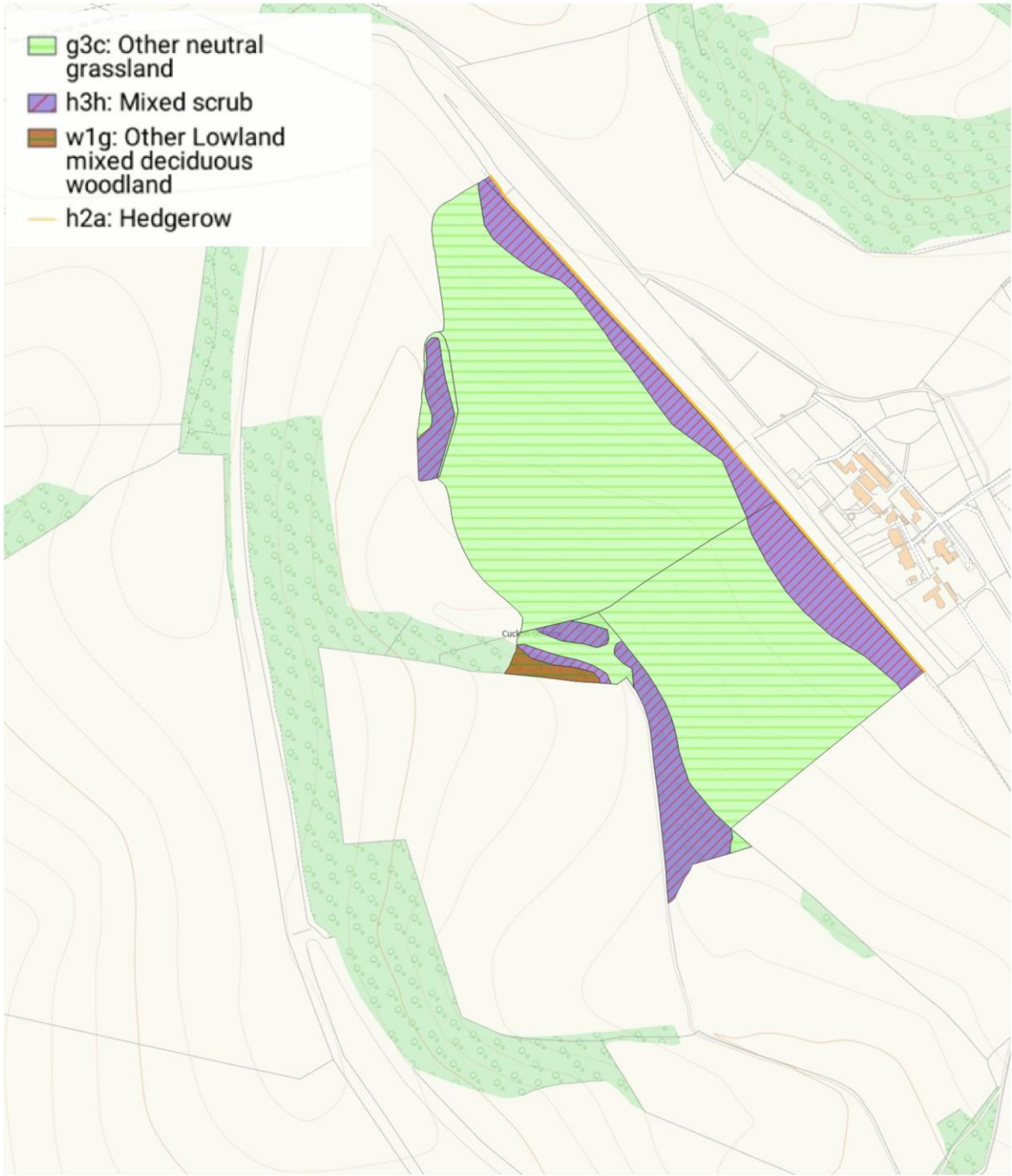




Department
for Environment
Food & Rural Affairs

BNG Habitat Monitoring Report

Site Name	Iford Estate
Planning Reference	N/A if an off-site habitat bank
Register Reference	N/A if part of a consented planning proposal
Consent or Licence Reference	N/A if not required for your site. If required, are these permissions up to date?
Site Owner	J & H Robinson Iford Estate
Author	AM CLM
Date of Report	15 /08 /2024
Monitoring Year	1



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200 m
Scale 1:7068 (at A4)
N

Consultant: CLM



Client: J & H Robinson
Iford Estate



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Document Details

Authorship Details MR-B01

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Version Control MR-T01

Version	Issue Status	Prepared by / Date	Approved by / Date
V1		NC 15/ 08/ 2024	AM 15/ 08/ 2024

1.Introduction

Survey Details

Organisation Responsible for Monitoring Surveys MR-T02	
Name or Initials	AM
Organisation	CLM
Survey date(s)	17/ 06/ 2024
Statement of competency	
- MCIEEM qualified - A competent person as defined by the Statutory Biodiversity Metric Guidance - Director at CLM Ltd conducting Preliminary Ecological Appraisals, Phase 1 Habitat Surveys, UKHabs Baseline Habitat Surveys, Environmental Impact Assessment (Agriculture), all utilising skills and knowledge relating to habitat identification and botanical surveys. As well as creating Habitat Management and Monitoring Plans and BNG Post Management proposals for Schemes and Projects. Demonstrated level of competence as defines by BSI BS 8683:2021 'Process for designing and implementing Biodiversity Net Gain – Specification'.	
Surveys completed	
All Habitats identified were classified using UKHabs V2 framework.	
Survey conditions and limitations	
The Site was visited on the 17th of June by Alex Macdonald MCIEEM, and Neve Clatworthy of CLM Ltd. Habitats were classified based on the UKHab Version 2 definitions, species recorded within each quadrat surveyed were given a DOMIN score. In addition, condition scores were given to habitats surveyed using the Statutory Condition Assessment Sheets. Habitats were mapped using the UK Hab survey methodology. A minimum mapping unit (MMU) of 400m² for habitat polygons and 20m for linear habitats was used when surveying and mapping for broad habitat types, with smaller MMU utilised where a clear distinction in broad habitat type was observed.	

Progress Summary

Summary of Progress Made Since Implementation Period MR-B02

A grass seed mix has been established within the areas targeted for g3c: Other neutral grassland. This is now cut and grazed by cattle on rotation using electric fencing, to ensure the habitat is evenly grazed and does not contain large amounts in injurious weeds/ scrub species.

In the areas targeted for h3h. Mixed scrub, whips of scrub species have been planted out on top of a grassland seed mix. The whips were then surrounded with a circle of mulch with the aims of suppressing weeds and reducing competition with grass and weed species. This area has also been rabbit fenced to reduce the chances of herbivore damage on young whips.

During the first year of the enhancement of the area of w1f Lowland deciduous woodland on site at the Houndean investment site one the pheasant pens were removed to reduce bare ground within the woodland and to ensure the overall woodland enhancement and management is even across the site.

Th H2a5: Species rich native hedgerow targeted for enhancement has been allowed to thicken up following a 2-5 year cutting rotation.

As the project is still in its infancy with created habitats not yet fully established and habitats being enhanced at very early stages, all habitats should continue to be managed according to the practices outlined within the HMMP.

Site Wide Successes and Challenges

Successes MR-B03

The areas of g3c: Other neutral grassland ,h3h: Mixed scrub ,w1f: Lowland deciduous woodland and H2a5: Species rich native hedgerow are progressing as intended.

A grass seed mix has been established within the areas targeted for g3c: Other neutral grassland, h3h: Mixed scrub, whips of scrub species have been planted out on top of a grassland seed mix with accompanying mulch to suppress competition from other flora, the pheasant pens have been removed to reduce bare ground within the area of w1f: Lowland deciduous woodland, and H2a5: Species rich native hedgerow has been allowed to thicken up following the 2-5 year cutting rotation.

Challenges MR-B04

Project challenges include ensuring h3h mixed scrub is not dominated by the grass mix sown beneath whips, and controlling excessive herbivore damage to the Other neutral grassland, Mixed scrub, Lowland deciduous woodland and Species rich native hedgerow habitats.

As the project is still in very early stages with created habitats not yet fully established and habitats being enhanced at very early stages no urgent action is required and all habitats should continue to be managed according to the practices outlined within the HMMP. Where management techniques are not achieving the required characteristics of a habitat type consultation with the advisor, to advise of ways of remedying the situation through adaptations to management, will be undertaken. Where external factors, outside of the control of the project managers threatened the BNG objectives, then these will be discussed with the responsible authority to agree appropriate changes to management.

General Site Photographs MR-F01



2. Progress Towards Habitat Condition Targets

Methodology

Survey Methodology Equipment:

- Map of the site showing the area to be monitored
- UK Habs V2 condition assessment forms suitable for the site
- Weather writer
- Pencil / pen
- ID books and hand lens
- GPS // What three words

Methodology:

On entering the site, go to the area that has been identified for survey using the prepared map. A quick walk-over of the part of the site you want to survey would suffice so that you can find your bearings and locate 'representative' samples of vegetation.

The choice of where to place each 2x2m (for grassland) 2X2m, (for scrub), 10x10 (for woodland) quadrat is subjective. It should be placed in what you consider to be a uniform stand of vegetation – that is an area that is representative of the overall site.

The selection of location for the quadrat should not be swayed by trying to get a particularly rich composition of species or particular structure, such as concentrating in areas with a finer sward compared to those with a coarser sward. This would alter the results. There will always be some variation in sward across a site, and obvious boundaries between different types of grassland should be avoided. However, boundaries between grassland are usually more gradual, and can be hard to avoid.

After identifying the similar areas of vegetation composition and structure at the site, you will need to undertake 3-5 quadrats within each similar stand of vegetation. At the top of the record sheet enter an 8-figure or 10-figure grid reference/ What 3 words location of the quadrat. All plants should be recorded from each quadrat and a coverage scale estimating the percentage coverage of a species. The species identified should then be listed according to their abundance using the DOMIN scale.

Other useful information to record includes general information about site management, such as animals grazing, burning etc.

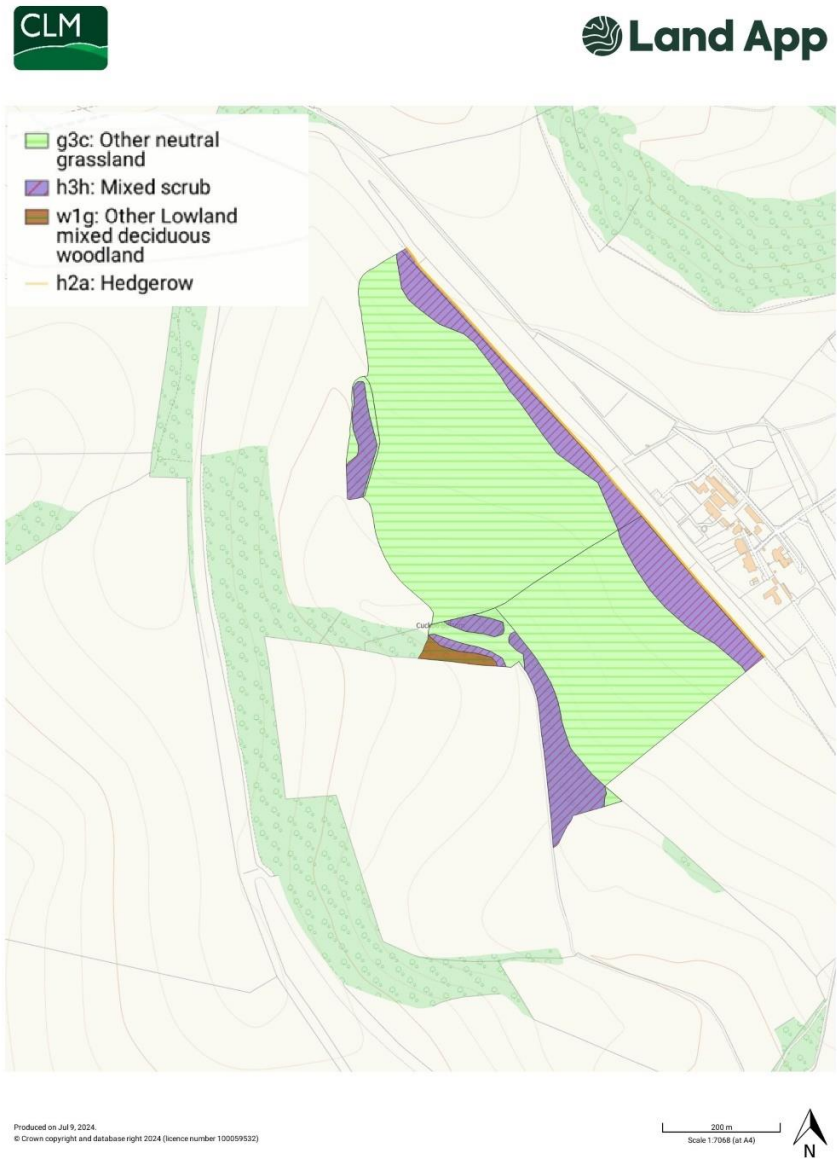
The condition of each habitat present will be recorded using the BNG Statutory Metric Habitat Condition Assessment Sheets. Photographs should be taken to record the current state of each habitat; these are to be included within the monitoring report. The habitat management methods used during the lead up to and at the time of survey should be recorded (eg. Cattle grazing, recently topped etc) to assess how successful the management techniques are at achieving desired habitat types and conditions.

Following the field survey, data collected will be collated and reported within the Annual Monitoring Plan.

DOMIN Scale

Cover	Domin
91-100%	10
76-90%	9
51-75%	8
34-50%	7
26-33%	6
11-25%	5
4-10%	4
<4% (many individuals)	3
<4% (several individuals)	2
<4% (few individuals)	1

Monitoring Plan MT-F01



Monitoring Strategy

Provide details of the monitoring strategy to encourage successful implementation of the management plan (MS-B01)

The monitoring reports will be filled out at years 2, 5, 10, 20, 30. Further general annual monitoring will also be completed but will not form part of the more formal monitoring report.

Monitoring reports should consist of an updated species list for each habitat area, photographs of the current state of each habitat and completion of habitat condition sheets for each habitat area.

Monitoring Methods and Intervals MS-T01

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
g3c: Other neutral grassland	Monitoring reports will be filled out at years 2 5 10 20 30. Undertake quadrat sampling to identify the number of species per m², compile a non-exhaustive species list, complete condition assessment sheets. Monitoring reports should include any management works which have been undertaken since the last report, to establish which methods are being used to achieve the target condition of each habitat type.	Monitoring reports will be filled out at years 2 5 10 20 30, site surveys to be completed between May and August. Annual surveys of species following the NVC method should be undertaken to establish species abundance.
w1f: Lowland deciduous woodland	Monitoring reports will be filled out at years 2 5 10 20 30. Identify species present and complete condition assessment sheets for the habitat type. Monitoring reports should include any management works which have been undertaken since the last report, to establish which methods are being used to achieve the target condition of each habitat type.	Monitoring reports will be filled out at years 2 5 10 20 30, site surveys to be completed between May and August. Annual surveys of species should be undertaken to establish species abundance.
h3h: Mixed scrub	Monitoring reports will be filled out at years 2 5 10 20 30. Identify species present and complete condition assessment sheets for the habitat type.	Monitoring reports will be filled out at years 2 5 10 20 30, site surveys to be completed between May and August.

	Monitoring reports should include any management works which have been undertaken since the last report, to establish which methods are being used to achieve the target condition of each habitat type.	Annual surveys should be undertaken for the full length of the agreement.
H2a5: Species Rich Native Hedgerow	Monitoring reports will be filled out at years 2 5 10 20 30. Identify species present and complete condition assessment for the habitat type. Monitoring reports should include any management works which have been undertaken since the last report, to establish which methods are being used to achieve the target condition of each habitat type.	Monitoring reports will be filled out at years 2 5 10 20 30, site surveys to be completed between May and August. Annual surveys should be undertaken for the full length of the agreement.

Monitoring Reports

Monitoring Report Schedule MS-T02

Organisation Responsible for Submitting the Monitoring Reports	Organisation Receiving and Responsible for Reviewing Reports
CLM	tbc

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
2	September	September or October	Report on results of initial habitat creation and enhancement works
5	September	September or October	Report on results of ongoing habitat creation and enhancement works.
10	September	September or October	Report on results of ongoing habitat creation and enhancement works.
20	September	September or October	Report on results of ongoing habitat creation and enhancement works.

30	September	September or October	Report on results of ongoing habitat creation and enhancement works.
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Adaptive Management

Summary of Adaptive Management Approaches (MS-B02)

Habitat management principles outlined in the Companion Document are designed to deliver the desired habitat creation and enhancement, but these are assuming current or recent climate conditions. When these change, so will the management. While it is not yet known how these will change exactly, although some thought has been given to this in the Companion Document, monitoring will have to identify where habitat creation and enhancement is being affected.

Monitoring of habitats throughout the year as well as more thoroughly on an annual basis, alongside the official monitoring surveys carried out in years 2, 5, 10, 20, and 30, will help to identify long term and progressive changes to the habitats and pick up where changes and adaptations to the management need to be made, more rapidly. Any changes made will be covered in the stated Monitoring reports, but it will be necessary to continuously monitor the habitats progress to ensure timely adaptations are made to achieve the required habitat types.

Where management techniques have been outlined, these will be monitored to determine their effect on achieving the desired outcomes. Where management techniques are not achieving the required characteristics of a habitat type consultation with the advisor, to advise of ways of remedying the situation through adaptations to management, will be undertaken. Where external factors, outside of the control of the project managers threatened the BNG objectives, then these will be discussed with the responsible authority to agree appropriate changes to management.

Grassland (medium, high, and very high distinctiveness)

Progress Towards Habitat and Condition Targets (MH-T01)

Condition Assessment Criteria		Targeted?	Relevant parcels	Year:	1
				Target met?	Management Activity Updates
Target Habitat:	g3c: Other neutral grassland	N/A		Yes / No	Provide details of the actions relevant to this habitat or condition criteria that must be implemented from this monitoring period onwards. What, if any, adaptive management changes will be implemented to continue delivering targets.
1	There are 6-8 vascular plant species per m ² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² , please review the full UKHab description to assess whether the grassland should be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high or very high distinctiveness, please use the relevant condition sheet.	Yes	TQ3811 6537, TQ3910 2575, TQ3810 5458	yes	The seed mix containing a variety of mixes of local provenance and other grassland mix were sown in the spring of 2023. A combination of cutting and grazing using cattle is seeing the gradual decline of dominant grass species, allowing for a variety of species to establish within the sward.
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Yes	TQ3811 6537, TQ3910 2575, TQ3810 5458	yes	Cattle were introduced the South of the site during the first week in April to rotationally graze the sward and create a varied sward height.
3	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	TQ3811 6537, TQ3910 2575, TQ3810 5458	yes	Cattle grazing within the southern area on site is controlling scrub encroachment.
4	Physical damage is evident in less than 5% of total grassland area Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes	TQ3811 6537, TQ3910 2575,	yes	Appropriate stocking rates (<0.75 LU per ha) are being used to avoid any poaching from cattle on the site.

			TQ3810 5458		
5	Cover of bare ground between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens.)	Yes	TQ3811 6537, TQ3910 2575, TQ3810 5458	yes	See above.

Grassland (medium, high, and very high distinctiveness)

General Progress

Comments on progress towards project goals (MH-B01)

A grass seed mix has been established within the areas targeted for g3c: Other neutral grassland. This is now cut and grazed by cattle on rotation using electric fencing, to ensure the habitat is evenly grazed and does not contain large amounts in injurious weeds/ scrub species.

Actions required in next management period (MH-B02)

Continue to rotationally graze the areas of g3c using cattle and electric fencing, any areas with scrub developing such as field boundaries should be grazed for longer to reduce the risk of succession by opportunistic scrub species.

Photographs of Progress (MH-F01)



Scrub

Progress Towards Habitat and Condition Targets (MS-T01)

Condition Assessment Criteria		Targeted?	Relevant parcels	Year :	1
				Target met?	Management Activity Updates
Target Habitat:	H3h: Mixed Scrub	N/A	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	Yes / No	Provide details of the actions relevant to this habitat or condition criteria that must be implemented from this monitoring period onwards. What, if any, adaptive management changes will be implemented to continue delivering targets.
A	The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). At least 80% of scrub is native, There are at least three native woody species, No single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Yes	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	No	Scrub is native, and consists of more than three species. Much of the planting has been smothered by the grassland growing rapidly throughout the summer.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Yes	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	No	Scrub is currently of one age class as this is the first year of establishment. Once fully established scrub will be managed, cutting 1/15 th of the overall area annually so that it is structurally diverse, with a network of rides running throughout.

C	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	Yes	There are no invasive non-native species currently within the scrub creation area at investment site one. If invasive non-native species become an issue they will need to be controlled by spraying or injecting with approved herbicides.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	No	As the scrub has not yet had chance to fully establish, it does not have a gradual edge . When the scrub reaches maturity, allow cattle to lightly graze into the edge of the scrub or introduce rotational cutting of the scrub edge to create an ecotone of value to reptiles and enhance biodiversity.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Yes	TQ3811 6323, TQ3811 6537, TQ3910 2575, TQ3810 5458,	Yes	Currently the scrub does not contain any clearings, glades or rides. Temporary open space should be created once the scrub has been able to establish, creating a structurally diverse habitat with niches appropriate for a variety of species. In the first year of enhancement a tree shear was taken into the scrub at parcel TQ 3810 5458 and TQ3811 6323, these areas were subject to clearance of some scrub plants which were subsequently stacked within part of the cleared area to create brash piles.

Scrub

GENERAL PROGRESS

Comments on progress towards project goals (MH-B01)

In year one of the project, whips of scrub species have been planted out on top of a grassland seed mix. The whips were then surrounded with a circle of mulch with the aims of suppressing weeds and reducing competition with grass and weed species. This area has also been rabbit fenced to reduce the chances of herbivore damage on young whips.

Actions required in next management period (MH-B02)

Spray off a circle surrounding or add another larger area of mulch around scrub planting to avoid whips being smothered by grass species growing alongside scrub plants.

Maintain the rabbit fencing surrounding the scrub planting, in areas it has been lifted by badgers and foxes potentially allowing rabbits to enter the scrub planting area – some of the scrub plants had been damaged by herbivores at the time of surveying.

Photographs of Progress (MS-F01)



Woodland

Progress Towards Habitat and Condition Targets (MI-T01)

Condition Assessment Criteria			Target Score	Relevant parcels	Year :	1
					Target met?	Management Activity Updates
Target Habitat:		W1f: Lowland deciduous woodland	Good	TQ3810 5458	Yes / No	Provide details of the actions relevant to this habitat or condition criteria that must be implemented from this monitoring period onwards. What, if any, adaptive management changes will be implemented to continue delivering targets.
A	Age distribution of trees	Three age classes present	3	TQ3810 5458	No	The woodland proposed for enhancement at Houndean investment site 1 lacks structural diversity due to the lack of multiple age classes. Introduce a programme of thinning in order to increase the structural diversity of the woodland specifically targeting areas where one age class is present.
		Two age classes present				
		One age class present				
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland	3	TQ3810 5458	No	Some herbivore damage is present within the woodland on site, this should be combatted through carrying out a programme of deer monitoring and management. This will reduce pressure from browsing and allow the ground flora to recover.
		Evidence of significant browsing pressure is present in 40% or less of whole woodland				
		Evidence of significant browsing pressure is present in 40% or more of whole woodland				
C	Invasive plant species	No invasive species present in woodland	3	TQ3810 5458	Yes	There are currently no invasive non- native species present within the woodland at Houndean investment site one. Where invasives occur control using approved methods and chemicals dependant on the species in question.
		Rhododendron <i>Rhododendrion ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species <10% cover				

		Rhododendron or laurel present, or other invasive species) 10% cover				
D	Number of native trees species	Five or more native tree or shrub species found across woodland parcel	3	TQ3810 5458	Yes	Five or more species were found in all quadrats surveyed during the site visit. This could be increased through woodland management techniques including thinning and two zone ride management, opening up the woodland floor to increased levels of sunlight.
		Three to four native tree or shrub species found across woodland parcel				
		Two or less native tree or shrub species present across woodland parcel				
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understorey shrubs are native	3	TQ3810 5458	Yes	All trees and shrubs recorded within the woodland were of native species.
		50 – 80% of canopy trees and 50-80% of understorey shrubs are native				
		<50% of canopy trees and <50% understorey shrubs are native				
F	Open space within woodland	10-20% of woodland has areas of temporary open space. Unless woodland <10ha in which case 0-20% temporary open space is permitted.	3	TQ3810 5458	No	Thin woodlands to encourage a more diverse age and height structure. Maintain open space and introduce temporary open space to allow more light into the woodland, increasing species diversity at a ground level
		21-40% of woodland has areas of temporary open space				
		<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category.				

G	Woodland regeneration	All three classes present in woodland; trees 4-7cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth	3	TQ3810 5458	No	To introduce a programme, allowing saplings to establish, encouraging a more diverse age and height structure throughout the woodland.
		One or two classes only present in woodland				
		No classes or coppice regrowth present in woodland				
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	3	TQ3810 5458	Yes	All trees monitored at the time of survey were disease free, monitor and fell any identified individuals with diseases or crown dieback every 5 years.
		11% to 25% mortality and/or crown dieback or low risk pest or disease present				
		Greater than 25% tree mortality and or any high risk pest or disease present				
I	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	3	TQ3810 5458	No	Fertile soil as evidenced by the presence of a carpet of nettle, bramble, and ground ivy. Removal of the pheasant pen will reduce the fertility of the soil within the woodland and should result in more diverse ground flora layer.
		Recognisable NVC plant community at ground layer present				
		No recognisable NVC plant community at ground layer present.				
J	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland.	3	TQ3810 5458	No	The woodland proposed for enhancement at Houndean investment site one lacks structural diversity. Introduce a programme of thinning in order to increase the structural diversity of the woodland specifically targeting areas where one age class is present.
		Two storeys across all survey plots				
		One of less storey across all survey plots				
K	Veteran trees	Two or more veteran per hectare	3	TQ3810 5458	No	No veteran trees were identified at the time of survey, however there were many mature trees which could be targeted with a view to ensuring they are allowed to develop
		One veteran tree per hectare				

		No veteran trees present in woodland				over time into veteran trees such as the Walnut in parcel TQ3810 5458.
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems and stumps, or an abundance of small cavities. Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities. Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	3	TQ3810 5458	No	At the time of survey deadwood was observed in the form of fallen branches and occasional standing deadwood. A portion of the standing and fallen deadwood within the woodland should be left to provide nesting sites, decaying wood and structural micro-sites.
M	Woodland disturbance	No nutrient enrichment or damaged ground evident Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground	3	TQ3810 5458	No	The pens from the Pheasant shoot on the estate have been removed from the woodland, this will reduce woodland disturbance and allow for ground flora to colonise areas exposed to sunlight.

Woodland

General Progress

Comments on progress towards project goals (MI-B01)

During the first year of the enhancement of the area of w1f Lowland deciduous woodland on site at the Houndean investment site one the pheasant pens were removed to reduce bare ground within the woodland and to ensure the overall woodland enhancement and management is even across the site.

Little progress has been made in the first year in introducing rides or thinning, this should be approached in year two of the project when potential veteran trees and areas suitable for two zone rides have been identified.

Actions required in next management period (MI-B02)

Introduce a thinning routine within the existing woodland on site to increase structural diversity and open up the woodland floor for ground flora to establish.

Establish a network of two zone rides that both enable woodland management and benefit biodiversity by increasing the structural diversity of the woodland.

Identify and mark trees displaying veteran features/ with potential to become veteran trees to be allowed to develop into one.

Photographs of Progress (MI-F01)



Hedgerow

Progress Towards Habitat and Condition Targets (MG-T01)

Condition Assessment Criteria		Targeted?	Relevant parcels	Year:	
				Target met?	Management Activity Updates
Target Habitat:	H2a5: Species Rich Native Hedgerow	N/A	TQ3811 6537	Yes / No	Provide details of the actions relevant to this habitat or condition criteria that must be implemented from this monitoring period onwards. What, if any, adaptive management changes will be implemented to continue delivering targets.
A1	Height >1.5m average along length.		TQ3811 6537	yes	The hedge is of a healthy height and continues to be managed on a 2-5 years cutting rotation to increase its overall height.
A2	Width >1.5m average along length.		TQ3811 6537	no	The hedge is increasing in width and continues to be managed on a 2-5 years cutting rotation to enhance its width.
B1	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length.		TQ3811 6537	yes	There is a healthy gap between the ground and the base of the hedge canopy.
B2	Gap – hedgerow canopy continuity Gaps make up <10% of total length; and no canopy gaps >5m.		TQ3811 6537	yes	There are a small amount of gaps within the hedge however these are from a couple of failed hedge plants from the time of planting and are representative of less than 10% of its length. These gaps will be filled with new whips and by the increased canopy cover as a result of cutting on a 2-5 year rotation.
C1	Undisturbed ground and perennial vegetation >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: measured from outer edge of hedgerow, and is present on one side of the hedge (at least)		TQ3811 6537	no	While the majority of the sward underneath the hedgerow is undisturbed, it is partially disturbed by frequent ramblers along the footpath running adjacent to the hedge.
C2	Nutrient-enriched perennial vegetation Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.		TQ3811 6537	yes	Any plant species indicative of enriched soils (ie goose grass, nettle etc) were under the 20% threshold, ground flora will continue to be managed to ensure they do not dominate the sward below the hedgerow.
D1	Invasive and neophyte species >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.		TQ3811 6537	yes	No invasive or non-native species were recorded at the time of survey – if any were to colonise the hedgerow or its ground flora, they would be delt with as outlined within the HMMP.
D2	Current damage >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.		TQ3811 6537	no	The presence of foxes and badgers is evident from small gap sin the base of the hedgerow, this is difficult to avoid. Additionally human influences from frequent ramblers along the footpath running adjacent to the hedge causing a lack of undisturbed ground and reduced amounts of ground flora.
E1	Tree class (applicable to hedgerows with trees only) There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.		TQ3811 6537	yes	There are several age classes present, any veteran features that occur after a number of years of the management style outlined within the HMMP will be retained.
E2	E2. Tree health (applicable to hedgerows with trees only)		TQ3811 6537	yes	Trees are healthy and being managed on a 2-5 years cutting rotation. No adverse impacts on hedge species health is recorded from human, animal or pest activity.

	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.				
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Hedgerow

General Progress

Comments on progress towards project goals (MI-B01)

The hedge is of a healthy height but its width overall could be improved as it continues to be managed on a 2-5 years cutting rotation, it is showing signs of thickening up but requires a couple of years to fully widen and reach target condition.

Actions required in next management period (MI-B02)

Continue to cut once every 2-5 years. When cutting only cut back half of the hedges on farm at a time as cutting annually can be damaging to existing populations of invertebrates.

Continue to control weeds while maintaining grasses and hedge bottom flora by physical or chemical control methods, where possible avoid chemical control as it will likely damage desirable species as well.

Photographs of Progress (MI-F01)



3. Monitoring Report Conclusions

Key Future Actions MR-B05

For areas of G3c Other neutral grassland:

- Continue to rotationally graze using cattle and electric fencing
- Any areas identified with scrub encroachment should be grazed for longer to reduce the risk of succession by opportunistic scrub species.

For areas of H3h Mixed scrub:

- Spray off a circle surrounding or add another larger area of mulch around scrub planting to avoid competition from grasses
- Maintain the rabbit fencing surrounding the scrub planting

For areas of w1f: Lowland deciduous woodland:

- Identify and mark trees displaying veteran features/ with potential to become veteran trees
- Introduce a thinning routine within the existing woodland to increase structural diversity and open up the woodland floor for ground flora to establish

For the H2a5: Species Rich Native Hedgerow:

- Continue to manage on a 2-5 year cutting rotation
- Continue to control weeds while maintaining grasses and hedge bottom flora by physical or chemical control methods

Adaptive Management

Are any Adaptations to the Management Plans Targets and, or, Prescriptions Required? MR-B06

Habitat management principles outlined in the Companion Document are designed to deliver the desired habitat creation and enhancement, but these are assuming current or recent climate conditions. When these change, so will the management. While it is not yet known how these will change exactly, although some thought has been given to this in the Companion Document, continuous monitoring will have to identify where habitat creation and enhancement is being affected.

Where management techniques are not achieving the required characteristics of a habitat type consultation with the advisor, to advise of ways of remedying the situation through adaptations to management, will be undertaken. Where external factors, outside of the control of the project managers threatened the BNG objectives, then these will be discussed with the responsible authority to agree appropriate changes to management. At the time of survey no changes to management were identified to be beneficiary to the project, as the habitats reach the established stage monitoring may require alteration to reach target condition.

The areas of Other neutral grassland should continue to be to rotationally grazed using cattle and electric fencing, any areas with scrub developing such as field boundaries should be grazed for longer to reduce the risk of succession by opportunistic scrub species. The areas of h3h Mixed scrub should continue in accordance with the HMMP documents, including management of vegetation around scrub planting to avoid whips being smothered by grass ley growing alongside scrub plants and maintenance of the rabbit fencing to protect the young plants from herbivore damage. The management of the w1f: Lowland deciduous woodland habitat should be approached in year two by identifying and marking trees displaying veteran features/ with potential to become veteran trees to be allowed to develop into one as well as introducing a thinning routine within the existing woodland to increase structural diversity and open up the woodland floor for ground flora to establish. The H2a5: Species Rich Native Hedgerow on site should continue to be managed on a 2-5 year cutting rotation.

4.Activity Register

Creation MR-T03

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Enhancement MR-T04

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Management MR-T05

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments

Monitoring MR-T06

Date	Works Completed	Who Delivered Works	Who is Liable for Delivery	Signed Off by Ecologist	Ecologist Company & Name	Comments
15/08/2024	Year 1 annual monitoring	AM	AM	AM	CLM	

References

JNCC. (2006). *National Vegetation Classification: Users’ handbook*.

UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at: <https://www.ukhab.ora>)

Appendices

Appendix 1 – Quadrat species tables

G3c Other neutral grassland

Quadrat no	Species	DOMIN
1	White clover	4
	Black medic	4
	Ribwort plantain	3
	Yarrow	3
	Birds foot trefoil	2
	Oxeye daisy	2
	Crested dogstail	1
	Rough stalked meadow grass	2
	Perennial ryegrass	2
	Red fescue	2
	Sweet vernal grass	1
	Red clover	1
	Cocksfoot	1
	Wild carrot	2
	Hairy vetch	1
	Fodder burnet	2
	Common Catsear	2
2	Sainfoin	7
	Ribwort plantain	4

	Yarrow	4
	Birds foot trefoil	5
	Red clover	5
	Yarrow	5
	Oxeye daisy	1
	Mouse ear	4
	Black medic	2
	Self heal	2
	Common bent	2
	Perennial ryegrassgrass	4
	Wild carrot	1
	Red fescue	2
3	Knapweed	2
	Self heal	2
	Ribwort plantain	4
	Black medic	3
	Yarrow	4
	Birds foot trefoil	2
	Wild carrot	2
	Oxeye daisy	4
	Sainfoin	1
	Perennial ryegrass	3

	Sweet vernal	2
	Crested dogs tail	3
	Creeping bent	2
	Cocksfoot	3
	Red fescue	3
	Common bent	2
4	White clover	3
	Cats ear	1
	Ribwort plantain	4
	Wild carrot	2
	Red clover	4
	Birds foot trefoil	2
	Sainfoin	1
	Black medic	4
	Yarrow	4
	Red campion	1
	Knapweed	2
	Common vetch	1
	Self heal	3
	Rough stalked meadow grass	3
	Pale flax	1
	Fodder Burnet	1

	Crested dogs tail	3
	Pernnial ryegrass	3
	Red fescue	2
5	Mouse ear	1
	Black medic	4
	Sainfoin	2
	Crested dogs tail	3
	White campion	1
	Red clover	4
	White clover	2
	Birds foot trefoil	2
	Red campion	1
	Ribwort plantain	3
	Yarrow	4
	Common Catsear	1
	Scarlett pimpernel	1
	Wild carrot	1
	Creeping bent	1
	Perennial ryegrassgrass	3
	Soft brome	1
	Red fescue	2
6	Red clover	5

	Black medic	4
	Ribwort plantain	3
	Oxeye daisy	4
	Yarrow	4
	Birds foot trefoil	3
	Wild carrot	3
	Rough stalked meadow grass	3
	White campion	2
	Sainfoin	1
	Red fescue	4
	Perennial ryegrass	3
	Crested dogs tail	3
	Knapweed	2
7	Sainfoin	2
	White clover	3
	Scarlett pimpernel	1
	Black medic	5
	Cats ear	1
	Ribwort plantain	4
	Pale flax	1
	Yarrow	3
	Red fescue	3

	Crested dogs tail	3
	Cocksfoot	1
	Birds foot trefoil	2
	Common bent	2
	Oxeye daisy	3
	Rough stalked meadow grass	2
	Cooch grass	1
	Yorkshire fog	1
	Perennial ryegrass	2
	Red campion	1
	Muskmallow	1
8	Red campion	1
	Sainfoin	2
	White clover	3
	Scarlett pimpernel	1
	Black medic	5
	Cats ear	1
	Ribwort plantain	4
	Pale flax	1
	Yarrow	3
	Red fescue	3
	Crested dogs tail	3

	Cocksfoot	1
	Birds foot trefoil	2
	Common bent	2
	Oxeye daisy	3
	Rough stalked meadow grass	2
	Yorkshire fog	1
	Perennial ryegrass	2
9	White clover	3
	Cats ear	1
	Ribwort plantain	4
	Oxeye daisy	2
	Yarrow	4
	Birds foot trefoil	2
	Wild carrot	1
	Rough stalked meadow grass	4
	White campion	4
	Sainfoin	1
	Red fescue	3
	Perennial ryegrass	3
	Crested dogs tail	3
	Knapweed	2
10	Red clover	5

	White clover	4
	Ribwort plantain	3
	Oxeye daisy	4
	Yarrow	4
	Birds foot trefoil	3
	Wild carrot	3
	Rough stalked meadow grass	3
	White campion	2
	Cats ear	1
	Red fescue	4
	Perennial ryegrass	3
	Crested dogs tail	3
	Pale flax	2
11	Crested dogs tail	4
	White clover	2
	Cocksfoot	1
	Yorkshire fog	2
	Blackmedic	3
	Selfheal	4
	Oxeye daisy	3
	Yarrow	1
	Scarlett pimpernel	1

	Birds foot trefoil	1
	Ribwort plantain	4
	Rough stalked meadowgrass	2
	Red fescue	1
	Sweet vernal grass	1
12	Sainfoin	2
	Yarrow	3
	Birdsfoot trefoil	2
	Ribwort plantain	2
	Red clover	1
	Oxeye daisy	1
	Black medic	3
	Crested dogs tail	2
	Self heal	1
	Cocksfoot	1
	Common Hogweed	1
	Rough stalked meadowgrass	3
13	Oxeye daisy	1
	White clover	2
	Ribwort plantain	2
	Crested dogs tail	2
	Yarrow	2

	Self heal	1
	Black medic	2
	Yorkshire fog	1
	Golden oat grass	1
	Red fescue	2
	Common bent	2
14	Sainfoin	1
	Yarrow	1
	Birdsfoot trefoil	2
	Ribwort plantain	2
	Red clover	1
	Oxeye daisy	2
	Black medic	3
	Crested dogs tail	2
	Self heal	1
	Cocksfoot	1
	Common Hogweed	1
	Rough stalked meadowgrass	3
15	Oxeye daisy	1
	White clover	2
	Ribwort plantain	2
	Crested dogs tail	2

	Yarrow	2
	Self heal	1
	Black medic	2
	Yorkshire fog	1
	Rough stalked meadow grass	3
	Red fescue	2
	Common bent	2
16	Red clover	2
	Oxeye daisy	1
	White clover	2
	Ribwort plantain	2
	Crested dogs tail	2
	Rough stalked meadow grass	3
	Self heal	1
	Black medic	2
	Yarrow	2
17	Rough stalked meadow grass	3
	Self heal	1
	Yarrow	2
	Ribwort plantain	2
	Red fescue	2
	Common bent	2

18	Birdsfoot trefoil	2
	Ribwort plantain	2
	Red clover	1
	Crested dogs tail	2
	Rough stalked meadow grass	3
	Yarrow	2
	Self heal	1
	Oxeye daisy	1
19	Crested dogs tail	2
	Rough stalked meadow grass	3
	Self heal	1
	Oxeye daisy	1
	Red clover	2
	White clover	2
	Ribwort plantain	2
	Perennial ryegrass	2
20	Rough stalked meadow grass	3
	Perennial ryegrass	2
	Crested dogs tail	2
	Red clover	2
	Common bent	2
	Yarrow	1

	Red fescue	1
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H3h Mixed scrub

Quadrat no	Species	DOMIN
1	Nettle	7
	Hogweed	2
	Elder	5
	Hawthorn	6
	Blackthorn	6
	Bramble	5
2	Nettle	4
	Sycamore	1
	Hawthorn	5
	Bramble	5
	Yew	1
	Blackthorn	4
3	False oat grass	1
	Soft brome	1
	Nettle	5
	Elder	3
	Hogweed	1
	Bramble	3
	Old mans beard	1
	Deadly nightshade	1
	Cocksfoot	1

	Sycamore	3
	Cleavers	2
4	Oxeye daisy	4
	Wild Carrot	5
	Buckthorn	1
5	Oxeye daisy	4
	Wild Carrot	5
6	Oxeye daisy	4
	Wild Carrot	5
7	Oxeye daisy	4
	Wild Carrot	5
8	Oxeye daisy	4
	Wild Carrot	5
9	Oxeye daisy	4
	Wild Carrot	5
	Gorse	1
10	Oxeye daisy	4
	Wild Carrot	5
11	Oxeye daisy	4
	Wild Carrot	5
	Gorse	1
12	Oxeye daisy	4

	Wild Carrot	5
13	Oxeye daisy	4
	Wild Carrot	5
	Gorse	
14	Hawthorn	8
	Ground ivy	5
	Common Hogweed	1
	Bramble	2
	Elder	1
	Dogrose	4
15	Elder	5
	Nettle	3
	Ground ivy	2
	Hawthorn	2
	Bramble	1
	Woodavens	1
	Old mans beard	1
16	Hawthorn	4
	Ivy	1
	Old mans beard	2

W1f Lowland deciduous woodland

Quadrat no	Species	DOMIN
1	Elder	5
	Hawthorn	9
	Nettle	9
	Old mans beard	4
	Enchanters nightshade	3
	Bramble	7
2	Hawthorn	9
	Elder	5
	Nettle	9
	Wood avens	4
	Hogweed	3
	Ground ivy	7
3	Blackthorn	9
	Hawthorn	9
	Elder	7
	Wood avens	4
	Ground ivy	7
	Nettle	9
	Bramble	7
	Sycamore	6
	Crab apple	7

4	Walnut	5
	Hawthorn	5
	Wood avens	4
	Ground ivy	4
	Hogweed	2
	Annual meadow grass	2
5	Bramble	7
	Hawthorn	4
	Blackthorn	4
	Nettle	5
	Cleavers	3
	Wood avens	2
	Bryony	1