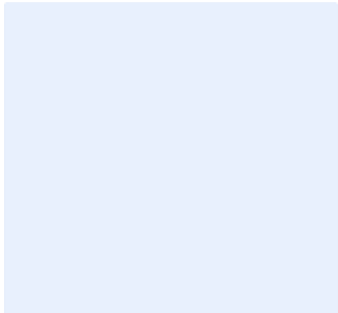


# Habitat Management and Monitoring Plan

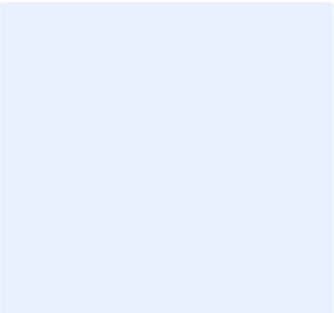
Site Name:	Kilman Down (Extension)
Date:	12/08/2025
Version:	V1.1



Author:



Client:



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Version Control

The version control is used for updates to the content. Record the initial version and further version control details in this table each time the management plan is altered throughout the management and monitoring period.

Version	Issue Status	Prepared by / Date	Approved by / Date
V1	Changes required	TOE	
V1.1	Pending	TOE / 12/08/2025	

Document Details

Provide ownership, copyright and licensing information within this table.

Authorship Details
<p>This HMMP was written for the Hendred Estate by the Trust for Oxfordshire’s Environment (TOE).</p> <p>Trust for Oxfordshire’s Environment The Old Counting House 82e High Street Wallingford Oxfordshire OX10 0BS</p>

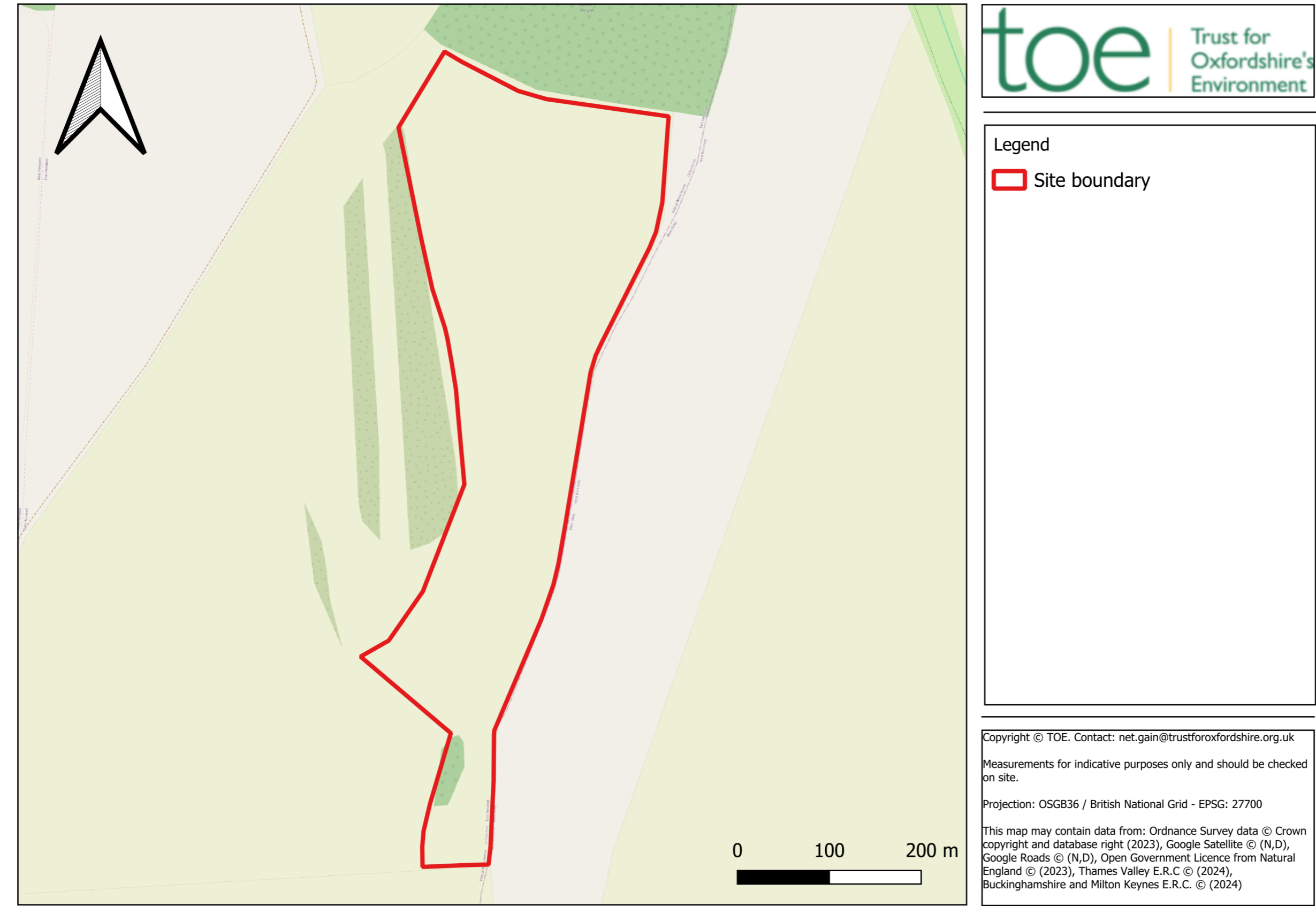
# 1. Project Background

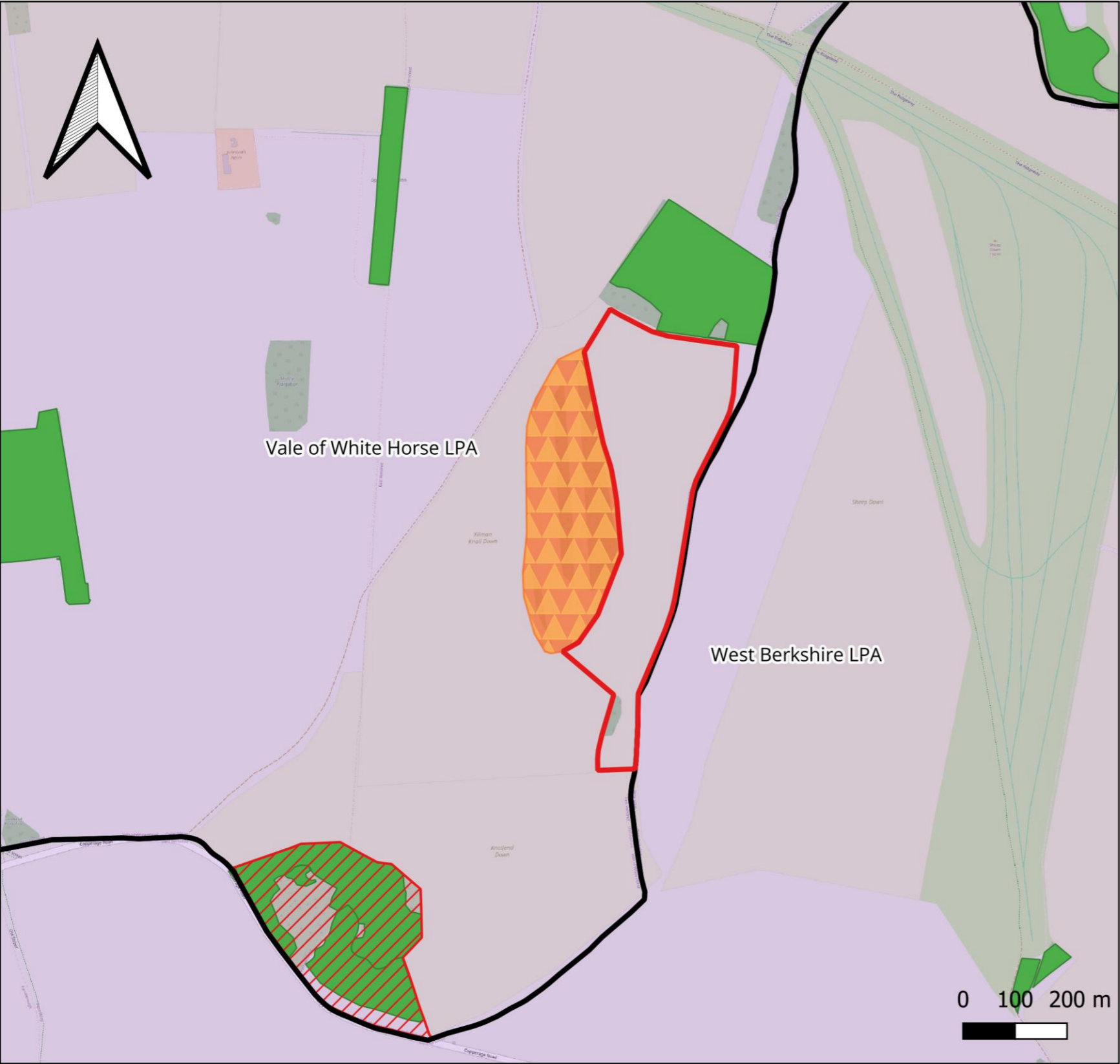
Summarise the key aspects of your management plan in this section. Table PB-B01 can be extended to suit the specific needs of individual projects.

Site Overview PB-B01	
Project type	Habitat Bank
Development Name and Address	N/A
BNG Project Name and Address	Kilman Down Extension
Author Organisation	Trust for Oxfordshire’s Environment (TOE)
Landowner	Edward Eyston
Land Manager	Julian Gold and successional farm managers
Responsible person/organisation for creating or enhancing the habitat	Julian Gold
Period covered by this management plan	2024 - 2056
Planning authority	Vale of the White Horse District Council
Planning reference (if applicable)	N/A
BNG register reference (if applicable)	
Central OS grid reference	SU 4583 4305
Metric revision/title	Statutory Metric
Are any Irreplaceable Habitats present onsite	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>

## Summary of Management Plan

Habitats to be Retained, Created and Enhanced PB-B02
<p>This project is an extension of an existing Habitat Bank, managed by the same land manager. The habitats to be created are approximately 13.9 ha of chalk grassland and 1 hectare of mixed woodland.</p>
Timescales for Actions PB-B03
<p>This project will be start in 2024 and finish in 2056, with the hope that the land will continue to be managed for biodiversity beyond this project.</p>
Monitoring Requirements PB-B04
<p>The habitats will be monitored by competent ecologists every year for the first five years, and then once every five years for the remainder of the project.</p> <p>This information will be collated into an annual report by the land manager and sent to TOE for evaluation for each year of the project.</p>
Required Consents and Licences PB-B05
<p>No licenses or consents are required.</p>
Funding PB-B06
<p>Funding will be provided through the sale of the biodiversity units generated by the project. As the broker, TOE will ensure that there are sufficient funds to ensure that the management activities prescribed in this HMMP take place.</p>
Legal Agreement PB-B07
<p>The delivery of the prescriptions in this HMMP will be secured by two legal agreements: one between the landowner and the Vale of the White Horse District Council, in the form of an s106, and a second in the form of a landowner agreement between the landowner and TOE, mainly concerning the commercial aspects required to ensure that the works can be properly funded.</p>





Legend

- Site boundary
- Kilman Down phase 1 (Existing)
- LPA boundaries
- Nature Recovery Network Core Zone
- Priority habitats
- Berkshire and Marlborough Downs National Character Area

Copyright © TOE. Contact: [net.gain@trustforoxfordshire.org.uk](mailto:net.gain@trustforoxfordshire.org.uk)

Measurements for indicative purposes only and should be checked on site.

Projection: OSGB36 / British National Grid - EPSG: 27700

This map may contain data from: Ordnance Survey data © Crown copyright and database right (2023), Google Satellite © (N,D), Google Roads © (N,D), Open Government Licence from Natural England © (2023), Thames Valley E.R.C © (2024), Buckinghamshire and Milton Keynes E.R.C. © (2024)

Phasing strategy

Will the proposed work measures be delivered in phases? PB-B08

Yes: ☐ No: ☐

The project will not be delivered in phases.

All habitat creation works will take place in the first two years of the project. In the subsequent 30 years, the project will be monitored annually by qualified professionals to ensure the units set out in the metric are delivered on the ground. TOE will be responsible for organising the ecological surveys and reporting the results to Vale of the White Horse Council.

This HMMP is a site-wide management plan.

Roles and Responsibilities

Provide details of the responsible persons and organisation(s) for delivering this management plan.

Ecologist or Other Professional Responsible for HMMP PB-B09

Name or Initials		George Lewis		
Organisation		Trust for Oxfordshire’s Environment		
Responsibility	Start Date:	Spring 2024	End Date:	Spring 2056

TOE is responsible for collating information from the relevant professionals (ecologists, contractors, etc) to produce this HMMP. Through ongoing consultation with these other professionals, and the landowners/land manager, the HMMP will be implemented. TOE is for responsible organising the ecological monitoring of the site and evaluating the annual reports from the project that are produced by the land manager.

Statement of Competency

Trust for Oxfordshire’s Environment has been at the forefront of Biodiversity Net Gain since 2018 and is considered a trusted and competent provider by the eNGO community, with a proven record both in BNG and other environmental projects. TOE has contributed to BNG policy development, commenting on all consultations, undertaking a Test and Trial project for Defra and collaborating with other BNG drivers such as the Wildlife Trusts and other LPA’s. TOE is the secretariat for the county-wide Task and Finish Group to help address implementation issues and work towards a consistent approach to good practice at a county level. TOE continues its membership of the Natural England Market Advisory Group and reports key policy and guidance information back to the BNG Task and Finish Group.

The staff have relevant degree-level qualifications and up to 25 years of experience working with landowners to develop and implement land management and long-term land use change (such as Two Moors Threatened Butterfly Project, River for Life). TOE staff are supported by an Advisory Panel, a voluntary group of specialists who contribute to project design. Where outside expertise is required, TOE has a list of preferred ecologists to call on and outsourced legal and business advice. BNG staff have completed relevant training for the use of the Metric, and all work is reviewed by independent 3<sup>rd</sup> parties with CIEEM membership.

Landowner or Land Manager PB-B10

Name or Initials		Julian Gold (land manager)		
Organisation		Hendred Estates		
Responsibility	Start Date:	Spring 2024	End Date:	Spring 2056

The land manager (Julian Gold and his successors) will be responsible for all habitat creation and maintenance activities on the site.

These responsibilities will include carrying out or overseeing:

- All habitat creation and enhancement work, either doing the work personally or using professional contractors
- Finding suitably competent contractors to undertake habitat creation works.
- Submitting annual reports to TOE for evaluation to ensure that the works detailed in this HMMP are producing the desired results. This will feed into the adaptive management strategy to alter the HMMP to suit on-site conditions.

The landowner must ensure that these activities are conducted in a way which is environmentally sensitive to the surrounding ecosystems and cultural landscape. Work is to be safely carried out by trained and competent individuals to maximise the benefits of this project for the environment and the local community.

Statement of Competency

Julian Gold is a farm Manager with over 30 years of experience and is particularly interested in Regenerative Agricultural systems and integrating food production with nature conservation.

Management Organisation(s) Responsible for Implementing the HMMP PB-B11

Name or Initials		N/A	
Organisation			
Responsibility	Start Date:		End Date:
Statement of Competency			

LPA or Responsible Body for Reviewing HMMP PB-B12

Name or Initials			
Organisation		Vale of the White Horse District Council	
Responsibility	Start Date:	2024	End Date: 2056
Assess the application to set up this Habitat Bank.			
Review and approve this HMMP.			
Sign Planning condition to secure site and creation/management and monitoring for full term.			
Register the BNG site on the land register.			
Receive and assess the monitoring reports provided by TOE.			

Land Use Summary

Overview of Baseline Site Use PB-B13

Area B in Figure 1: c.12.8 ha of the site is categorised as c1c7 Other cereal crops. The field is dominated by wheat *Triticum aestivum* with a small number of common native botanical species typical of arable fields located around the field boundaries including locally abundant barren brome *Anisantha sterilis* and fat hen *Chenopodium album* agg., alongside less frequent white campion *Silene latifolia*, small toadflax *Chaenorhinum minus*, black grass *Alopecurus myosuroides*, dove’s-foot crane’sbill *Geranium molle* and fool’s parsley *Aethusa cynapium*. A margin running along the west of the field has been planted with sweetcorn *Zea* sp potentially as a game cover crop. An 8m wide grass margin runs along the eastern boundary of the field categorised as c1a5 Arable field margins – tussocky. The sward supports abundant to locally abundant false oat-grass *Arrhenatherum elatius*, cock’s-foot *Dactylis glomerata* and red fescue *Festuca rubra*.

Overview of Proposed Site Use PB-B14

The proposed site will be managed to establish Other Neutral Grassland, with a small area of Lowland Calcareous Grassland to investigate the potential for Lowland Calcareous Grassland across the site.

Site Context Photos PB-F03

Tick if additional photographs are provided in the Appendices ☐ Reference: Click or tap here to enter text.



Site Baseline, Environmental Information and Associated Impacts Checklist PB-T01

Baseline and Environmental Information	Prompts for when these may be relevant. This is not an exhaustive list. Use your professional judgement to determine which are required for your HMMP	Check box if included	Document Reference or Reason if not included
Statutory / Non-statutory Designated Sites	Will your proposals lead to direct or indirect effects on designated sites?	<input checked="" type="checkbox"/>	<a href="#">See Designated Sites</a>
Protected and Notable Species	Does the presence or proximity of specific species on or near your site present any constraints or opportunities to project design or management?	<input checked="" type="checkbox"/>	<a href="#">Protected and notable species</a>
Invasive Non-Native Species (INNS)	Are any INNS present onsite that could affect the proposals?	<input type="checkbox"/>	No INNS were found onsite.
Biological Records Plan - Sites and Species	Does the presence of designated sites or specific species on or near the site present any constraints or opportunities to proposals?	<input checked="" type="checkbox"/>	<a href="#">Biological Records Plan</a>
Baseline Habitats Survey	Is this current and important HMMP information located in a separate document? If so, provide details on where it is located.	<input checked="" type="checkbox"/>	<a href="#">See Appendix 1</a>
Public Access	Has public access, or proposals to allow public access, influenced your management prescriptions? If so, how?	<input type="checkbox"/>	The site does not have public access and does not propose to allow public access.
Climate	Are local climate conditions and, or, climate change likely to impact the target habitat retention, creation or enhancement?	<input type="checkbox"/>	The changing global climate will likely affect the site as it will with habitats worldwide. However, because of the successful establishment of similar habitats nearby and the benefits of converting arable land back into a more natural state (which will help mitigate the impacts of climate change), the climate will not be included in this HMMP.
Geology and Topography	Any geological or topographical constraints or opportunities?	<input checked="" type="checkbox"/>	<a href="#">Geology and Topography</a>
Agricultural Land Status	Does the site support any land favourable for agricultural management? Could this affect the proposals?	<input type="checkbox"/>	The land has been used for cereal production but is the least productive land across the estate.
Soils and Substrates	Do soils and substrates present any constraints or opportunities?	<input checked="" type="checkbox"/>	<a href="#">Soils and Substrates</a>
Contaminated Land	If there is any contaminated land, will this present any constraints?	<input type="checkbox"/>	The site does consist of any land that has been classified as contaminated in the Contaminated Land Register
Hydrology and Drainage	Will the site hydrology present any constraints or opportunities?	<input type="checkbox"/>	The steep, sloping ground will help leach the soils of excess nutrients, increasing stress on plants and leading to a higher botanical diversity, which is what is desired at the site.
Flood Risk Zones	Is the site within a flood risk zone? Will that present any site management risks?	<input type="checkbox"/>	The site sits on top of an escarpment and is consequently categorised as Flood Zone 1, meaning it has a low probability of flooding from rivers and the sea, and therefore will not affect the proposed management tasks.
Landscape Character and Designations	Does the landscape character of the site present any constraints or opportunities?	<input checked="" type="checkbox"/>	<a href="#">Landscape Character and Designations</a>
Historic Land Use	Does the historic land use present any constraints or opportunities?	<input type="checkbox"/>	The site has historically been in arable cultivation, receiving regular inputs of artificial fertilisers. High soil nutrient levels hinder species-rich grassland creation. However, results from the soil analysis (see page 15) show that the soil nutrient levels are, or soon will be, at a level that is suitable for the proposed creation of lowland calcareous grasslands.
Historic Environment and Earth Heritage	Are there any historic environment designations? What are the implications for your plan?	<input type="checkbox"/>	There are no historic environment designations on the site or nearby that will be affected by the prescriptions in this management plan.
Other – please specify	Any other details - for example underground services or overhead powerlines, which may impact habitat management.	<input type="checkbox"/>	There are no underground services or overhead powerlines that will impact habitat management

Statutory and Non-Statutory Designated sites

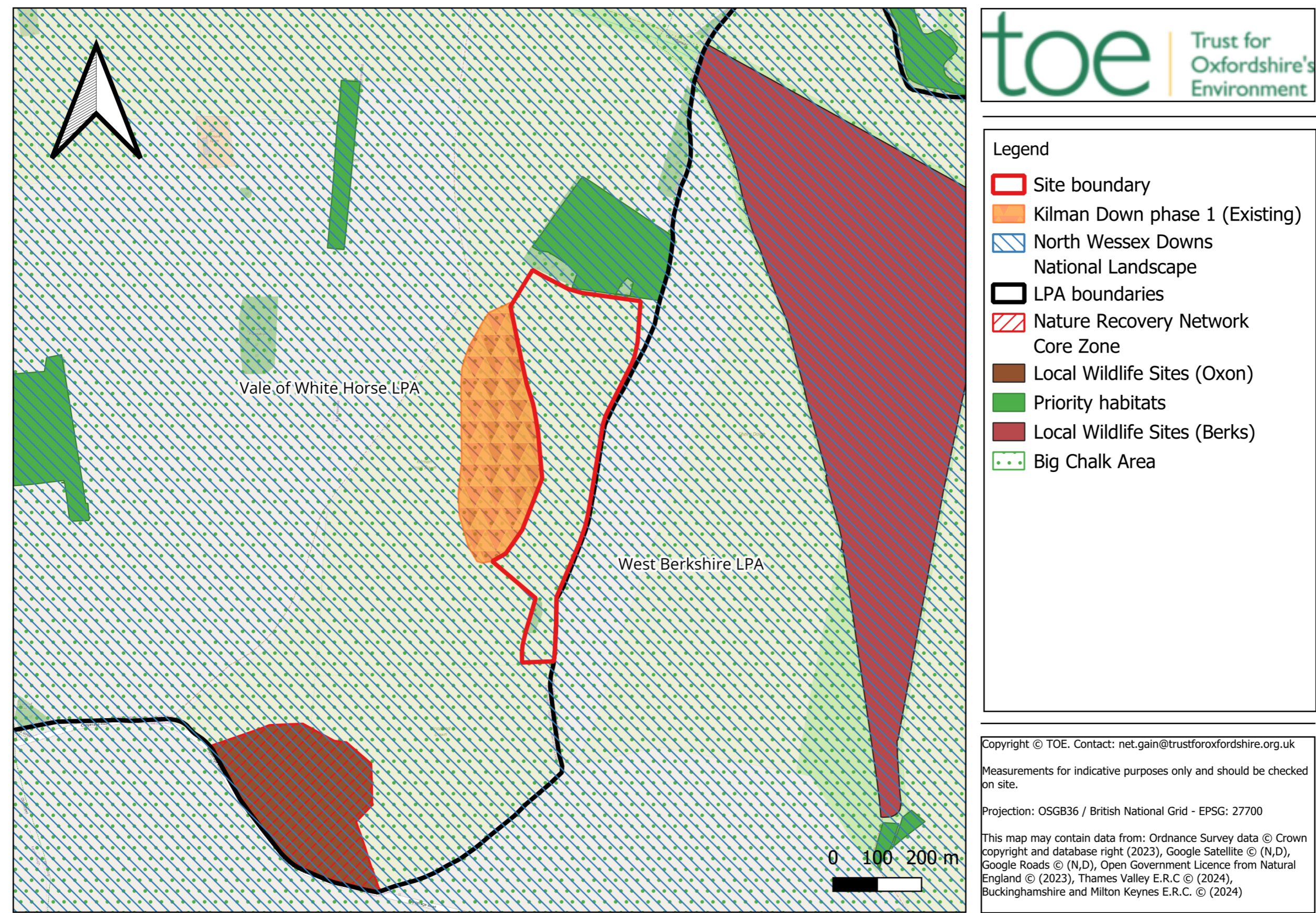
Site Name	Designation	Distance from Project Site	Potential Impact from Project
North Wessex Downs	National Landscape/AONB	Sites area and entire 2km buffer within designated site	Positive
Big Chalk Area	Non-statutory	Sites area and entire 2km buffer within designated site	Positive
Cow Down/Bury Down	Proposed Local Wildlife Site	310m east of site	Positive
Knollend Down	Local Wildlife Site	400m south west of site	Positive
Isley Bottom	Local Wildlife Site	1300m west of site	Positive
West Isley Bushes	Local Wildlife Site	2040m south east of site	Positive

Constraints and Opportunities for Project (BI-B02)

This project provides an opportunity to bring a further 14 hectares of land under nature-sensitive management in an area with a high density of statutory and non-statutory biological sites.

A key issue for this landscape is the loss and fragmentation of chalk grassland (page 80 in Landscape-Character-Assessment-Full-report1.pdf (northwessexdowns.org.uk)). This project will help to create chalk grassland: a key management requirement set out by the National Landscape Conservation Board. Around 9% of chalk grassland in the UK lies within the North Wessex Downs and supports nationally important populations of the early gentian, a scheduled protected species and one of Britain’s few endemic plants. The hope is that this site will, in time, revert towards this level of biodiversity (given its chalk bedrock) and increase the area of this key habitat in a nationally important landscape.

Two non-statutory designated Local Wildlife sites nearby (Knollend Down and Isley Bottom) are areas of established chalk grassland with patches of chalk scrub/woodland, supporting the prescriptions in this HMMP to create an additional chalk grassland in the area. The existing BNG project adjacent to the site was an area of mostly arable land that was sown with a chalk grassland seed mix in September 2022. After one year, results from the Year 1 site survey found that the habitat already passed the necessary condition assessment criteria to be classed as chalk grassland. The proximity of these sites gives us confidence that the same results are achievable at the proposed site.



Protected and Notable Species (BI-T02)

Species	Distance of Closest Record	Potential Impact from Project
Brown Hare	Seen on site regularly	Negligable
Linnet	Seen on site regularly	Positive
Yellowhammer	On site	Positive
Grey Partridge	On site	Positive
Small blue butterfly	680m west of site	Positive
Corn bunting	900m west of site	Positive
Lapwing	630m north of site	Positive

Summary of Protected and Notable Species (BI-B03)

--

Constraints and Opportunities for Project (BI-B04)

This project will play a vital role in nature’s recovery in the area, specifically around chalk grassland restoration. This site will provide a biodiverse refuge for calcareous plants and the species that rely on them, improving connectivity in an arable-dominated landscape. The grasslands have been seeded with good-quality native seed mixes, containing calcareous indicator plant species such as agrimony, kidney vetch, salad burnet, quaking grass, and sheep’s fescue. Having secured the funds for long-term management, we hope that this habitat will be able to support the wide variety of animals that rely on it: particularly invertebrates, such as Duke of Burgundy, Small- and Chalkhill blue butterflies, chalk carpet moths, bloody-nosed beetles, carder bees and phantom hoverflies, and also the birds and mammals that lurk higher up the food chain.

# Geology and Topography

## Geological Information (EI-B07)

The site sits on a Lewes Nodular Chalk Formation - Chalk. Sedimentary bedrock formed between 93.9 and 86.3 million years ago during the Cretaceous period, indicative of the North Wessex Downs and Chilterns AONB and the Ridgeway National Trail.

## Potential Impact to Scheme (EI-B08)

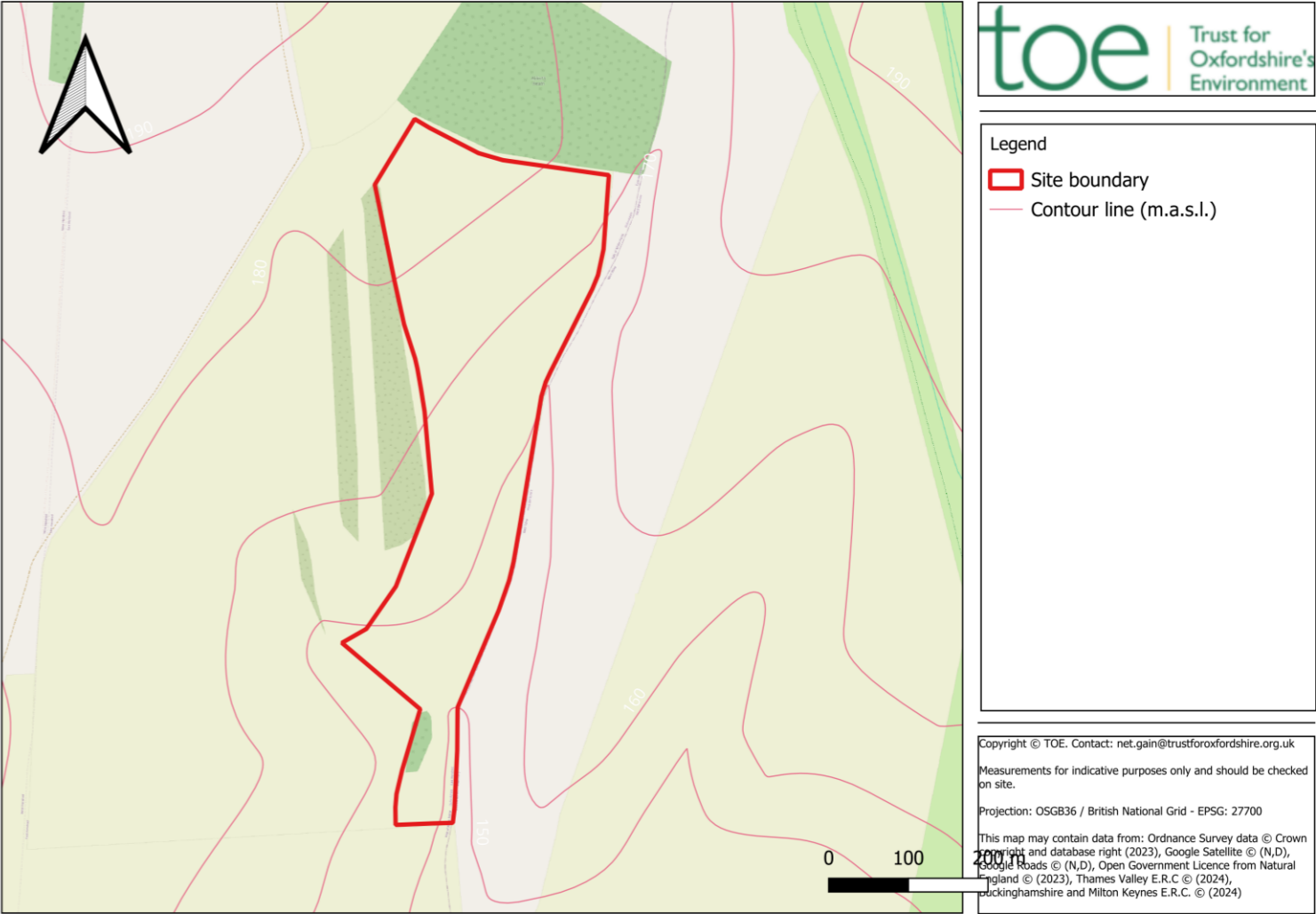
The chalk bedrock will help the establishment of lowland calcareous grassland. It will also support the creation of other calcareous grassland.

## Topography (EI-B09)

There is a reasonable gradient difference of about 30 metres from the northwest corner of the site to the south east corner (see image opposite)

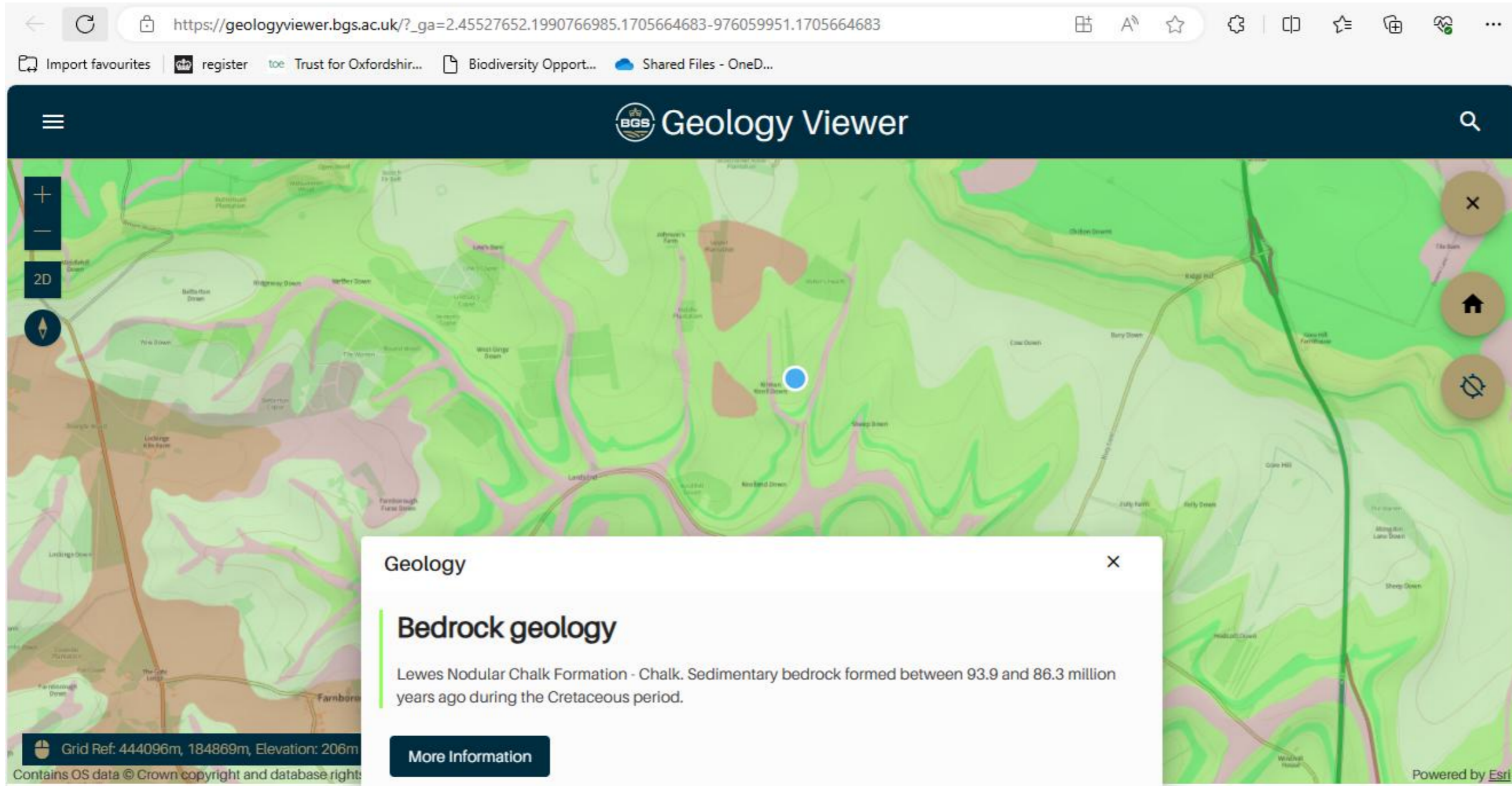
## Potential Impact to Scheme (EI-B10)

Very shallow and stony soil and sloping ground will help to leach excess nutrients from the soil. This will increase stress on plants leading to higher botanical diversity.



## Geology and Topography Plan (EI-F02)

The blue dot indicates the site location



Soils and Substrates (EI-T02)

Parcel Refs	Soil Texture	pH	Nitrogen (N)	Phosphorous (P)	Potassium (K)
Area B	Silt loam	8.1	0.78%, (high)	28 mg/l (low index 3)	152 mg/l, (Index 2-)

A detailed soil analysis can be found in the baseline ecological survey attached in Appendix 1.

Summary of Soils Information (EI-B13)

Although N, P and K levels are relatively high at present due to application of fertiliser in the past, these nutrients are likely to be leached out over time from the silty loam soil on sloping ground. The soils are very shallow and stony (chalk) which will help the establishment of lowland calcareous grassland. Nutrient stripping could be considered to reduce these nutrients prior to seeding to facilitate the creation of lowland calcareous grassland. Overall, the site is considered suitable for the creation of Other Neutral Grassland aiming towards lowland calcareous grassland.

Potential Impact on Project (EI-B14)

Soil nutrient levels are marginally high at the moment but likely to be leached from the soil over time. Very shallow, stony, and sloping soils will help to counteract this by increasing stress on plants leading to higher botanical diversity.

Soils and Substrate Plan (EI-F04)



# Landscape Character and Designations

## Summary of Landscape Character and Designations (EI-B21)

The site is situated in the Blewbury Downs Landscape Character Area of the North Wessex Downs National Landscape.

The Blewbury Downs have a strong structural landform of rolling downland with gently rounded or flat-topped hills, intersected by dry valleys. A steep, deeply convoluted scarp cut through by dry valleys, forms the northern edge allowing long views out including to the development at Didcot on the AONB boundary. The downs are dominated by arable farmland, with little enclosure, apart from occasional post and wire fences creating a large-scale open landscape. In contrast the thin soils on the steep slopes of the escarpment are extremely important for the extent of unimproved flower-rich chalk grassland that they retain, including five sites designated as SSSI, supporting an important range of flora and fauna. In addition to the close-grazed chalk grassland, these steep slopes also contain a mosaic of chalk scrub, including juniper and small beech hangers and hazel coppice. Broadleaved woodland occurs in long sinuous blocks along the slopes. Isolated Bronze Age round barrows are highly visible along the scarp edge. Other prominent skyline features include an Iron Age hillfort on Blewburton Hill and a folly on Churn Hill.

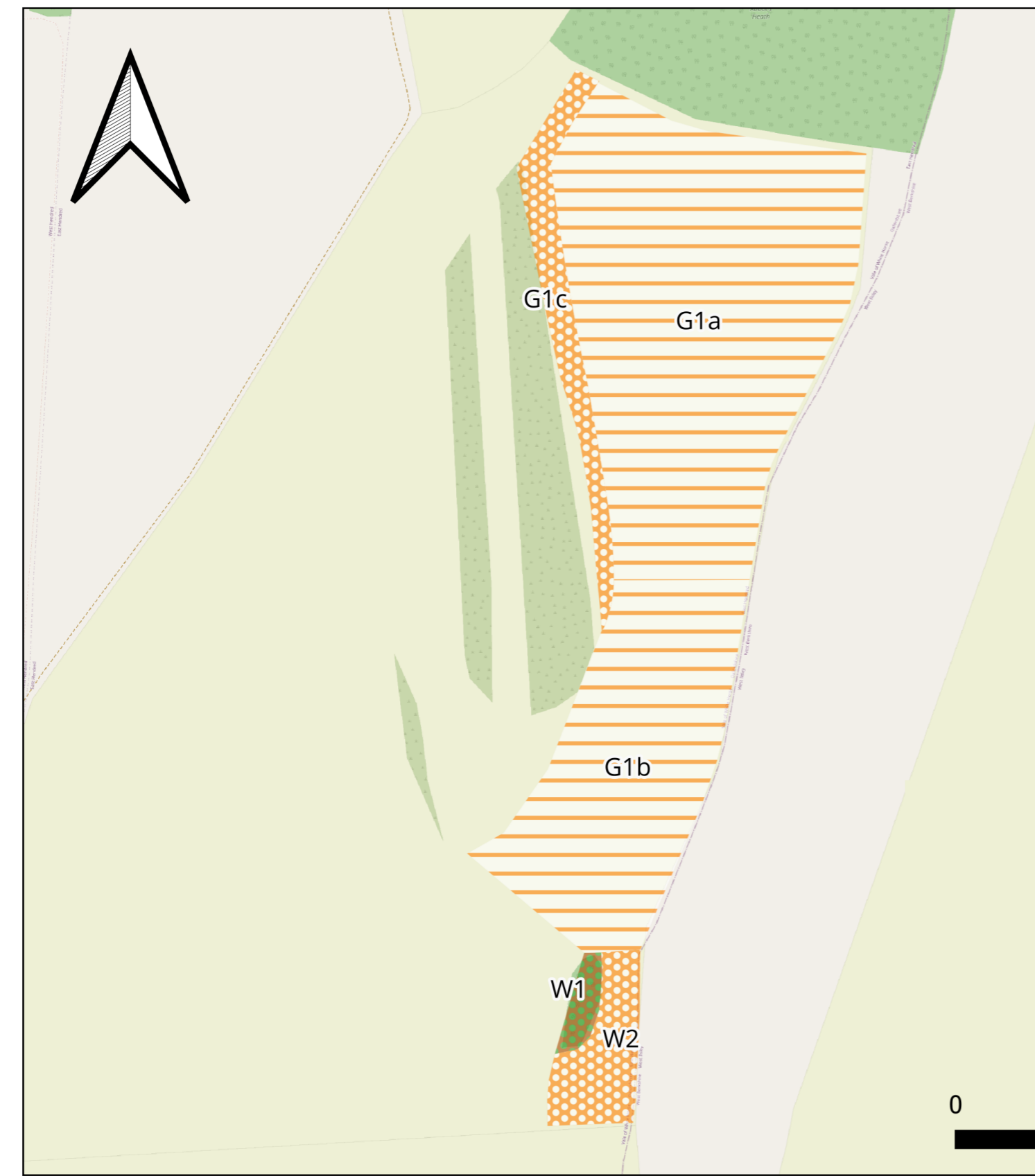
## Potential Impact on Project (EI-B21)

A key issue for this landscape is the loss and fragmentation of chalk grassland (page 80 in [Landscape-Character-Assessment-Full-report1.pdf \(northwessexdowns.org.uk\)](#)). This project will help to conserve and enhance the surviving chalk grassland habitats and create of characteristic chalk hanger woodlands: key management requirements set out by the AONB conservation board.

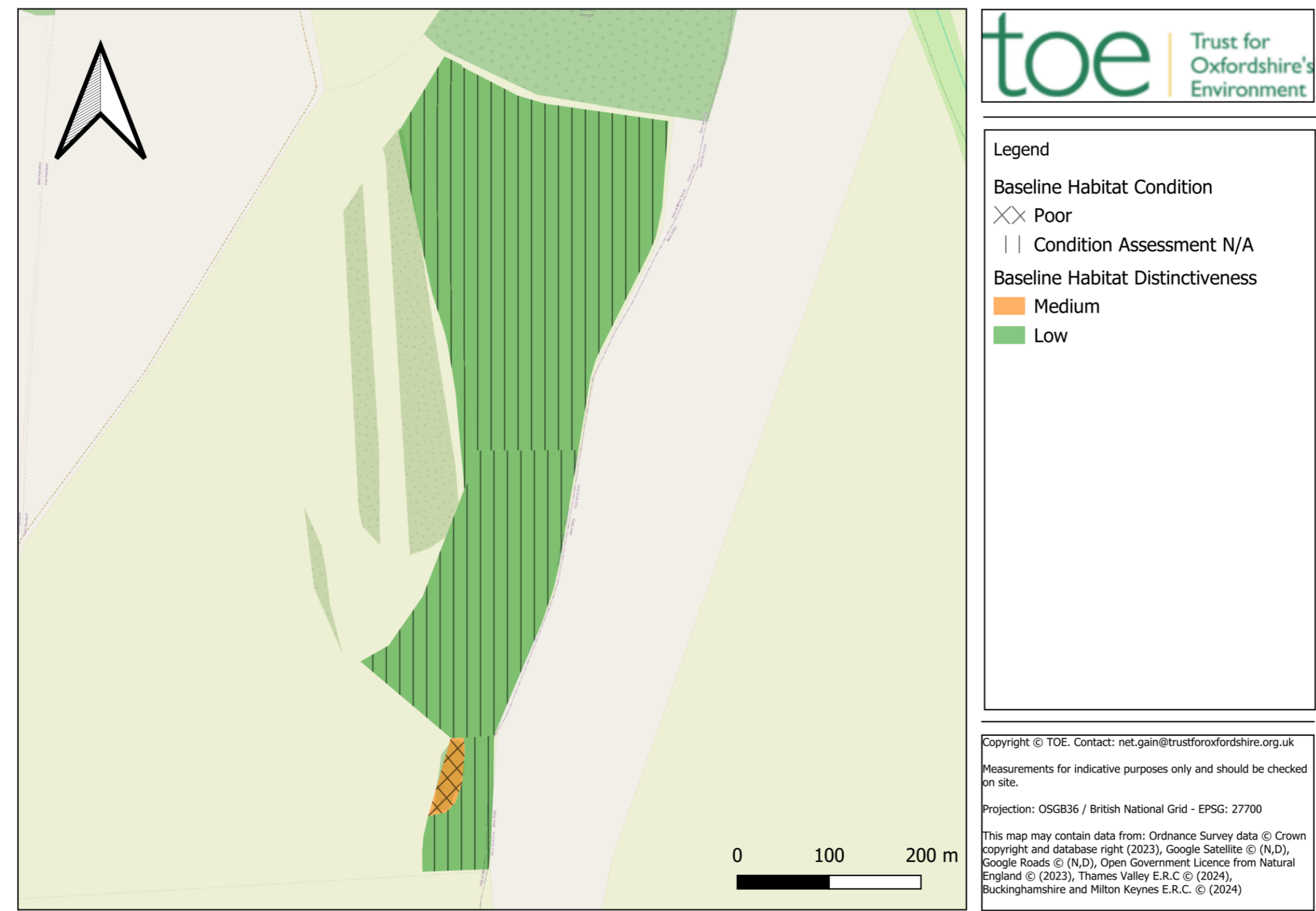
Baseline Habitat Descriptions and Condition

Habitats (BI-T04)

Parcel Refs	Habitat Type and Code	Irreplaceable	Priority	Description and Condition Justification	Condition	Area (ha)
G1a	Other cereal crops – c17c	No	No	The field is dominated by wheat <i>Triticum aestivum</i> with a small number of common native botanical species typical of arable fields located around the field boundaries including locally abundant barren brome <i>Anisantha sterilis</i> and fat hen <i>Chenopodium album</i> agg., alongside less frequent white campion <i>Silene latifolia</i> , small toadflax <i>Chaenorhinum minus</i> , black grass <i>Alopecurus myosuroides</i> , dove’s-foot crane’sbill <i>Geranium molle</i> and fool’s parsley <i>Aethusa cynapium</i> . The habitat type c1c7 Other cereal crops are both categorised as cropland and therefore a condition assessment is not applicable.	N/A	7.22
G1b	Other cereal crops – c17c	No	No	The field is dominated by wheat <i>Triticum aestivum</i> with a small number of common native botanical species typical of arable fields located around the field boundaries including locally abundant barren brome <i>Anisantha sterilis</i> and fat hen <i>Chenopodium album</i> agg., alongside less frequent white campion <i>Silene latifolia</i> , small toadflax <i>Chaenorhinum minus</i> , black grass <i>Alopecurus myosuroides</i> , dove’s-foot crane’sbill <i>Geranium molle</i> and fool’s parsley <i>Aethusa cynapium</i> . The habitat type c1c7 Other cereal crops are both categorised as cropland and therefore a condition assessment is not applicable.	N/A	4.48
G1c	Other non-cereal crops c1d8	No	No	The sward supports abundant to locally abundant false oat-grass <i>Arrhenatherum elatius</i> , cock’s-foot <i>Dactylis glomerata</i> and red fescue <i>festuca rebra</i> . <i>The habitat type c1d8 Other non-cereal crops are both categorised as cropland and therefore a condition assessment is not applicable.</i>	N/A	1.2
W1	Other woodland; mixed	No	No	The parcel is dominated by sycamore <i>Acer pseudo-platanus</i> (50 trees) and Corsican pine <i>Pinus nigra</i> (29), with 2 <i>hawthorn Crataegus monogyna</i> shrubs and 1 pedunculate oak <i>Quercus robur</i> . The understory is 95% stinging nettle <i>Urtica dioica</i> and 5% garlic mustard <i>Alliaria petiolate</i> .	Poor	0.15
W2	Other non-cereal crops	No	No	<i>The habitat type c1d8 Other non-cereal crops are both categorised as cropland and therefore a condition assessment is not applicable.</i>	N/A	0.81



Baseline Distinctiveness and Condition Plan (BI-F03)



## 2. Planned Management Activities

### Management Plan Aims and Objectives PM-B01

The aim of this project is to extend an existing biodiversity net gain project. Works begun at the existing project (Kilman Down) in 2022 to restore approx. 5 ha of chalk grassland to predominantly arable land. Based on the ecological reports from the first year of the existing project, the habitat creation is developing well and justifies the proposed extension of the proposed project.

The aim of this project (Kilman Down Extension) is to achieve maximum gains for biodiversity within the farm and surrounding landscape.

This will be done by

- Reverting the arable land adjacent to the existing site from arable to chalk grassland (a priority habitat)
- Planting native, broadleaved tree species on arable land.

### Principles Informed by Design Stage

#### Design Principles Informed by Baseline Information PM-B02

The overarching aim of this proposal is supported by the evidence of the successful creation of chalk grassland in the adjacent field. This gives the land manager, land owner, and LPA more confidence that the results are repeatable. The site is within Big Chalk Project area and North Wessex Downs AONB where chalk grassland is a priority habitat

The proposals are further supported by the following baseline information:

Geology:

The site sits on a Lewes Nodular Chalk Formation - Chalk. Sedimentary bedrock formed between 93.9 and 86.3 million years ago during the Cretaceous period, indicative of the North Wessex Downs and Chilterns AONB and the Ridgeway National Trail. The chalk bedrock will help the establishment of lowland calcareous grassland.

Soils:

Although N, P and K levels are relatively high at present due to the application of fertiliser in the past, these nutrients are likely to be leached out over time from the silty loam soil on sloping ground. The soils are very shallow and stony (chalk) which will help the establishment of lowland calcareous grassland.

Baseline Habitat Type	Target Habitat Type	Parcel / Feature Refs	Baseline Condition	Targeted Condition	Years to Targeted Condition	Condition Assessment Targets
Cereal crops	g2c Other calcareous grassland	G1a	N/A	Moderate	10	Moderate condition will be targeted by achieving a pass of between 3 and 4 criteria from criteria A, B, C, D and E. Passing criterion A is essential.
Cereal crops	g2a Lowland calcareous grassland	G1b	N/A	Moderate	10	Moderate condition will be targeted by achieving a pass of between 3 and 4 criteria from criteria A, B, C, D and E. Passing criterion A is essential.
Non-cereal crops	g2c Other calcareous grassland	G1c	N/A	Moderate	10	Moderate condition will be targeted by achieving a pass of between 3 and 4 criteria from criteria A, B, C, D and E. Passing criterion A is essential.
Other woodland; mixed	w1g Other woodland; broadleaved	W1	Poor	Moderate	15	Moderate condition will be achieved by scoring between 26 and 32 in the relevant condition assessment sheets.
Non-cereal crops	w1g Other woodland; broadleaved	W2	N/A	Moderate	15	Moderate condition will be achieved by scoring between 26 and 32 in the relevant condition assessment sheets.

Habitat Retention

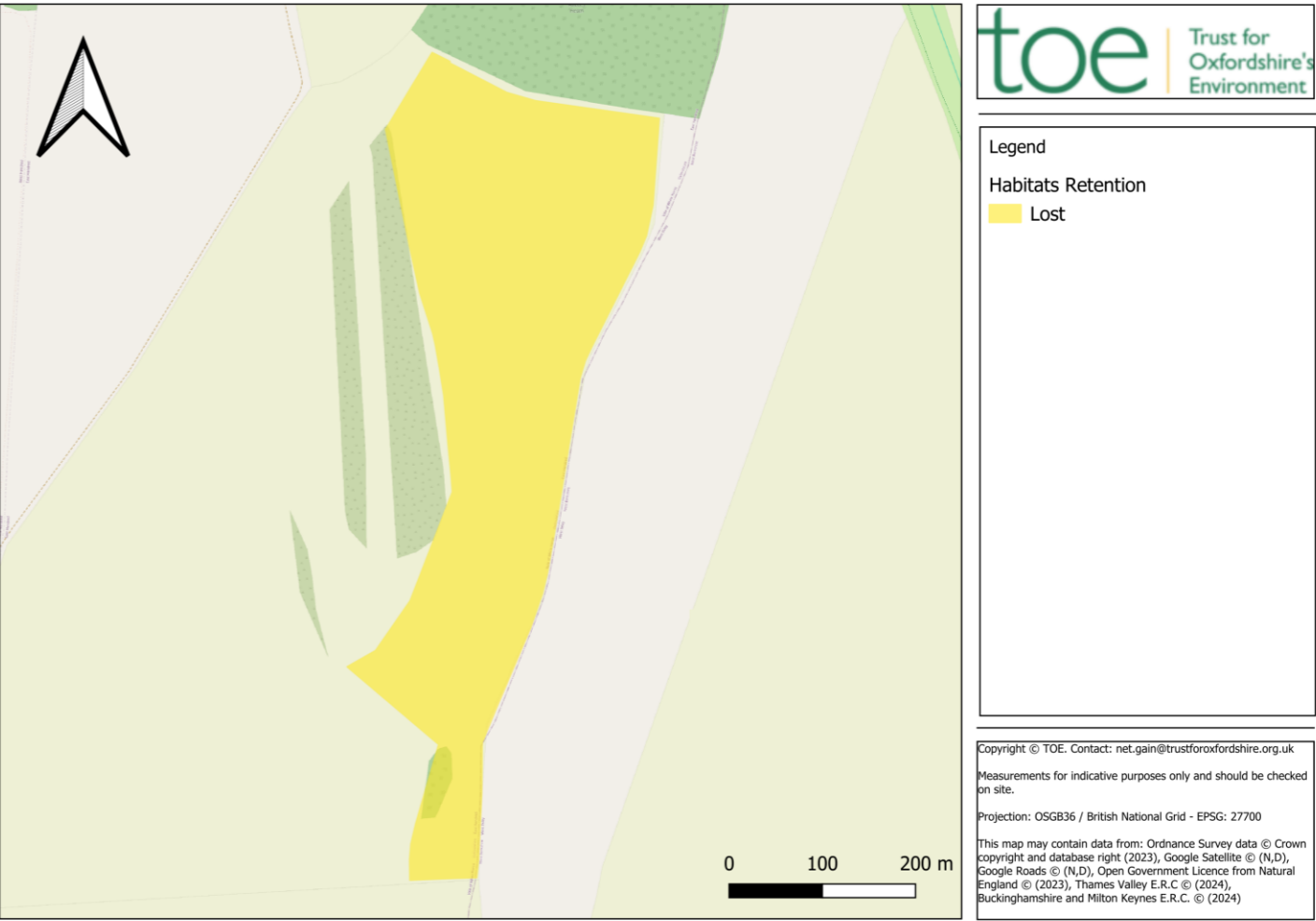
Measures to be Implemented to Protect Retained Habitats PM-03

No habitats will be retained in their baseline condition.

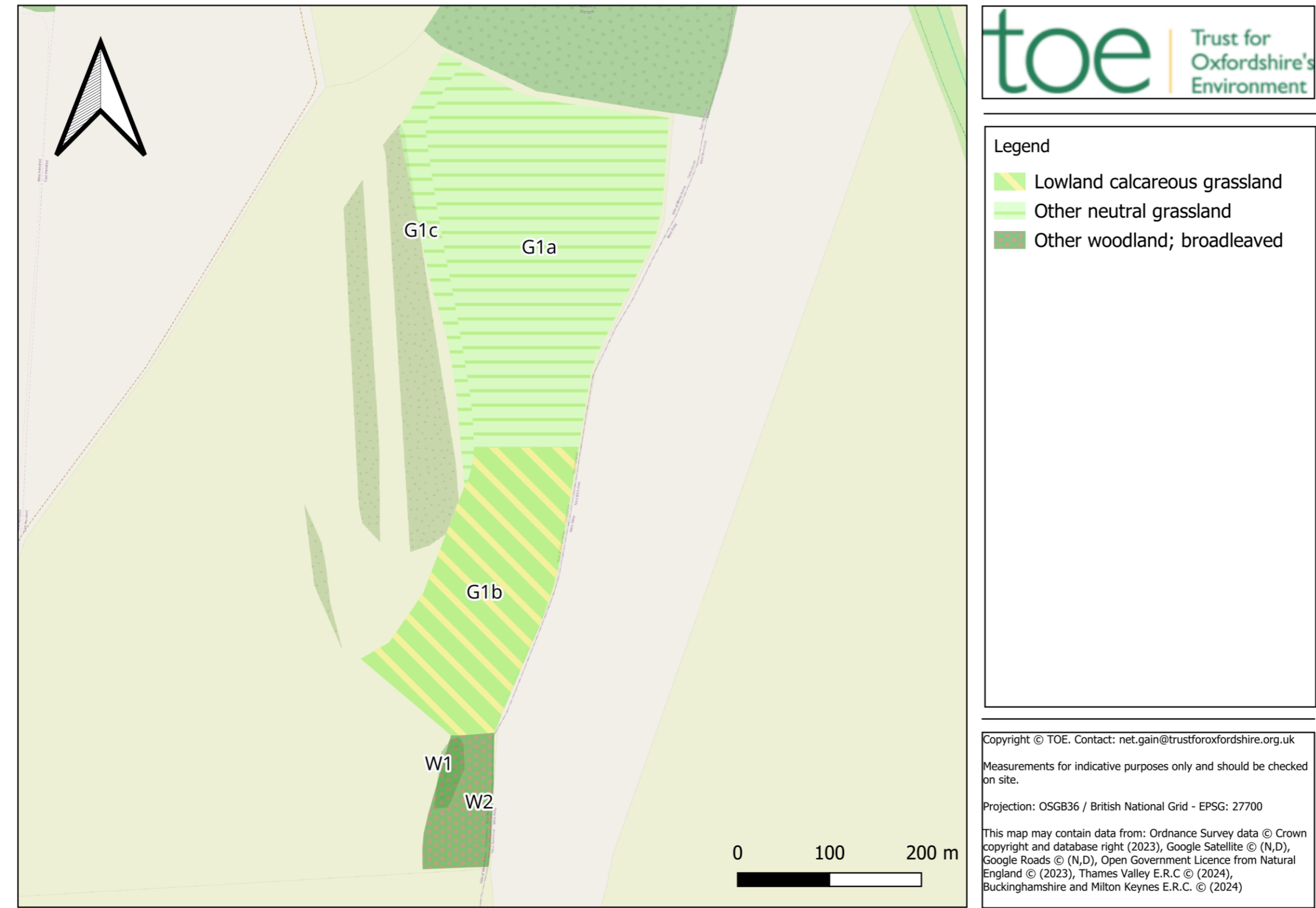
Specification of Protective Measures to be Used PM-04

Habitat Retention Plan PM-F01

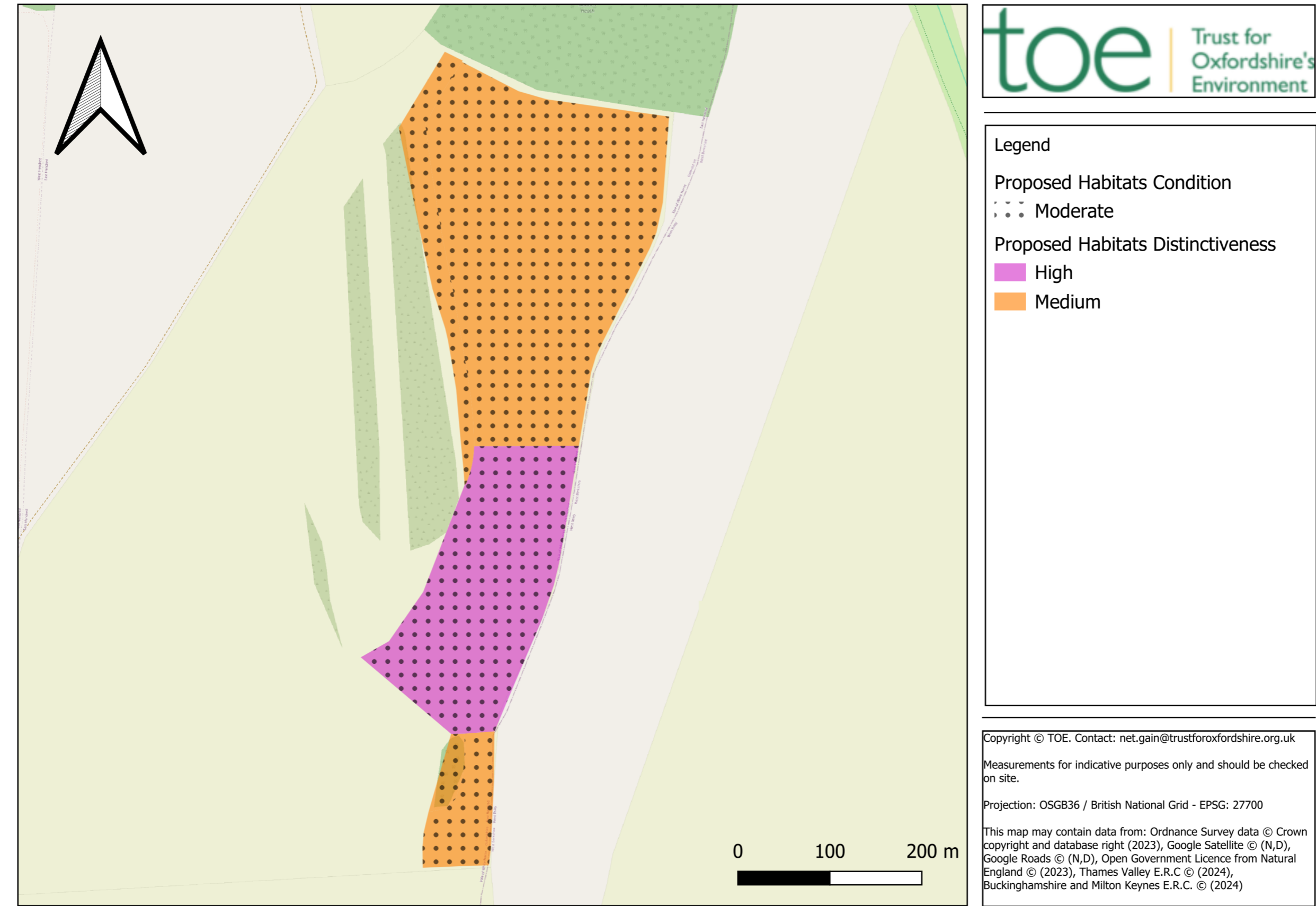
Provide a plan with the locations of habitats to be retained (including whether to be protected and, or, enhanced) and those to be created under this HMMP. Include parcel references if needed. Tick box if any additional plans are provided in the Appendices ☐ . Reference: [Click or tap here to enter text.](#)



Target Habitats Plan



Target Habitats Condition and Distinctiveness Plan



Creation, Enhancement and Management Targets and Prescriptions

Lowland calcareous grassland and Other Neutral Grassland

Creation timeline

Parcel	Creation task	Frequency	Ja	F	M	A	Ma	Ju	J	Au	S	O	N	D
G1a, G1b, and G1c	Cultivate soil/create stale seed bed	Once (timing is weather and donor site dependent)			X	X				X	X			
G1a, G1b, and G1c	Sow wildflower seed mix	Once (timing is weather and donor site dependent)			X	X				X	X			
G1a, G1b, and G1c	Roll fields to ensure seeds make contact with soil	Once (after sowing)				X					X			
G1a, G1b, and G1c	Top if perennial weeds/grasses have grown too vigorously over winter	As required (could be two or three times in the first year)			X	X	X	X	X					
G1a, G1b, and G1c	Manage as a hay meadow for first 5 years. Cut to 150 mm. Leave cut material in situ for a week to drop seeds.	Once							X	X				
G1a, G1b, and G1c	Light grazing, removing livestock if poaching levels exceed 20%	As required	X	X							X	X	X	X

Existing arable land

Activity 1) Source suitable chalk (calcareous) grassland seed mix. The composition will depend on existing soil fertility.

- Possible seed sources: Emorsgate seeds, Charles Flower Seeds, Cotswold Seeds

Activity 2) Prep ground in August for sowing.

- Create a stale seed bed.
- Plough to bury the surface vegetation, harrow or rake to produce medium tilth, and roll to produce a firm surface.
- Sow or drill the wildflower/grass seed mix at a rate of **20kg per hectare**.
  - If the seed is mixed with kiln-dried sand it improves the flow of seed through the spreader and sown. Up to four passes of the spreader may be required to ensure good distribution of the seed. The field will then be rolled with to ensure good contact with the soil.

Activity 3) Top the grass and remove the arisings in May to knock back grasses and unwanted plants, such as thistles and docks.

- **This may need several cuts in its first few years.** The cutting regime will need to take account of annuals such as yellow rattle. Yellow rattle tends to be a short plant (max 15cm). Inspect the field before topping and adjust cutting height.
- For thistle control, cut **just** before they seed. This is usually between June and early July.

Habitat	Management task	Frequency	Ja	F	M	A	Ma	Ju	J	Au	S	O	N	D
Grassland	If managing as a hay meadow, remove livestock during these months and allow grass to grow. Cut to 150 mm. Leave cut material in situ for a week to drop seeds. Rake and remove arisings from the site.	Once per year					x	x	x	x				
	If not managing as a hay meadow, continue to graze livestock, ensuring most of the sward (70-80%) is between 5-15cm tall.	On-going					x	x	x	x				
	Invasive species/dominant perennial weeds removed by topping/spot spraying	As required annually					x							
	Light winter grazing, removing livestock if poaching levels exceed 20%		x	x							x	x	x	x
Supplementary reseedling (if required)														
	Cut (to 50mm) and remove grass and/or graze livestock	Once							x	x				
	Option 1: Spread green hay	Once (timing is method and weather dependent)								x	x			
	Option 2: Sow wildflower seed mix	Once (timing is method and weather dependent)								x	x			
	Roll fields to ensure seeds make contact with soil	Once (after sowing)								x	x			
	Graze with livestock, removing livestock if poaching levels exceed 20%	After sowing and/or annual hay cut	x	x	x	x				x	x	x	x	x

## Ongoing management prescriptions

### 1) Manage as a hay meadow:

- Cut between late July and mid-September. The later you leave it, the more plants will get a chance to set seed.
- Leave 10% uncut to create a diverse sward height. Rotate the area left uncut every two years.
- Reintroduce livestock in mid-August or after the hay cut is taken. If livestock grazing is required, gently grazing with about 0.5 livestock units per hectare will happen from the first cut until March the next year.
  - The livestock will be taken off when the ground gets too waterlogged or if more than 20% of the area shows signs of poaching. This stocking level is suggested to begin with, but it can change based on onsite conditions.

### 2) From year 10 onward: If results from botanical monitoring suggest that additional seed should be added to meet the habitat condition criteria A, do this in the Spring or Autumn, depending on seed/green hay availability.

- Prior to seeding, take a hay cut to 50mm, followed by aftermath grazing (sheep or cattle) to minimize sward height.
- Create 50-75% bare ground using a disc or power harrow.

### Sowing using seed mixture **between late July and early September**

- Sow using British native-origin wildflower seed at a rate **of 7.5 kg/ha**. A suitable seed mix should be used, one which includes Yellow rattle (yellow rattle competes with grasses and helps less-dominant wildflower species establish).
- Sow or drill the seed.
- To help the seeds grow, they need contact with the soil. If sowing, roll the field right after spreading the seed or by letting livestock, especially cattle, graze the area.
- Continue grazing over autumn to keep grass sward low and increase germination rates.

Green hay should only be taken once every three years from donor grassland. Taking it more often may start to remove too much seed-rain from the field and it may become impoverished. The donor grassland should be treated as normal during the intervening years to maintain the wildflowers and grasses. It's important to carefully record the species composition of the donor grassland to assess whether or not the transplant has been a success.

Green hay is a great way to maintain the local character of wildflower grasslands and boost wildflowers in fields with few species. However, a drawback is that early blooming plants might have already dispersed seeds, and late-blooming ones might still be flowering when the green hay is collected. This can lead to missing these plants, potentially requiring extra efforts to enhance specific wildflowers later on. If the species mix needs to be increased, taking hay cuts from the donor field at different times of the year can help this (i.e., later spring or late summer).

- The process of cutting, transporting and spreading green hay needs to be undertaken in under half a day, ideally 3 hours. Green hay heats up quickly when baled and can cause the seeds to die.
- Spread green hay (using a much spreader or forks).

- Introduce livestock or roll the spread hay to ensure seeds contact bare earth.

Measures to reach condition

Target Habitat				g1c Lowland calcareous and g2c Other calcareous grassland		
Condition Assessment Criteria		Targeted	Relevant Parcels	Creation Approach	Enhancement Approach	Management Approach
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type.  <b>Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</b>	Yes	G1a, G1b, and G1c	Prepare seed bed by cultivating soil.  Sow native wildflower mix.		Monitor progress. Reseed as necessary.  Do not add fertilisers to the land.  Remove competitive weeds.
B	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 insects, birds and small mammals to live and breed.	Yes	G1a, G1b, and G1c		Graze with cattle/sheep in autumn, monitoring sward heights	Graze every year once creation completed.  To not cause overgrazing. Stock to be removed if sward height becomes too low (most of the sward is less than 5cm).  Graze with cattle in spring and autumn, as conditional allows monitoring sward heights
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	Yes	G1a, G1b, and G1c	Habitat to be created on bare ground.		Introduce livestock to create bare ground.  Do not graze as to cause large areas of bare ground. Remove stock if ground too wet or being damaged.  Do not supplementary feed.
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	G1a, G1b, and G1c		Remove areas of bracken if they occur, by cutting and removing.  Monitor scrub creation to ensure no encroachment into grassland area.	Do not allow bracken and scrub to encroach onto the site.
E	Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area.	Yes	G1a, G1b, and G1c		Annual Rapid Assessments (RAs) to be carried out on condition of grassland vegetation by independent party – adjust management regime as required (weed control, grazing numbers, etc)	Limit impact of human disturbance wherever possible.  Remove invasive non-native species correctly every year.

Target Habitat			g1c Lowland calcareous and g2c Other calcareous grassland			
Condition Assessment Criteria		Targeted	Relevant Parcels	Creation Approach	Enhancement Approach	Management Approach
	If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.					
F	There are 10 or more vascular plant species per m <sup>2</sup> present, including forbs that are characteristic of the habitat type.  <b>Note – this criterion is essential for achieving Good condition for non-acid grassland types only.</b>	No	G1a, G1b, and G1c		Surveys to be undertaken at set times	Follow all prescriptions and meet milestones

Woodland creation

A new woodland will be planted at the southern end of the site, adjacent to an existing woodland. The site will be fenced to exclude deer and other herbivores.

Creation and management timeline: Year 1+

Enhancement task	Parcel	Frequency	Ja	F	M	A	Ma	Ju	J	Au	S	O	N	D
Fell 10 of the weaker sycamores. Leave the existing pines, hawthorns and oak.	W1	Once											x	x
Fence to protect from grazing, including gates to allow access for management and light grazing in future	W1 and W2	Once, replace as required.	x											x
Plant tree / shrub whips	W1 and W2	Years 1-5	x	x	x								x	x
Weed	W1 and W2	Years 1-3				x	x	x						
Clearance/thinning	W1 and W2	Every 5 years	x								x	x	x	x
Deer/squirrel control	W1 and W2	As required	x	x	x	x								

Winter 2024-2025

Remove 10 of the weaker existing sycamores. This can either be done by felling or girdling. Girdling some trees will leave standing dead wood in the parcel which is beneficial to a host of wildlife species. A high number of sycamore seedlings were found in the surrounding arable land and excessive seeding could be detrimental to the planned grassland and woodland restoration so removing some of the existing trees will reduce the available seed bank.

The area will be fenced to reduce herbivore damage.

Tree planting will take place during the winter months. The trees will be planted as whips and protected with canes and spirals.

Plant at least five different tree species and some shrub species, all of which are native and most of which are broadleaved. A species list can be found in Appendix 2.

- Yew (*Taxus baccata*) is tolerant of alkaline soils and could be planted occasionally
- Blackthorn should not be planted on the edge of the new woodland facing the grassland restoration as it can spread prolifically through root runners.

Plant tree species in groups (at least 10 plants) to reduce the competition that faster-growing species (e.g., cherries and birches) will exert on the slower-growing species (e.g., oaks and beeches).

Plant two rows of mainly shrub species around the edge of the woodland as well as some through the woodland to create an understory.

**Winter 2025-2026**

Assess the establishment of the newly planted trees and beat up any failures.

Control weeds for the first 3 years.

Years 2-30 after final habitat creation year:

Rapid Assessment’s (RA) to be carried out to assess establishment success, natural regeneration rates, and competition (weeds) problems

feedback loop to management created to control for any issues arising.

**Ongoing management prescriptions**

If the sycamore seedlings from the existing mature trees start to dominate and outcompete the planted native species, remove them using an appropriate method (thinning/spraying).

Every five years, create/maintain a diverse woodland structure. To help trees and shrubs grow better and make room for ground plants, use methods like thinning, coppicing, and pollarding. It's suggested to work on only 5% of trees at a time using these techniques. Focus on semi-mature trees for management, keeping those with the potential to become mature trees. Also, any trees showing signs of decay will be kept providing standing deadwood. Light livestock grazing will be used to maintain open patches of ground to encourage herbaceous growth on the woodland floor.

Cut wood will be retained to add decaying wood habitat.

Ground flora

Difficult to achieve. Manage woodland for the tree species found naturally in Beech woodlands in the area. Consider sowing woodland seed mix containing Field layer with Deschampsia flexuosa, Vaccinium myrtillus or Calluna vulgaris. Ground flora may be sparse if the tree canopy is very dense.

Deer/squirrel control

- Assess deer and/or squirrel damage levels twice per year.
  - If most of newly planted trees are showing signs of deer damage (bark stripping or buds being nipped), consider lethal control using a professional contractor.
  - If >25% of the mature trees are showing signs of bark stripping from squirrels, consider control methods (live trapping, spring trapping, shooting), carried out by a professional.

Measures to reach condition

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Targeted?	Enhancement measures	Milestones	Prescriptions for management for 30 years
Age distribution of trees	Three age-classes <sup>1</sup> present.	Two age-classes <sup>1</sup> present.	One age-class <sup>1</sup> present.	Yes		All initial planting will be completed by March 2025.	Repeat the process at year 10 or 15 to encourage age distribution of trees, depending on the success of the initial planting.
Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland <sup>2</sup> .	Evidence of significant browsing pressure is present in 40% or less of whole woodland <sup>2</sup> .	Evidence of significant browsing pressure is present in 40% or more of whole woodland <sup>2</sup> .	Yes		Year 10	Ensure fencing is not damaged: replace where necessary.
Invasive plant species	No invasive species <sup>3</sup> present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species <sup>3</sup> <10% cover.	Rhododendron or cherry laurel present, or other invasive species <sup>3</sup> >10% cover.	Yes			Monitor invasive species presence. If cover exceeds 10%, consider control options. Mechanical control is a strong preference over chemical control. If chemical control is required, herbicides should be applied by a qualified operator, taking the necessary precautions when applying near the watercourse and sensitive fen habitat.

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Targeted?	Enhancement measures	Milestones	Prescriptions for management for 30 years
<b>Number of native tree species</b>	Five or more native tree or shrub species <sup>4</sup> found across woodland parcel.	Three to four native tree or shrub species <sup>4</sup> found across woodland parcel.	Two or less native tree or shrub species <sup>4</sup> across woodland parcel.	Yes	Only plant native species. Species of woody shrubs should also be included in the planting scheme to increase structural complexity.	Initial planting completed by spring 2025.	Ensure there are consistently healthy populations of 3 – 4 native tree species and plant native species where necessary.
<b>Cover of native tree and shrub species</b>	>80% of canopy trees and >80% of understory shrubs are native <sup>5</sup> .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native <sup>5</sup> .	<50% of canopy trees and <50% of understory shrubs are native <sup>5</sup> .	Yes		Initial planting will be completed by spring 2025.	Monitor changes in canopy cover and species composition. If native species number forming the canopy drops below 50%, thin non-native species and replant with native species.
<b>Open space within woodland</b>	10 - 20% of woodland has areas of temporary open space <sup>6</sup> . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted <sup>7</sup> .	10 - 20% of woodland has areas of temporary open space <sup>6</sup> . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted <sup>7</sup> .	<10% or >40% of woodland has areas of temporary open space <sup>6</sup> . But if woodland <10ha has <10% temporary open space, please see Good category <sup>7</sup> .	Yes		Year 10	Introduce livestock/use mechanical means to maintain open space in the woodland.
<b>Woodland regeneration</b>	All three classes present in woodland <sup>8</sup> ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland <sup>8</sup> .	No classes or coppice regrowth present in woodland <sup>8</sup> .	Yes	Coppice (e.g., hazel, ash, alder, elder species) to encourage bushy regrowth.	Year 10	Herbivore pressure will hinder natural regeneration. Maintain fences.
<b>Tree health</b>	Tree mortality less than 10%, no pests or diseases and no crown dieback <sup>9</sup> .	11% to 25% mortality and/or crown dieback or low-risk pest or disease present <sup>9</sup> .	Greater than 25% tree mortality and or any high-risk pest or disease present <sup>9</sup> .	Yes			Monitor crown dieback and overall tree health. If any felling is required, leave deadwood in situ.

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Targeted?	Enhancement measures	Milestones	Prescriptions for management for 30 years
<b>Vegetation and ground flora</b>	Recognisable NVC plant community <sup>10</sup> at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community <sup>10</sup> at ground layer present.	No recognisable woodland NVC plant community <sup>10</sup> at ground layer present.	No			Difficult to achieve. Manage woodland for the tree species found naturally in Beech woodlands in the area. Consider sowing woodland seed mix containing Field layer with Deschampsia flexuosa, Vaccinium myrtillus or Calluna vulgaris. May be sparse if beech canopy is very dense.
<b>Woodland vertical structure</b>	Three or more storeys across all survey plots or a complex woodland <sup>11</sup> .	Two storeys across all survey plots <sup>11</sup> .	One or less storey across all survey plots <sup>11</sup> .	Yes	Plant, in natural clusters, native species to diversify the vertical structure. Include shrub species, such as holly <i>Ilex aquifolium</i> ,		
<b>Veteran trees</b>	Two or more veteran trees <sup>12</sup> per hectare.	One veteran tree <sup>12</sup> per hectare.	No veteran trees <sup>12</sup> present in woodland.	No	One or two trees with veteran potential to be identified within the plot. The tree should be chosen based on it's species, DBH, and the presence of interesting features <a href="#">Veteran Trees: A guide to good management - IN13 (naturalengland.org.uk)</a> . <b>IF</b> a suitable tree can be identified, manage tree for veteran qualities. Consider Halo-thinning, premature ringing of limbs.	Identification and management to occur in winter 2024/25. Monitoring at the 10-year mark	Adaptive management based on how the selected tree responds to treatment.
<b>Amount of deadwood</b>	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities <sup>13</sup> .	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 <sup>13</sup> .	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 <sup>13</sup> .	Yes	The aim is to get different types of deadwood to accumulate within the plot. Any arisings from initial thinning works to remain in the plot. Creation of brash piles, long piles, and windrows where possible. Standing dead wood to be left alone and <b>not</b> be felled.	Monitor at the 5-year mark. If dead wood is not present in multiple forms in at least 25% of the parcel at this stage, consider ringing or felling to achieve this.	

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Targeted?	Enhancement measures	Milestones	Prescriptions for management for 30 years
Woodland disturbance	No nutrient enrichment or damaged ground evident <sup>14</sup> .	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground <sup>14</sup> .	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground <sup>14</sup> .	Yes	Where the ground is damaged, reduce livestock access.	Year 5, 10, 15, 20, 25, 30	Nutrient enrichment can occur when there is a buildup of feces in an area. Exclude livestock, particularly cattle, from the area if possible to help reduce this.

Footnotes

Footnotes below refer to the EWBG woodland condition assessment details: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from: [Woodland Wildlife Toolkit \(sylva.org.uk\)](#)

The woodland condition assessment survey methodology is outlined in the EWBG toolkit. However the criteria on this sheet are those specific to the Statutory Biodiversity Metric and must be used when assessing woodland condition.

**Footnote 1** - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 – 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an ‘age-class’ of young trees.

**Footnote 2** - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

**Footnote 3** - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Alianthus altissima*.

**Footnote 4** - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

**Footnote 5** - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

**Footnote 6** - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

**Footnote 7** – Given the increased ratio of edge habitat to woodland where the woodland is <10ha.

**Footnote 8** - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the ‘young’ category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

**Footnote 9** - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

**Footnote 10** - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this.

**Footnote 11** – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

**Footnote 12** - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

[Keepers of time: ancient and native woodland and trees policy in England \(publishing.service.gov.uk\)](#)  
and:  
[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](#)

EWBG INDICATOR 12 is the relevant indicator.

**Footnote 13** – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

**Footnote 14** - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Habitat Creation and Management – Risk Register and Remedial Measures PM-T02

Risk Identification Date	Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
Spring 2027	Grassland	Failure to complete creation/management works in year resulting in delay towards condition assessment and sward enhancement on rest of parcel	Known or unforeseen delays to undertaking any task as laid out in the HMMP (eg weather, poor health, availability of labour)	Defra metric would need to be re-calculated to reflect delay to creation/management and works undertakes as soon as possible, including any remedial works.
Spring 2027	Grassland	Extreme weather (drought/flood) resulting in seed failing to germinate or the sward damaged, reverting condition or increasing time to reach condition.	Extreme weather event	To consider the effect of the extreme weather and take action accordingly e.g. need to re-seed at the next growing season; need to leave livestock off the fields to enable growth to recommence. Defra metric would need to be re-calculated
Summer 2032	Grassland	Unable to reduce soil nutrient levels resulting in failure to reach target habitat or condition	Poor ecological survey results or soil tests showing unsuitable soil conditions for target habitat and condition.	Complete soil nutrient reduction as outlined in plan. Defra metric may need to be re-calculated.
Autumn 2025/Spring 2026	Grassland	Pest bird populations eat the seed so that there is no growth.	Failure to germinate in levels anticipated due to pest damage	To employ bird pest control measures to prevent further incidents.
Autumn 2025/Spring 2026	Grassland	Unable to sow seed to establish grassland sward or enhance where condition assessment not being met.	Shortage of additional seed	Seek alternative seed producers or take a cut of seed from nearby, local wildflower meadows (if they can be found) with similar ecological status

Risk Identification Date	Habitat Type	Risk Factor	Trigger for Action	Remedial Measure
Autumn 2025/Spring 2026	Grassland	Low availability of green hay to establish grassland sward or enhance where condition assessment not being met	Unable to obtain enough green hay to establish other neutral grassland sward	Have alternative seeding methods accounted for or additional sites with the availability of green hay.
Winter 2027/28	Woodland	Newly planted trees failing to establish	10% of targeted number of newly planted trees found to be dead during years 1-10.	Beat up and replace failed trees

### 3. Monitoring Schedule

Monitoring Strategy

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

TOE will be responsible for returning a Monitoring Report in a format provided by Vale of the White Horse District Council. To complete this report TOE require the landowner/agreement holder to provide annual reporting by landowner, HMMP reviews and ecological monitoring.

The landowner will submit annual progress reports to TOE using the reporting template provided. Photos will be provided before, during and after works during habitat creation. Evidence is required of the date of the habitat creation works and the date that each aspect of management is carried out on an annual basis, (e.g. supplier invoices). TOE will come to site to carry out site inspections as and when required. The landowner agrees to allow all reasonable requests to access the site by a TOE representative. It is also noted that Vale of the White Horse District Council will require access for their own monitoring purposes.

Ecological monitoring, carried out by a reputable, qualified ecologist, will take place throughout the life of the project to monitor the changes in botanical species assemblages and biodiversity uplift. Biodiversity units will need to be calculated and reported along with the ecological data. The monitoring will be carried out in a consistent way and will be reported in a standardised format. All monitoring reports will be sent to Thames Valley Environmental Records Centre (TVERC).

Scrub (such as Dogwood) and coarse grass (such as tor-grass *Brachypodium pinnatum*) areas should be included in the monitoring scope.

Monitoring Methods and Intervals MS-T01 – From the landowner/habitat bank manager to TOE

Habitat type	Monitoring Method	Monitoring Interval	Project year	Date of required record submission
All habitats	Site appraisal by walk through	Annually	All	With annual report
Grassland	Rapid assessment of grassland	Every 3-5 years		With annual report
Grassland	Full ecological survey and condition assessment during summer months (June-August). This will be carried out by an appropriately qualified ecologist and in line with Biodiversity Net Gain metric guidance on condition assessment.	Year 1, 2, 3, 4, 5, 10, 15, 20, 25	Year 1, 2, 3, 4, 5, 10, 15, 20, 25	With annual report
Woodland	Full ecological survey and condition assessment during summer months (June-August). This will be carried out by an appropriately qualified ecologist and in line with Biodiversity Net Gain metric guidance on condition assessment.	Year 1, 2, 3, 4, 5, 15, 25	Year 1, 2, 3, 4, 5, 15, 25	With annual report
All habitats	Landowner annual report, covering all management activities on TOE template	Annually	1-30	December 31 all years
All habitats	Fixed and non-fixed-point photography	Flowering period	annually	With annual report December all years
All habitats	Soil tests	every 3 years	1,3,6,9,12,15,18,21,24,27,30	With annual report

Monitoring Reports – from TOE to the Vale of the White Horse District Council

Following completion of habitat creation and initial enhancement works, prepare for your monitoring report for the Local Planning Authority or Responsible Body. You should monitor each habitat type comprising the BNG project. Provide sufficient detail for the reviewing authority to assess the progress. The ‘Monitoring Report Template’ can help you do this. The requirements and regularity with which the monitoring reports are required are at the discretion of the LPA or Responsible Body. Prepare the monitoring requirements below.

Monitoring Report Schedule MS-T02

Provide details of the person or organisation that will be responsible for submitting the monitoring reports. Also state the responsible organisation for receiving and reviewing the reports.

Organisation Responsible for Submitting the Monitoring Reports	Organisation Receiving and Responsible for Reviewing Reports
The Trust for Oxfordshire’s Environment (TOE)	Vale of the White Horse District Council

Provide details of when the monitoring surveys and reports will be undertaken and submitted. You can extend the table and adjust according to your required schedule.

Reports will be submitted to the council as soon as reasonably practicable, given the window to survey habitats and the time it takes to produce thorough ecological reports.

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
Y1	February	February to March	
Y2	February	February to March	
Y5	February	February to March	
Y10	February	February to March	
Y15	February	February to March	

Y20	February	February to March	
Y25	February	February to March	
Y30	February	February to March	

Summary of Adaptive Management Approaches (MS-B02)

Observations and notes from day-to-day management are important for delivering adaptive management. Consider how this information will be captured and fed into changes in management prescriptions, then through to subsequent monitoring reports.

Regular robust monitoring, and reporting to the responsible authority, should identify issues early on. Then you can make conscious decisions to implement effective actions. Most likely triggers for action and remedial management actions can be found in the [Risk Register and Remedial Measures PM-T02](#) above.

If the BNG objectives are affected by external factors, it is important to agree decisions on changes to the management prescriptions and targets with the responsible authority. Following the review, record any changes in this management plan and schedule.

A final audit of the project will be sent to the council at the 30-year endpoint.

The Habitat Monitoring Report will be submitted in the following format:

- 1) Introduction
- 2) Methodology
- 3) Results
- 4) Evaluation
- 5) Remedial actions
- 6) HMMP updates
- 7) Monitoring Schedule Updates
- 8) Appendices
  - a. Habitat map
  - b. Condition Assessment sheets
  - c. Metric calculation results

The Report will be submitted to the council as an electronic document (where possible, as PDF or Microsoft Word documents). Supporting documents (e.g., species lists, condition assessment sheets, and photographs) should also accompany the ecological report.

# 4. Appendices

## Appendix 1

Biodiversity Net Gain (BNG) baseline survey for Trust for  
Oxfordshire’s Environment (TOE) biodiversity offset  
application

Kilman Down, Oxfordshire

September 2023

Client details	Trust for Oxford Environment (TOE)		
Date of Survey work	30 <sup>th</sup> June 2023	Date of Report	6 September 2023
Report version	2986_06.09.2023	Authors	Robert Gray BA Hons MCIEEM and Iain Corbyn MA (Oxon) MSc MCIEEM CEnv



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Appendix 2

Plant type	Scientific name	Common name
Trees		
	Acer campestre	Field maple
	Quercus robur	Pedunculate (English) oak
	Carpinus Betula	Hornbeam
	Fagus sylvatica	Beech
	Tilia cordata	Small-leaved lime
	Taxus baccata	Yew
	Prunus avium	Wild cherry
	Sorbus aucuparia	Rowan
	Betula pendula	Silver birch
Shrubs		
	Crataegus monogyna	Hawthorn
	Prunus spinosa	Blackthorn
	Rosa canina	Dog rose
	Viburnum opulus	Gelder rose
	Ligustrum vulgare	Privet