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Rother
District Council

Rother District Council

Biodiversity Audit

Middle Salts, New Road, Rye

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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 Middle Salts, New Road, Rye (referred to from here as Middle Salts).

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

Middle Salts is located on the border between the High Weald and Romney Marshes National Character Areas (NCAs). It is not located within the High Weald National Landscape (formerly known as Area of Outstanding Natural Beauty (AONB).

Middle Salts is not currently covered by any international, national or local nature conservation designations. The site is west-adjacent to Dungeness, Romney Marsh And Rye Bay Ramsar Site and Site of Special Scientific Interest (SSSI), and is located within Romney Marsh Biodiversity Opportunity Area (Sussex Biodiversity Partnership, 2024).

1.4. Site description

Located in the centre of Rye (central grid reference: TQ 92364 20741), a small village 2km from the coast, Middle Salts is an area of predominantly modified grassland used for recreation. Surrounding the grassland field are lines of trees at the southern, western, and eastern boundaries, with a native hedgerow also along the eastern boundary separating the Site from the River Rother. The building on-site is used by the local cricket club, and the developed land in the south-eastern corner is used as a skate park.

The table below shows the habitats which are present at Middle Salts, New Road, Rye. Detailed descriptions of each habitat type are given in Section 1.16.

| Habitat type	Description
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*.
Urban tree (individual)	Individual trees within the park.
Developed land	Areas of road, carpark and paths.
Building	Built structure.
Line of trees	Native and non-native trees planted in distinct lines throughout the park.
Native hedgerow with trees	Hedgerows comprised of predominantly native species, including larger tree species.

1.5. Maps

The maps presented below show the existing habitats at Middle Salts 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
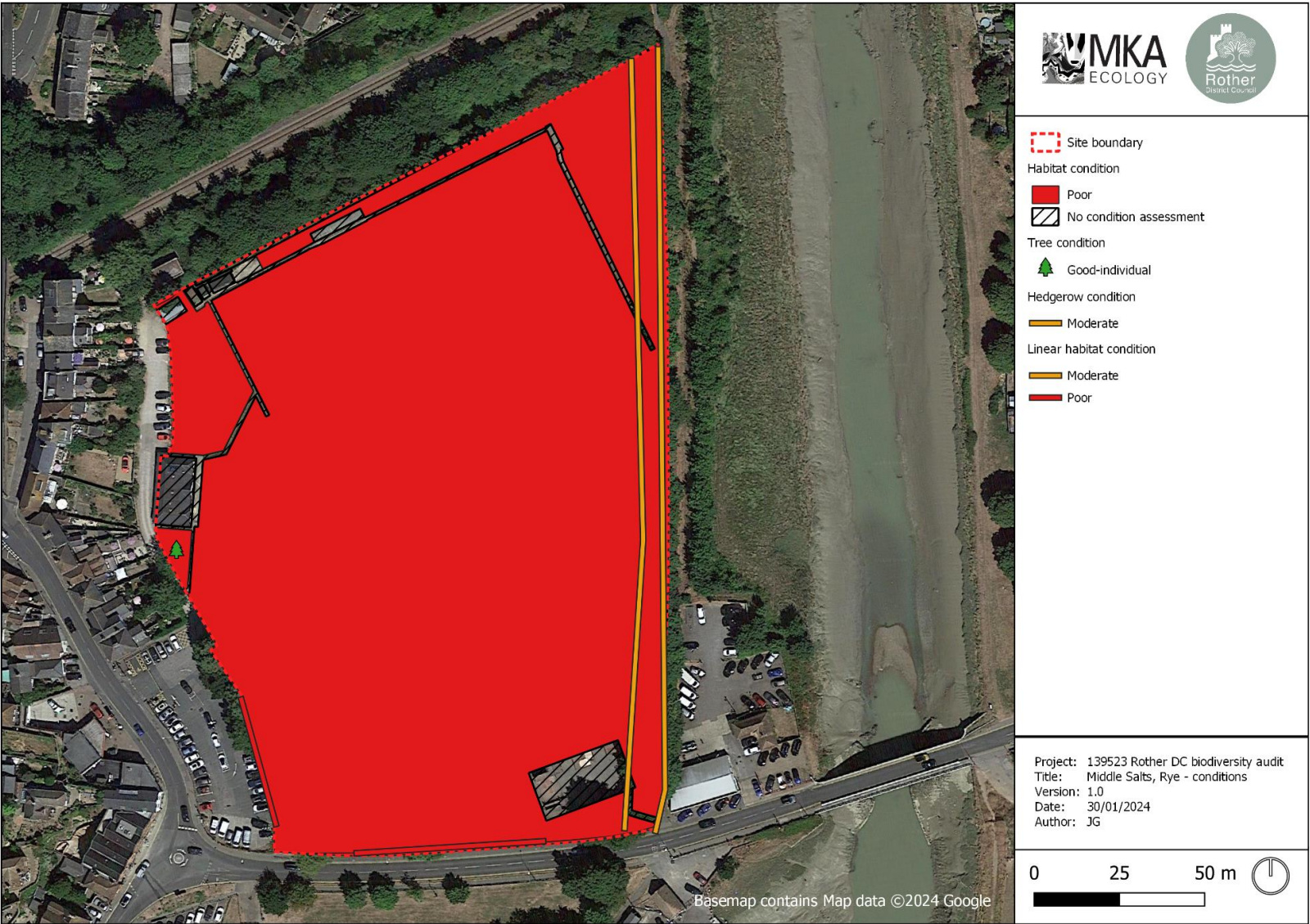
1.6. Photographs

Photograph 1: Modified grassland

Photograph 2: Developed land

Photograph 3: Line of trees – LOT1

Photograph 4: Line of trees – LOT2

Photograph 5: Line of trees – LOT3

Photograph 6: Native hedgerow with trees – H1

Photograph 7: Building

1.7. Priority habitats

There are no Priority Habitats on-site, however, the Site is west-adjacent to Mudflats and Coastal Saltmarsh (Natural England, 2023c) formed from the River Rother that runs along the east boundary of the site. Coastal Floodplain and Grazing Marsh and Lowland Mixed Deciduous Woodland are also in very close proximity; both less than 0.5km away.

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 Middle Salts, based on broad habitat types, are shown in the table below.

Habitat type	Total biodiversity units
Modified grassland	5.23
Developed land; sealed surface	0.00
Urban tree (individual)	0.92
Total habitat units	**6.14**
Linear features type	Total biodiversity units
Line of trees	1.09
Native hedgerow with trees	1.83
Total hedgerow units	**2.92**

1.9. Invasive non-native species

No invasive non-native species were recorded at Middle Salts.

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.

- Potential presence of nesting birds within the hedgerows, dense scrub and trees.
- Potential presence of roosting bats in buildings and trees.
- Potential use of the habitats onsite by foraging and commuting bats.

1.11.Opportunities

The following sections detail the potential opportunities for creating new habitats or enhancing existing habitats at Middle Salts, and also measures to provide further opportunities for priority species. These are focused on the eastern boundary, given the site's proximity to Dungeness, Romney Marsh And Rye Bay Ramsar Site and SSSI to the east and the River Rother, and the potential to supplement this riparian corridor.

Opportunities - Habitats

Habitat type	Opportunities
Modified grassland	This habitat is allocated low distinctiveness in the Biodiversity Metric and is currently of limited value for biodiversity, due to lack of botanical and structural variation. The interventions that would contribute most significantly to enhancing this habitat are: • In areas not used for intensive recreation, such as cricket pitches, mow the grass less regularly 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. Some supplementary management over-seeding may be required to increase the number of flowering species. • This approach is recommended particularly around the perimeters of the site, with a wider strip of long grassland along the east boundary. This would provide a buffer to the adjacent SSSI. As well as enhancing the existing grassland, new habitats of higher distinctiveness could be created in place of the grassland, including wetland and woodland (see below).
Hedgerow and lines of trees	The hedgerow is allocated medium distinctiveness in the Biodiversity Metric, and is in moderate condition; the lines of trees are allocated low distinctiveness, with one in poor and one in moderate condition. These linear habitats provide useful corridors for wildlife to move around the site, particularly along the east boundary where the hedgerow and line of trees act as a buffer to the adjacent SSSI and River Rother corridor. Interventions that would contribute most significantly to enhancing these linear habitats are:

Habitat type	Opportunities

	• Increase length/extent and infill gaps in connectivity around the perimeter of the site through planting native tree species, and/or incorporate into wider-scale woodland creation (see below);
	 • Install bird and bat boxes to compensate for lack of veteran features in the short-term;
	 • Where feasible and this aligns with amenity objectives, investigate veteranisation of existing trees: Measures to increase the volume of deadwood habitat in living trees is particularly appropriate in cases where there are large generation gaps, e.g. (Woodland Trust, 2014):
	     ○ *Ring-barking*
	     ○ *Branch breaks*
	     ○ *'Horse – damage'*
	     ○ *Pollarding*
	     ○ *'Monolith stumps': Soft/selective felling of limbs where necessary (i.e., for safety) to leave tall trunks in situ.*

Urban tree	This single tree could be connected to linear features elsewhere in the site with further tree planting (see above).
Wetland (reedbed)	Subject to further feasibility studies (e.g. hydrology), create areas of wetland habitat, such as reedbeds, ditches and scrapes, in place of modified grassland along the eastern boundary. Wetland habitats are of a higher distinctiveness in the Biodiversity Metric, and would complement the designated intertidal habitats adjacent to the site.
Woodland	There is ample space at this site to create small areas of woodland in place of modified grassland. These could be created using the Miyawaki Method (CTF, 2024), and could use wetland specialist tree species to complement the wetland habitats recommended above, as well as designated intertidal habitats adjacent to the site. • Increase cover of woodland through planting new areas of native woodland on habitats of lower distinctiveness (modified grassland). Extension of woodland could reinforce current treelines, forming a belt of woodland around the site perimeter. • Reinforce tree planting with native scrub planting, to create an understorey layer; and • Encourage a more diverse ground flora through re-seeding and planting.

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 on mature trees. Bird boxes with varying entrance hole sizes should be used to provide for a range of species. Bird boxes could also be installed on buildings at the site.
Bats	Installation of bat boxes on mature trees, especially along the east boundary. Bat boxes could also be installed on buildings at the site. Investigate feasibility of creating a bat attic in the main building.

1.12. Key targets for the short and long term

Short-term targets

Some key targets for upcoming 5 to 10 years:

- Relax mowing of grassland around perimeters of the Site, with particular focus on the east boundary;
- New tree, scrub and woodland planting, together with a management plan;
- Feasibility studies for wetland creation;
- Investigate veteranizing existing trees; and
- Install bat and bird boxes. Investigate feasibility of installing bat attic in main building.

Long-term targets

Some key targets for long term planning;

- Review woodland management plan;
- Wetland creation, together with a management plan;
- Increase botanical diversity of grassland;

- Veteranise selected trees where health and safety allows.

1.13. Further monitoring work/other activities

Specific surveys for protected and priority species could be undertaken, especially activity surveys to monitor use of the linear habitat features by bats. These could 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

Grassland
UKHabs habitat types present (secondary codes in brackets) **g4 – Modified grassland**
Description **g4 – Modified grassland** This habitat type forms the central recreational field and areas under lines of trees. The grassland is species-poor, with the sward (mown short at the time of the survey visit) dominated by perennial rye-grass *Lolium perenne*, with white clover *Trifolium repens,* dandelion *Taraxacum agg.* and daisy *Bellis perennis.*
Condition **g4 – Modified grassland** Poor condition, on the basis of low species diversity (fewer than six species per $1m^2$). There was no variation in sward height at the time of the survey visit, which also contributes to poor condition. However, levels of damage are low, there is no encroachment from scrub and bracken, and no invasive on-native species.

Linear features
UKHabs habitat types present (secondary codes in brackets) **w1g6 – Line of trees** **h2a7 – Native hedgerow with trees**
Description **w1g6 – Line of trees** There are three lines of trees at this site, lining the east (LOT1), south (LOT2) and west (LOT3) boundaries. LOT1 comprises predominantly semi-mature hornbeam *Carpinus betulus*, with semi-mature maple *Acer sp.*, lime *Tilia x europaea*, cherry *Prunus sp.* and one mature aspen *Populus tremula* at the far south end of the site. LOT2 comprises semi-mature weeping willow *Salix x babylonica* and other willow *Salix sp.* LOT3 comprises a belt of mature Leyland cypress *Cupressus x leylandii* and pine *Pinus sp.* trees, together with recently planted saplings. **h2a7 – native hedgerow with trees (H1)** This hedgerow runs along the east boundary of the site, adjacent to line of trees LOT1, and separates the site from a public footpath and the River Rother. It comprises hawthorn *Crataegus monogyna,* elm *Ulmus sp.* and elder *Sambucus nigra* with semi-mature sycamore *Acer pseudoplatanus* trees.

Linear features

Condition

w1g6 – Line of trees

LOT1: Moderate condition. Limited in achieving good condition primarily by the presence of hardstanding (public footpath) within 6m of the habitat feature. There are no gaps in canopy cover, over 70% of trees are native (hornbeam) and the trees are in a healthy condition. The mature aspen tree is covered in ivy *Hedera helix*, which provides a ecological niche for invertebrates and a potential roosting feature for bats.

LOT2: Poor condition. Limited in its condition by the low representation of native tree species (weeping willow is assigned non-native status for the purposes of this assessment, following guidance in Defra (2007)). There are also gaps in the tree canopy, an absence of any veteran features, and a road within 6m of the habitat feature.

LOT3: Poor condition. Limited in its condition by the low representation of native tree species. There are also gaps in the tree canopy as a result of part of the line being made up by saplings, an absence of any veteran features, and a car park within 6m of the habitat feature.

h2a7 – native hedgerow with trees (H1)

Moderate condition. Limited in achieving good condition by its narrow width (<1.5m), gaps in the hedge base, and the absence of veteran trees. However, the hedgerow is an appropriate height (>1.5m), there are no gaps in the hedge canopy or signs of damage, and no invasive non-native species.

Urban

UKHabs habitat types present (secondary codes in brackets)

u1b – Developed land; sealed surface

u1b5 - Buildings

Description

u1b – Developed land; sealed surface

There is a network of tarmac paths running between the buildings and around the north side of the site. An area of developed land in the south-east corner is used as a skate park.

u1b5 – Buildings

The main building is used by the local cricket club. There is a cluster of storage units in the far north-west corner of the site.

Urban
Condition
u1b – Developed land; sealed surface: N/A – Other
u1b5 – Buildings: 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/.

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Defra (2007). *Hedgerow Survey Handbook.* Defra: London.

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.

Woodland Trust (2014) Ancient Trees and special interest trees. Woodwise. Woodland Conservation News, Spring 2014. Available at: https://www.woodlandtrust.org.uk/media/1798/wood-wise-ancient-trees.pdf.

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 written by Lydia and Joe Gillis, Graduate Ecologist at MKA Ecology Ltd. Joe has a season's experience as an ecologist. The report has been 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:

- Amenity grassland was categorised separately as 'g4a', a level 4 code of 'g4 - modified grassland'.
- 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:

    o Association with a bank or ditch.
    o Species richness.
    o 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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