MKA ECOLOGY

Rother District Council

Rother District Council

Biodiversity Audit

Town Salts, Fishmarket 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 Town Salts, Fishmarket Road, Rye (referred to from here as Town 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

Town 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).

Town 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). Target habitat types for creation, restoration and management in this BOA are wetlands.

1.4. Site description

Located in the centre of Rye (central grid reference: TQ 92305 20416), Town Salts is an area of predominantly amenity grassland bounded by a line of trees separating the Site from the River Rother. The grassland in the north of the site is under more intensive management than that of the southern parcel, with the area used as a playground and a bowling green by the community. A concrete pathway and ornamental hedgerows surround the bowling green and playground. A small building is present

facing onto the bowling green providing facilities to the community. The southern field undergoes more occasional mowing.

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

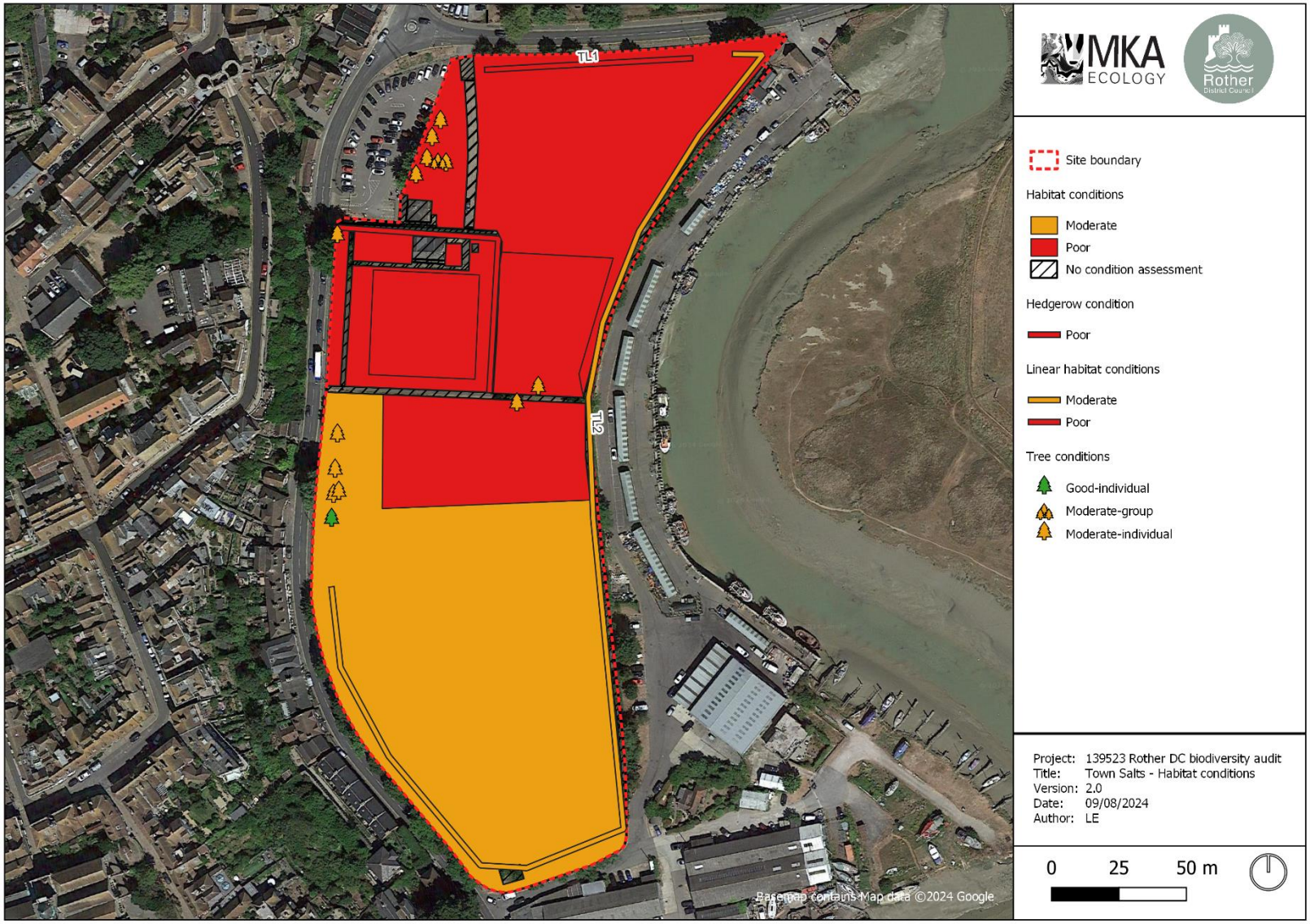
Habitat type	Description
Other neutral grassland	A widespread grassland type, distinguished by an absence of strong calcareous or acidic indicator species, and low occurrence of palatable grasses typical of modified grassland.
Modified grassland	Frequently managed grasslands found in recreational areas. 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 land	Areas of road, carpark and paths.
Line of trees	Native and non-native trees planted in distinct lines throughout the park.
Urban trees	Individual and groups trees within the park.
Building	Built structure.
Ornamental non-native hedge	Hedgerows dominated by ornamental, non-native woody species.

1.5. Maps

The maps presented below show the existing habitats at Town Salts and their conditions. Quadrats ($1m^2$) were used to determine the average number of species per square metre in the grassland habitats, 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 neutral grassland

Photograph 2: Modified grassland

Photograph 3: Developed land; sealed surface

Photograph 4: Line of trees

Photograph 5: Urban tree (individual)

Photograph 6: Pyramidal orchid (Target Note 1; see Figure 1)

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 near to the east boundary of the site. Coastal Floodplain & 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 Town Salts, based on broad habitat types, are shown in the table below.

Habitat type	Total biodiversity units
Other neutral grassland	11.14
Modified grassland	3.04
Developed land; sealed surface	0.39
Urban trees	4.67
Total habitat units	**18.84**
Linear features type	**Total biodiversity units**
Line of trees	2.23
Total hedgerow units	**2.23**

1.9. Invasive non-native species

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

1.10. Constraints

Constraints relating to protected and notable species, which should be considered as part of habitat enhancement or creation programmes, are listed below. 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 trees.
- Presence of reptiles in neutral grassland habitats, given the proximity of adjacent good-quality habitat along the River Rother.
- Potential use of the habitats onsite by foraging and commuting bats.
- Potential presence of roosting bats in buildings and trees.

1.11. Opportunities

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

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, 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. 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).
Other neutral grassland	These areas are already under a less regular mowing regime to the rest of the grassland habitat. Some further interventions, which could be detailed as part of a management plan for the site: • Implement a slightly more regular rotational mowing regime to create greater variety in sward height. Cut and collect arisings to reduce nutrient inputs; • Regular management to keep growth of undesirable species below threshold levels; • Increase botanical diversity within the sward as a longer-term goal. Soil sampling is recommended to inform appropriate management. Expand coverage of this habitat (perhaps beneath the line of trees and around the site boundaries) through relaxing mowing and over-seeding of modified grassland areas.

Habitat type	Opportunities
Trees	Individual trees and lines of trees could be connected with further tree planting. Potential interventions include: • Increasing length/extent and closing current gaps in the canopy through planting native tree species; • Install bird and bat boxes to compensate for lack of veteran features; • Where feasible and this aligns with amenity objectives, investigate veteranisation of existing trees (see Woodland Trust, 2014).
Hedgerow	This hedgerow is maintained for ornamental purposes. Ideally, species composition would be altered to gradually replace the non-native conifer with native species. This should be done over time, without disrupting connectivity of the hedgerow, which is arguably more important than its species composition.
Wetland	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 where possible, for instance on the mature hawthorn trees and trees within the hedgerow. Bird boxes with varying entrance hole sizes should be used to provide for a range of species.
Amphibians	Creation of a wildlife pond within one of the grassland parcels would add a high value habitat to the existing habitat mosaic, particularly of value to local amphibian populations.
Reptiles	Reptiles are present at the site, and could be supported through creation of bespoke reptile refugia and hibernacula, providing additional areas for basking and foraging.
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.
Hedgehog	Hedgehog hibernation boxes may be installed at the bases of the hedgerows, ideally positioned near to species-rich grassland.

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 modified grassland around perimeters of the Site, with particular focus on the east boundary;
- New tree and scrub 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 existing buildings.

Long-term targets

Some key targets for long term planning;

- Wetland creation, together with a management plan;
- Woodland 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 and reptile surveys of the other neutral grassland. 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) **g3c – Other neutral grassland** **g4 – Modified grassland** **g4a – Modified grassland (amenity)**
Description **g3c – Other neutral grassland** A large grassland field approximately 1.4ha in size in the south of the site. Sward height is consistently at 1m barring the mown paths cutting through the field and at the perimeter for accessibility. Grass species consisted of perennial rye-grass *Lolium perenne*, cock's-foot *Dactylis glomerata*, wall barley *Hordeum murinum*, creeping bent *Agrostis stolonifera*, crested dog's-tail *Cynosurus cristatus*, timothy *Phleum pratense*, and Yorkshire fog *Holcus lanatus*. Forb species included daisy *Bellis perennis*, red clover *Trifolium pratense*, white clover *Trifolium repens*, dandelion *Taraxacum* spp., creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, broad-leaved dock *Rumex obtusifolius*, sow-thistle *Sonchus sp.*, spear thistle *Cirsium vulgare*, knapweed *Centaurea nigra*, and buttercup *Ranunculus sp*. **g4a – Modified grassland (amenity)** Occurring at the extent of the playground area, this grassland is species-poor, with a short 3cm sward dominated by perennial rye-grass, with occasional cock's-foot and wall barley. Alexanders *Smyrnium olusatrum* were present under the line of trees in the east. The area is heavily mown. **g4 – Modified grassland** Found at the north and centre of the site, including the bowling green extent, these grasslands are also species poor and have very short swards, dominated by perennial rye-grass with occasional creeping bent and wall barley. Forb species such as hedge mustard *Sisymbrium officinale*, dandelion, dove's-foot crane's-bill *Geranium molle*, and sow-thistle *Sonchus sp.* were observed throughout.
Condition **g3c – Other neutral grassland: Moderate.** Fails to reach good condition due to low botanical diversity (fewer than 10 species per 1m^2 quadrat). **g4a – Modified grassland (amenity): Poor.** Limited by uniform short sward height and low botanical diversity (fewer than 6 species per 1m^2 quadrat). **g4 – Modified grassland: Poor.** Limited by uniform short sward height and low botanical diversity (fewer than 6 species per 1m^2 quadrat).

Hedgerows and lines of trees
UKHabs habitat types present (secondary codes in brackets) **h2b – Non-native and ornamental hedgerow** **w1g6 – Line of trees**
Description **h2b – Non-native and ornamental hedgerow:** Composed of cypress *Cupressus sp.*, heavily managed to maintain a box shape, approximately 1m wide and 3m in height. **w1g6 – Line of trees:** Bordering the site at the north, east, south, and some of the western extent, are lines of trees. There are two different lines of trees, the first of which (TL1) covers most of the northern boundary, and consists of pedunculate oak *Quercus robur*, horse-chestnut *Aesculus hippocastanum*, rowan *Sorbus aucuparia*, and a non-native Italian maple *Acer opalus*. The second (TL2) covering the entire eastern and southern boundary and wrapping around into the western boundary includes species such as sycamore *Acer pseudoplatanus*, plum *Prunus domestica*, hornbeam *Carpinus betulus*, ash *Fraxinus excelsior*, elm *Ulmus procera*, lime *Tilia spp.*, holm oak *Quercus ilex*, and willow *Salix spp.*
Condition **h2b – Non-native and ornamental hedgerow:** Automatically allocated **Poor condition.** **w1g6 – Line of trees:** **TL1: Poor condition.** Due to the presence of a non-native species and trees not supporting any ecological niches of value to other wildlife. **TL2: Moderate condition.** Due to trees not supporting any ecological niches of value to other wildlife.

Individual trees
UKHabs habitat types present (secondary codes in brackets) **Urban trees**
Description Individual and groups of trees are present scattered through the north half of the site, particularly along the west boundary. Species include ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, lime *Tilia x europaea* and a willow *Salix sp,* as well as non-native oak and maple.
Condition All trees are in **Moderate condition**, apart from one willow tree in the centre of the site which is in **Good condition**. All trees at the site lack ecological niches of value to other wildlife (including bats, birds and invertebrates). Some trees are non-native species and/or immature, which limits them reaching good condition. The willow tree is both a native species and mature, and so reaches good condition.

Urban
UKHabs habitat types present (secondary codes in brackets) **u1b5 – Developed land; buildings** **u1b – Developed land; sealed surface**
Description **u1b – Developed land; sealed surface:** Concrete pathway around the bowling green and playground for community accessibility linking the site to a bus stop at the A259 and a car park to the north. **u1b5 – Developed land; buildings:** There are two small buildings just north of the bowling green purposed for community facilities. There is another small building located in the south at the edge of the field.
Condition **u1b – Developed land; sealed surface:** N/A – Other **u1b5 – Developed land; buildings:** N/A – Other

1.16. References

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1.17. Surveyors

The survey was undertaken by Rory Roche ACIEEM. Rory has seven years' experience undertaking habitat surveys. The report was written by Joe Gillis, Graduate Ecologist at MKA Ecology Ltd. Joe is in his first season 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:

- 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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