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Rother
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Rother District Council

Biodiversity Audit

Land at Coronation Cottages, Tinkers Lane, Ticehurst

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1.1. Introduction

In March 2023, MKA Ecology Ltd was commissioned by Rother District Council to undertake Biodiversity Audits of 23 sites owned and managed by the district council. The aims of the biodiversity audits were to provide baseline information on the type and quality or condition of these areas with a view to identifying measurable opportunities for positive biodiversity interventions using the Biodiversity Metric. This report refers specifically to Land at Coronation Cottages, Tinkers Lane, Ticehurst (referred to in this report as Land at Coronation Cottages).

1.2. Methodology

The audits were performed using standard methodologies; habitats were defined according to the UK Habitat Classification and habitat conditions were assessed assist the 'Biodiversity Net Gain' metric schema (Natural England, 2023). By assigning values to habitats by their 'distinctiveness' or rarity, and their condition, the overall measurable biodiversity contained within the surveyed sites was calculated using the Defra Biodiversity Metric (v4.0). In principle, larger/longer, more valuable and better condition habitats score more highly. A detailed methodology is provided at the end of this document.

1.3. Site status

The site is located within the High Weald National Landscape (formerly known as Area of Outstanding Natural Beauty (AONB) and High Weald National Character Area (NCA).

Land at Coronation Cottages is not currently covered by any international, national or local nature conservation designations. It is located 0.5km south-east of Bewl Water Local Wildlife Site (LWS), which is designated for its extensive wetland habitat and populations of wildfowl, waders, raptors and dragonflies.

Most of the woodland within the site boundary, as well as adjacent woodland to the north, is registered as Priority Habitat (deciduous woodland) on Natural England's Priority Habitat Inventory (Natural England, 2023c). The woodland extending to the north beyond the site boundary is also registered on Natural England's Ancient Woodland Inventory (Natural England, 2023d); no woodland within the site boundary is registered as ancient. The site is located in proximity to Rother, Brede and Tillingham Woods Biodiversity Opportunity Area (BOA; Sussex Biodiversity Partnership, 2024). Target habitat types for this BOA for creation, restoration and management are woodland, meadows and wetlands.

1.4. Site description

The site is 0.9ha in size (centred on grid reference TQ 69937 30887) and consists of a parcel of deciduous woodland, with a small area of grassland in the south. A ditch runs along the eastern boundary of the woodland. No information on current or past management of the site was available. At the time of the survey visit, it did not appear to be under regular management, or accessed by members of the public, save for a footpath running along the south perimeter, adjacent to the houses, and paths mown through the grassland.

The site is adjacent to a row of cottages to the south, with a golf course immediately to the east and the village of Ticehurst 0.7km to the south-west. Bewl Water LWS, 0.5km north, is a dominant feature in the local landscape, surrounded by a network of woodlands, hedgerows and arable and pasture fields. The woodland within the site boundary is part of this network, joining directly with a belt of woodland leading north out of the site.

The table below shows the habitats which are present at Land at Coronation Cottages. Detailed descriptions of each habitat type are given in Section 1.16.

Habitat type	Description
Lowland mixed deciduous woodland	Includes both semi-natural and ancient woodland growing on a range of soil types, comprising native deciduous tree and shrub species. Deciduous species occupy >80% of tree cover.
Modified grassland	Frequently managed grasslands found in recreational areas. Species composition is not diverse and the habitat is dominated by vigorous grasses that can withstand trampling and mowing such as perennial rye-grass *Lolium perenne*.
Developed surface	Areas of road, carpark and paths.
Rural tree	Individual trees in a rural environment.
Ditch	A man-made channel created for drainage.

1.5. Maps

The maps presented below show the existing habitats at Land at Coronation Cottages, and their conditions. Quadrats (1m^2) were used to determine the average number of species per square metre in the grassland, which informs the condition assessments for Biodiversity Net Gain.

Figure 1: UK Habitats Classifications map

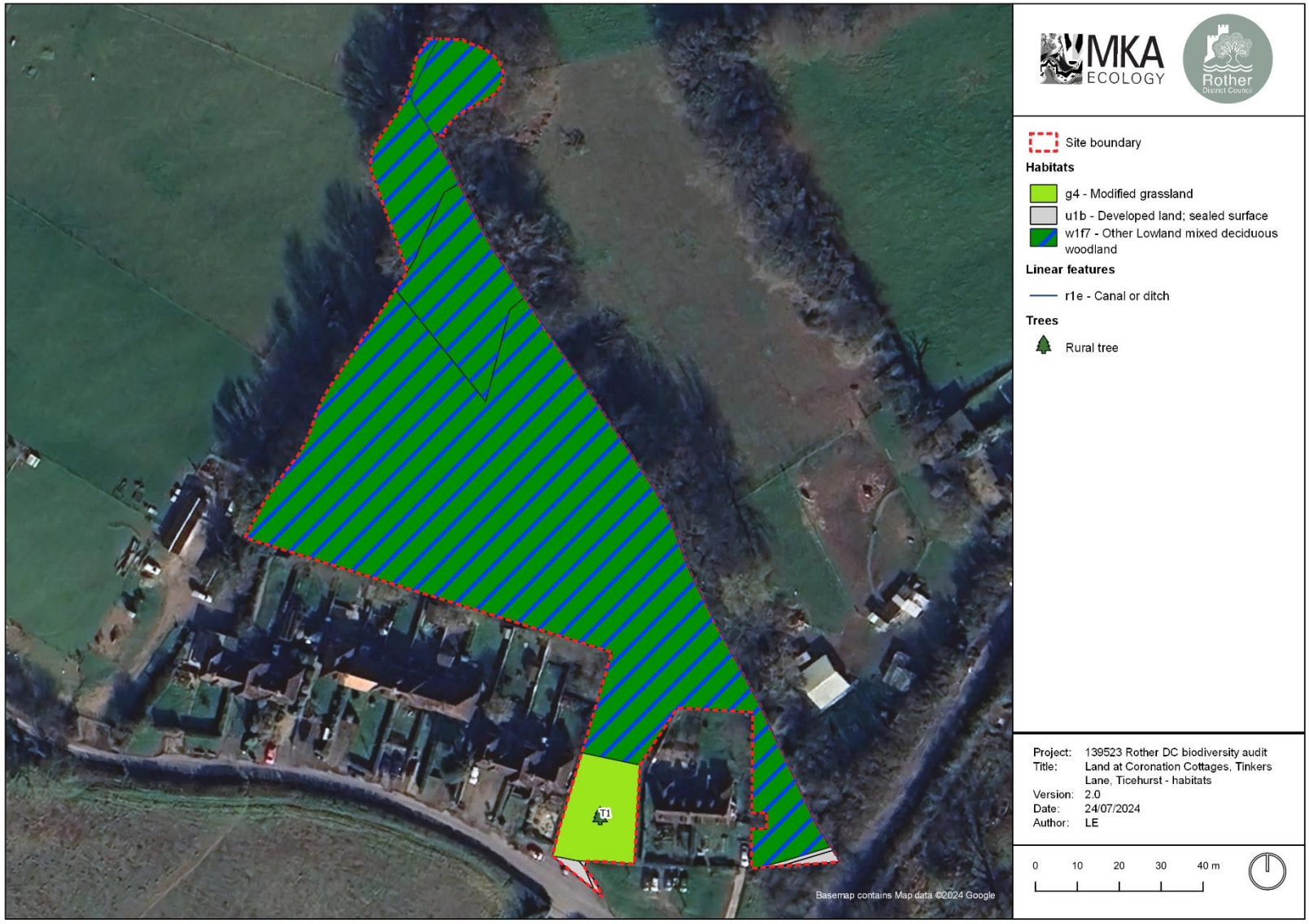
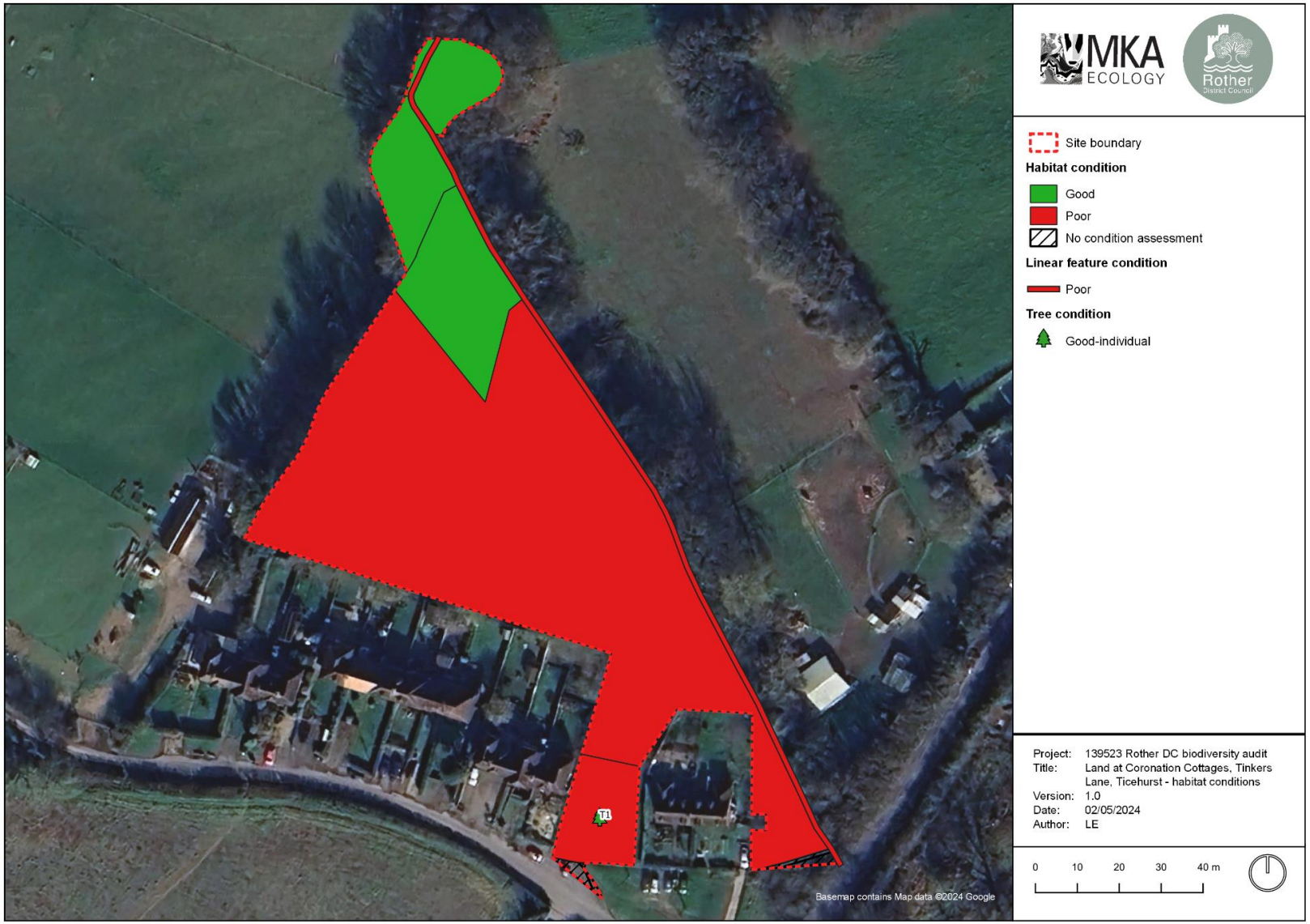


Figure 2: Condition assessments



1.6. Photographs

Photograph 1: Other lowland mixed deciduous woodland (north parcel)

Photograph 2: Other lowland mixed deciduous woodland (north parcel)

Photograph 3: Other lowland mixed deciduous woodland (south parcel)

Photograph 4: Other lowland mixed deciduous woodland (south parcel showing disturbance)

Photograph 5: Modified grassland

Photograph 6: Rural tree

Photograph 7: Ditch

1.7. Priority habitats

The following Priority Habitats are present at this location;

- Lowland mixed deciduous woodland.

All woodland habitats at the site are categorised as Priority Habitat. Habitats of Principal Importance are recognised as the most important habitats in the UK and are listed within the Natural Environment and Rural Communities Act (2006).

1.8. Biodiversity units

The biodiversity units at Land at Coronation Cottages, based on broad habitat types, are shown in the table below.

Habitat type	Total biodiversity units
Lowland mixed deciduous woodland (good condition)	3.23
Lowland mixed deciduous woodland (poor condition)	4.26
Modified grassland	0.08
Developed surface	0.00
Rural tree	0.44
Total habitat units	**8.02**
Linear features type	**Total biodiversity units**
Ditch	0.99
Total watercourse units	**0.99**

1.9. Invasive non-native species

Cherry laurel was recorded within the woodland, growing in the east of the site adjacent to the road. Cherry laurel is not listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), but can outcompete native woodland and scrub vegetation.

No other invasive non-native species were recorded in other habitats at Land at Coronation Cottages.

1.10. Constraints

Below are detailed some constraints relating to protected and notable species, which should be considered as part of habitat enhancement or creation programmes. It should be noted that most risks associated with protected species constraints can be easily avoided with appropriate planning.

- Presence of nesting birds within the woodland and cherry tree.
- Presence of reptiles in grassland and woodland habitats.
- Potential presence of amphibians (such as great crested newt *Triturus cristatus*) in thick vegetation during their terrestrial phase, due to the presence of ditches to the north of the site.
- Potential use of the habitats onsite by foraging and commuting bats.
- Potential use of trees onsite by roosting bats.
- Potential presence of hedgehogs *Erinaceus europaeus*.
- Potential presence of badger *Meles meles* setts (no setts recorded during the site visit).
- Potential presence of hazel dormouse *Muscardinus avellanarius* in woodland habitats.

1.11. Opportunities

The following sections detail the potential opportunities for creating new habitats or enhancing existing habitats at Land at Coronation Cottages, and also measures to provide further opportunities for priority species.

Opportunities - Habitats

Habitat type	Opportunities
Lowland mixed deciduous woodland North parcel	This habitat is currently in good condition, and allocated high distinctiveness in the Biodiversity Metric. It is not registered as ancient woodland, but is highly likely to be, given the presence of indicators in the ground flora. Although in good condition, largely due to a lack of human disturbance, in time this habitat will require management to maintain its condition. Introducing a programme of rotational coppicing will create more areas of open space within the woodland, encourage regeneration of native flora, and maintain structural diversity. Browsing pressure may be negatively impacting the woodland, but this is hard to manage in practice without coordinated effort at a landscape scale. Measures to protect recovering vegetation (such as coppice stools) from over-browsing can be incorporated into the management practices.
Lowland mixed deciduous woodland South parcel	This habitat is currently in poor condition. The interventions that would contribute most significantly to enhancing this habitat are:

Habitat type	Opportunities
	• Increase the proportion of native trees within the woodland, either through planting, or ideally natural regeneration, as the poplars reach the end of their natural lifespan and create gaps in the canopy. It may be possible to ring-bark and reduce some poplars to a safe height (given adjacent properties) to accelerate this process. Some standing deadwood left in situ would provide valuable habitats for wildlife, such as woodpeckers, bats and saproxylic invertebrates. • Active removal of non-native cherry laurel, which will overshade native vegetation and compromise any regeneration efforts; • Increase the structural density of the woodland, in particular creation of an understorey layer. This would happen in tandem with the above intervention. Introduction of rotational coppicing (see above) would help to maintain structural diversity in the long-term. • Ideally, cessation of disturbance of the east end of the woodland (rubble piles).
Modified grassland	This habitat is currently in poor condition, and allocated low distinctiveness in the Biodiversity Metric. The varied sward height between the centre surrounding the tree and the perimeter is providing some habitat diversity. This could be built on through: • Increase the area of unmown sward to the whole grassland, except for paths for access. Grass could be mown every 4-6 weeks in the summer, to encourage a more diverse sward structure and range of flowering plants in the sward. The aim would be to achieve a 'bee lawn', approximately 5-10cm in height; which could still be used for amenity purposes, but support more flowering plants. Remove mown arisings (create a habitat pile in the neighbouring woodland). • Increase the diversity of flowering plants within the grassland. Some scarification and supplementary over-seeding may be required to achieve this. Depending on the success of the second intervention, over time it may be possible to convert this habitat to neutral grassland.

Habitat type	Opportunities
Rural tree	Although currently in good condition, additional tree or hedgerow planting would link this tree with woodland habitats to the north.
Ditch	This habitat is currently in poor condition, due to due to absence of aquatic or marginal vegetation, significant shading along most of its length, and insufficient water levels. In practice, these are challenging limitations to address, particularly for a ditch running along the north edge of a woodland, as this habitat will always be naturally shaded. Woodland management activities described above which aim to increase light reaching the ground, such as coppicing, may help; wherever these occur adjacent to the ditch, efforts should be made to maximise light spill onto the ditch. Depending on hydrology, backwaters or connecting ponds could be dug from the ditch into the other broadleaved woodland (avoid disturbing ancient woodland flora in the woodland to the north), to create additional wetland habitat.

Opportunities - Species

Species	Opportunities
Invertebrates (saproxylic)	*Standing deadwood piles:* The creation of 'stumperies' with large volume wood (as generated by management works) dug into the soil (eg: PTES, 2016). *Artificial rot-holes:* Cavities cut into stumps to mimic rot holes. These often fill with water and provide habitat for the larvae of a range of specialist invertebrates.
Invertebrates (pollinators)	Increasing the proportion of wildflowers within the grassland will create additional foraging habitat for pollinators.
Invertebrates (generalist)	'Bug hotels,' 'bee banks' and log piles could be installed around the Site.
Birds	Installation of generalist bird boxes in the woodland and on the cherry tree. Bird boxes with varying entrance hole sizes should be used to provide for a range of species.
Bats	Installation of bat boxes on trees within the woodland.

Species	Opportunities
Hazel dormouse	Installation of dormouse boxes within the woodland, and management for key food plants for this species within the understorey (e.g. hazel, honeysuckle).

1.12. Key targets for the short and long term

Short-term targets

Some key targets for upcoming 5 to 10 years:

- Install bird, bat and dormouse boxes
- Create a management plan for both woodlands;
- Trial mowing regimes for grassland.

Long-term targets

Some key targets for long term planning;

- Implement woodland management plans and review progress
- Increasing botanical diversity of grassland.

1.13.Further monitoring work/other activities

Specific surveys for protected and priority species could be undertaken for bats, hazel dormouse, invertebrates and reptiles, to understand if and how these species groups use the site. There are survey methods for all these species which can be undertaken by volunteers; groups could be supported by a licensed ecologist or local specialist if needed.

These targeted surveys could be supplemented by regular Bioblitz surveys at the site, carried out by volunteer groups, to monitor general species diversity.

1.14. Future risks to condition

- Potentially increased levels of recreational pressure;
- Changes in management and land use;
- Tree disease;
- Impacts of climate change on the habitats present, such as increased drought, fire and flood risk; and
- Introduction and spread of invasive, non-native species.

1.15. Habitat descriptions and conditions

Woodland
UKHabs habitat types present (secondary codes in brackets) **w1f7 – Other lowland mixed deciduous woodland**
Description Woodland forms a belt to the north of Coronation Cottages and extends north to join with the woodland network in the wider landscape. The woodland was split into two parcels (north and south) displaying different characteristics and conditions, described below. **w1f7 – Other lowland mixed deciduous woodland** **South parcel** The majority of the woodland at the site is characterised by large mature poplars *Populus sp.,* pedunculate oak *Quercus robur* and ash *Fraxinus excelsior* forming a high canopy. Understorey is mostly absent, with hazel *Coryllus avellana* and yew *Taxus baccata* occurring only occasionally. The ground flora lacks any ancient woodland indicators, and is dominated by bramble *Rubus fruticosus agg.,* pendulous sedge *Carex pendula,* common nettle *Urtica dioica*, hogweed *Heracleum sphondylium,* cow parsley *Anthriscus sylvestris* and rough meadow-grass *Poa trivialis*. Cherry laurel *Prunus laurocerasus* is growing in the far east of the site, adjacent to the road. A path runs along the southern boundary of the woodland, adjacent to Coronation Cottages. A small number of access tracks are also present running north into the woodland. The east of the woodland in particular has a significant area of disturbed ground, with rubbish piles and a chicken coop. **North parcel** In the northern part of the site, the woodland ground flora changes, becoming characterised by ancient woodland indicators including bluebell *Hyacinthoides non-scripta*, wood anemone *Anenome nemorosa*, wood melick *Melica uniflora* and pignut *Conopodium majus*. There are no mature poplars in this part of the woodland, with the canopy characterised by birch *Betula sp.* and willow *Salix sp.,* with hazel *Corylus avellana*, holly *Ilex aquifolium* and elder *Sambucus nigra* forming a dense understorey. This part of the woodland has no signs of damage or disturbance; the density of the understorey suggests it is not regularly accessed.
Condition **w1f7 – Other lowland mixed deciduous woodland: south parcel** **Poor condition.** This parcel fails to reach moderate or good condition due to presence of invasive non-native species (cherry laurel), low diversity of native tree species, absence of ancient woodland

Woodland
indicators and veteran trees, and the extent of woodland disturbance, particularly in the east of the site. **w1f7 – Other lowland mixed deciduous woodland: north parcel** **Good condition.** This parcel scores highly due to high diversity of native tree species, presence of ancient woodland indicators in the ground flora, a lack of disturbance and structural complexity.

Grassland
UKHabs habitat types present (secondary codes in brackets) **g4 – Modified grassland**
Description **g4 – Modified grassland** The access track to the woodland from Tinkers Lane passes through a small square of grassland. The site is situated on slightly acid soils, but the species recorded in the grassland are indicative of a modified community, with no acidic indicators. The sward is dominated by grasses; predominantly perennial rye-grass *Lolium perenne* and rough meadow-grass *Poa trivialis,* with false oat-grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus* and cock's-foot *Dactylis glomerata*. Forbs recorded include common sorrel *Rumex acetosa*, cat's-ear *Hypochaeris radicata*, creeping buttercup *Ranunculus repens* and meadow buttercup *Ranunculus acris*. At the time of the survey visit, the central square of grassland (underneath the cherry tree canopy) had been left unmown, with a sward height of 30cm. The outer perimeter was mown short (sward height 5cm).
Condition **g4 – Modified grassland** **Poor condition.** The grassland fails to reach moderate or good condition due to poor species diversity, with fewer than 6 species recorded per $1m^2$. It passes criteria relating to varied sward height, physical damage and low occurrence or absence of undesirable species (scrub, bracken, invasive non-native species) and bare ground.

Trees
UKHabs habitat types present (secondary codes in brackets) **Rural trees**

Trees
Description **Rural trees** There is a single cherry *Prunus sp.* tree in the centre of the modified grassland parcel in the south of the site. The tree is mature; the grassland underneath the canopy had been left unmown at the time of the survey visit.
Condition **Rural trees** **Good condition**. The tree passes all condition criteria. It is mature, a native species; it supports ecological niches for other wildlife, and appears to be in a healthy condition.

Watercourses
UKHabs habitat types present (secondary codes in brackets) **r1e - Ditch**
Description **r1e - Ditch** A ditch runs along the northern boundary of the woodland, shallow (<50cm depth) at the time of the survey visit. It is heavily shaded along much of its length, with no marginal or aquatic vegetation recorded growing within it. A section to the north is impounded by a fallen willow tree *Salix sp.*
Condition **r1e - Ditch** **Poor condition.** This habitat fails to reach moderate or good condition due to absence of aquatic or marginal vegetation, significant shading along most of its length, and insufficient water levels.

Urban
UKHabs habitat types present (secondary codes in brackets) **u1b – Developed land; sealed surface**
Description **u1b – Developed land; sealed surface** There are small strips of hardstanding in the southern ends of the site, associated with access tracks.
Condition **u1b – Developed land; sealed surface:** N/A - Other

1.16. References

Butcher, B., Carey, P., Edmonds, R., Norton, L., & Treweek, J (2020) *The UK Habitat Classification User Manual Version 1.1* http//www.ukhab/org/.

Natural England (2023a) *Biodiversity Metric 4.0 Calculation Tool*. Natural England: York.

Natural England (2023b) *The Biodiversity Metric 4.0 – User Guide*. Natural England: York.

Natural England (2023c) Priority Habitats Inventory (England) Available at: https://www.data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitats-inventory-england. Downloaded 30/10/2023.

Natural England (2023d) Ancient Woodland Inventory (England) Available at: https://naturalengland-defra.opendata.arcgis.com/datasets/ancient-woodland-england/explore. Downloaded 30/10/2023.

Sussex Biodiversity Partnership (2024). *Biodiversity Opportunity Areas.* https://sussexlnp.org.uk/boa/. Accessed 19/01/2024.

SxBRC (2023) *Sussex Biodiversity Records Centre: data search of protected and priority sites and species in Rother District.* Received 05/06/2023.

1.17. Surveyors

The survey was undertaken by Lydia Ennis ACIEEM. Lydia has six years' experience undertaking habitat surveys and delivering management advice to landowners. The report was also written by Lydia, and reviewed by Will O'Connor CEcol MCIEEM. Will has over 15 years' experience working as an ecological consultant.

Detailed methodology

UK Habitat Classification

The habitat surveys followed the methodology of the UK Habitat Classification (professional) version 2.0 (hereafter UKHab; UK Habitat Classification Working Group, 2023). UKHab works at two levels: a hierarchical primary habitat classification and a list of secondary codes. The primary classification builds on existing habitat and botanical classifications (e.g., Phase 1, NVC). Habitats are described through an increasingly detailed hierarchy until a match is found. The secondary codes provide a list of environmental qualifiers that capture details for a range of other factors (e.g., hydrological regime, management etc). A given primary habitat area may have many secondary codes attached.

Some modifications to the UKHab were made as follows:

- Native hedgerows were categorised according to the more detailed Biodiversity Metric habitat label (see below). A level 5 hierarchy was created under the existing level 4 code 'h2a - Priority hedgerows' to reflect the differing features that hedgerows might contain in combination:

    - Association with a bank or ditch.
    - Species richness.
    - With/without trees.

Incidental plant species lists were gathered for each habitat and distributions of species estimated (using the DAFOR scale; **D**ominant, **A**bundant, **F**requent, **O**ccasional and **R**are). Full botanical inventories were not feasible within the scope of this work. Botanical lists are provided as a separate appendix to this Biodiversity Audit.

Biodiversity Metric

The Defra Biodiversity Metric 4.0 (Natural England, 2023) has been used for this Biodiversity Audit, with certain modifications as detailed in the Appendix. This method uses habitat as a proxy for biodiversity, whereby habitats are assigned the following 'multiplier' scores:

- Distinctiveness: A measure of the type and importance of a habitat. Habitats that are rare and/or support a wide range of species are more distinctive.
- Condition: A measure of the condition of a given habitat type. The condition is assessed according to a suite of criteria described within the methodology below. It should be stressed that condition in biodiversity terms is not to be confused with traditional perceptions of condition

or maintenance. A grassland that might be perceived to be well maintained (e.g. regularly mown) is very likely to be in poor condition. Distinctiveness and condition are also not wholly independent. Some of the factors that lead to poor condition grasslands (intensive mowing or grazing) can also lead to a definition as a lower distinctiveness grassland.

- Strategic significance: Any site that possesses a designation is considered High, those deemed ecologically valuable but without designation are considered Medium, and those with limited ecological value and no designation are classed as Low.

These factors are then multiplied to the area (for habitat parcels) or length (hedgerows, lines of trees) to produce an overall 'biodiversity unit.' Large parcels of habitat or long linear features will score better.

The total number of units is presented for the surveyed areas, each site and by habitat type. Indications of how many units are currently contained within habitats of different conditions are also presented; this will help to indicate the opportunities that might be made to increase measurable biodiversity by improving the condition of existing habitats.

Condition assessments

Each habitat type was assessed for condition using the methodology outlined in the Defra Biodiversity Metric 4.0 (Natural England, 2023). Habitat condition is defined as either good, moderate or poor by assessment against a suite of condition criteria. A habitat in good condition will meet more of the criteria for good condition and fewer of the criteria for poor condition. A habitat in poor condition will meet fewer of the criteria for good condition and more of the criteria for poor condition. For the purposes of this assessment the interim categories of 'fairly good' and 'fairly poor' were not used because they are not clearly defined within the methodology and may present inconsistencies with future audit assessments. The habitat condition sheets were modified for use in the field and are supplied as supplementary data.

Habitats were therefore divided into parcels based upon their condition and minimum mappable unit of habitat area.

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