due to competition from birch. To promote the development of stable, large-crowned, long-lived trees, proactive halo-thinning operations are recommended, especially in subcompartments 1.b, 1.g, 2.d. These interventions will release oaks, sycamores, sweet chestnuts, and hornbeams from birch competition, while also acknowledging the site's wood pasture heritage. In contrast, such measures are unnecessary in areas dominated by pure birch.
Protect and enrich the woodland's habitat diversity, including its glades, grasslands, heathlands, and ponds, to sustain a wide range of species.	In addition to the strategies for diversifying woodland structure, age, and species composition outlined above, the following actions will be implemented to enhance habitat quality and diversity and ecosystem resilience: **Glades** • Glades and open spaces will be maintained by regularly managing shrubs and trees within and around their periphery. For example, hawthorn in compartment 2.e will be progressively coppiced, while oak and other species will be controlled to keep the glade in subcompartment 2.c open. • Annual silage cutting will be carried out in the large open space in subcompartment 1.c, with flail cutting used for other glades. • Where heathland vegetation is present, maintenance will focus on encouraging regeneration by removing

overshadowing trees and managing bracken through bruising or cutting, while conserving heather and associated plants.

Rides

- Although Mardley Heath has few rides due to its complex topography, existing rides will be widened in select stretches, with pinch points retained to create canopy corridors.
- Vegetation along rides will be managed with differentiated cutting to diversify habitats, while mowing/cutting frequency will be adjusted to support species such as sallow and honeysuckle, which benefit butterflies and other insects.
- A new ride may be created in subcompartments 1.a and 1.b.
- Maintenance of existing rides and creation of new rides will help improve connectivity between open spaces.

Ponds

- To prevent ponds from becoming overshadowed, surrounding vegetation will be selectively cut or coppiced, and low branches from older trees removed, especially along southern edges. No more than one-third of the pond perimeter will be managed at a time, ensuring wildlife can disperse and varied light conditions are created.
- Habitat enhancement near ponds will include creating log piles and retaining lying deadwood to support feeding, foraging, and hibernating species.
- If proposed pond works are likely to impact amphibians, an eDNA survey for Great Crested Newts must be conducted. If no evidence of their presence is detected, the works may proceed. However, if Great Crested Newts are confirmed, the works must either be undertaken in winter—when the newts have left the pond for their hibernation sites—or a specific licence must be obtained from Natural England prior to any disturbance.

Veteran Trees

- Veteran trees will be identified, mapped, and released from competing vegetation during silvicultural operations.
- Contractors will be informed of their locations to prevent damage, including ground compaction or injury to the trees.

Deadwood Management

- Both standing and fallen deadwood will be retained during harvesting operations to enhance habitats and biodiversity.
- While birch deadwood is already abundant at Mardley Heath, efforts will focus on retaining deadwood from other species to support a wider range of organisms dependent on deadwood habitats.

Pests, Diseases, and Invasive Species

- Diseases and pests will be monitored, and mitigation measures implemented as outlined in Section 5.2.
- Vegetation regrowth, particularly coppice, will be protected from deer browsing (see Section 5.3).

	• Grey squirrel populations will be controlled to minimise damage to young and regenerating trees, with impacts monitored (see Section 5.4). • Non-native and native invasive species will be monitored and controlled, with efforts to engage neighbouring residents to mitigate the risk of new invasive species being brought into the wood (see Section 5.7).
Ensure the woodland remains a safe, welcoming, and inclusive space for public recreation, with accessible trails and amenities for all to enjoy.	Implementing small-scale operations will minimise the visual impact of harvesting on the landscape, preserving structural diversity in the woodland and preventing the creation of overly large openings or sudden, large-scale changes. To ensure the safety of visitors and neighbouring residents during silvicultural and management operations, appropriate signage and additional labour resources will be utilised. Regular safety inspections, particularly along footpaths, roads and residential boundaries will be conducted. Necessary safety measures will be implemented to reduce the risks posed by diseased and dangerous trees. Ensure footpaths are kept open by clearing fallen trees and branches and cutting back overgrowth, especially along the accessible path. Maintain way marking and information boards. Enhancing the accessibility of footpaths in the wettest and muddiest areas, will make the woodland more attractive to the public while safeguarding its environmental features. Promoting the development of large-crowned, health and stable trees through thinning along Heath Road and in the secondary woodland areas will enhance the aesthetical value of the wood.

Section 7: Stakeholder Engagement

There can be a requirement on both the FC and the owner to undertake consultation/engagement. Please refer to Operations Note 35 for further information. Use this section to identify people or organisations with an interest in your woodland and also to record any engagement that you have undertaken, relative to activities identified within the plan.

Work Proposal	Individual/ Organisation	Date Contacted	Date feedback received	Response	Action
All	Forestry Commission				
All	WHBC Environment Overview & Scrutiny Committee				
All	Welwyn Parish Council				
All	Herts County Council				
All	Welwyn Garden City Society				
All	Herts & Middlesex Wildlife Trust				
All	Herts Natural History Society				
All	Friends of Mardley Heath				
All	Council's public consultation				

All	2nd Welwyn (Oaklands) Scout Group				

Section 8: Monitoring

Indicators of progress/success should be defined for each management objective and then checked at regular intervals. Other management activities could also be considered within this monitoring section. The data collected will help to evaluate progress.

Management Objective/Activities	Indicator of Progress/Success	Method of Assessment	Frequency of Assessment	Responsibility	Assessment Results
Preserve and enhance the ancient woodlands and historic wood pasture features, ensuring their long-term ecological and cultural value, while promoting structural, age and species diversity in the woodland.	Area of woodland coppiced, thinned Number of existing pollards maintained, restored, number of new pollards created Condition of coppice regrowth and restored pollards	Data collated in annual management report Condition survey, with photographs	Annually Annually	Forest manager Council/Forest manager	
Support and guide the evolution of secondary woodland in former gravel extraction areas, fostering diverse and resilient habitats.	Number of trees halo-thinned in the secondary woodland areas Regeneration of oaks and other species in gaps created by natural collapse of birch	Data collated in annual management report	Annually	Forest manager	
Protect and enrich the woodland's habitat	Area of glades managed, nature of	Data collated in annual	Annually	Forest manager	

diversity, including its glades, grasslands, heathlands, and ponds, to sustain a wide range of species.	the management operations Length of rides managed and created, nature of the management Number of ponds managed, nature of the management Mapping of veteran trees, number of veteran trees released from competition	management report			
	Butterfly and solitary bees population monitoring.	Monitoring report	Annually	Friends Group, owner	
	Presence levels of invasive species and other pests.	Routine monitoring	Annually	Forest manager	
	Area of invasive species and other pests control operations undertaken.	Data collated in annual management report.	Annually	Forest manager	
			Annually	Owner	

	Number of trees protected against deer browsing Grey squirrel and deer impact levels Grey squirrel and deer culling numbers	Data collated in owner's records Grey squirrel and deer activity and habitat impact levels Culling records	Annually Annually	Game manager/owner Game manager/owner	
Ensure the woodland remains a safe, welcoming, and inclusive space for public recreation, with accessible trails and amenities for all to enjoy.	Number, extent and result of tree safety inspections Description of tree safety works undertaken Nature and extent of maintenance and improvement works on footpaths and marking Number of complaints received especially those relating to trees hanging over properties and those arising from	Data collated in owner's records	Annually	Owner	

	anti-social activities during school holidays. Feedback from Friends of Mardley Heath and from other local people. Conversation with visitors on site.				

UK Forestry Standard woodland plan assessment

For FC office use and approval only:

UKFS management plan criteria	Minimum approval requirements	Achieved	Review notes
Plan Objectives: Forest management plans should state the objectives of management and set out how an appropriate balance between social, economic, environmental objectives will be achieved.	• Management plan objectives are stated. • Consideration is given to environmental, economic and social objectives relevant to the vision for the woodland.	**Yes/No**	
Forest context and important features in management strategy: Forest management plans should address the forest context and the forest potential and demonstrate how the relevant interests and issues have been considered and addressed.	Management intentions communicated in ***Sect.6*** of the management plan are in line with stated objective(s) in ***Sect. 2***. Management intentions should take account of: • Relevant features and issues identified in the woodland survey (***Sect. 4***). • Any potential threats to and opportunities for the woodland, as identified under woodland protection (***Sect. 5***). • Relevant comments received from stakeholder engagement are documented in ***Sect. 7***.	**Yes/No**	
Identification of designations within and surrounding the woodland site: For designated areas, e.g. National Parks or SSSI, particular account is taken of landscape and other sensitivities in the design of forests and forest infrastructure.	• Survey information (***Sect. 4***) identifies any designations that impact on woodland management. • Management intentions (***Sect. 6***) have taken account of any designations.	**Yes/No**	
Felling and restocking to improve forest structure and diversity:	• Felling and restocking proposals are consistent with UKFS design principles (for example scale and adjacency).	**Yes/No**	

When planning felling and restocking, the design of existing forests should be re-assessed and any necessary changes made to meet UKFS requirements. Forests should be designed to achieve a diverse structure of habitat, species and age range of trees, appropriate to the scale and context. Forests characterised by a lack of diversity, due to extensive areas of even-aged trees, should be progressively restructured to achieve age class range.	• Current diversity (structure, species, age structure) of the woodland has been identified through the survey (***Sect. 4***). • Management intentions aim to improve / maintain current diversity (structure, species, and ages of trees).		
Consultation: Consultation on forest management plans and proposals should be carried out according to forestry authority procedures and, where required, the Environmental Impact Assessment (Forestry) Regulations.	• Stakeholder consultation is in line with current FC guidance, and recorded in ***Sect. 7***. The minimum requirement is for statutory consultation to take place, and this will be carried out by the Forestry Commission. • Plan authors undertake stakeholder engagement (ref FC Ops Note 35) relevant to the context and setting of the woodland.	**Yes/No**	
Plan update and review: Management of the forest should conform to the plan, and the plan should be updated to ensure it is current and relevant.	• A 5 year review period is stated on the 1st page of the plan • ***Sect. 8*** is completed with 1 indicator of success identified per management objective	**Yes/No**	

Approved in Principle *This means the FC is happy with your plan; it meets UKFS requirements.* *a) You can use it to support a CS-HT or other grant application.* ***b) You do not yet have a licence to undertake any tree felling in the plan.***	**Name (WO or FM):**	**Date:**
Approved	**Name (AO, WO or FM):**	**Date:**

This means FC is happy with your plan; it meets UKFS requirements, and we have also approved a felling licence for any tree felling in the plan (where required).		