GREATER AND LESSER HORSESHOE BATS IN SOUTH HEREFORDSHIRE 2010

A STUDY TO INFORM HEREFORDSHIRE COUNCIL'S LOCAL DEVELOPMENT FRAMEWORK

Herefordshire Biological Records Centre
and
Herefordshire Council's
Landscape and Biodiversity Team

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CONTENTS

1. INTRODUCTION

Herefordshire Council's Forward Planning team is currently developing a Local Development Framework (LDF) for the county, which includes the production of a Core Strategy and a number of Development Plan Documents. Various studies are being/have been undertaken during this process including the identification of strategic sites.

The Council is required to undertake a Habitats Regulations Assessment of these documents with regard to the impact of future development on Special Areas of Conservation (SACs) and their designated features.

The Wye Valley Woodlands SAC and the Wye Valley and Forest of Dean Bat Sites SAC lie within 10km of the town of Ross-on-Wye. The designated features of these sites include populations of greater and lesser horseshoe bats. These species are highly mobile and also travel between winter hibernation sites and summer maternity roosts. Therefore an assessment of greater and lesser horseshoe bat populations and their habitats in southern Herefordshire is required to inform the Habitats Regulations Assessment of the Local Development Framework (LDF) for Herefordshire, specifically in relation to the identification of strategic sites in the Ross-on-Wye area.

2. AIM

To complete an assessment of the current status and distribution of lesser and greater horseshoe bats in the Ross-on-Wye area

3. OBJECTIVES

- To identify existing information
- To digitise all available information
- To identify suitable lesser and greater horseshoe bat foraging and commuting habitat around Ross-on-Wye
- To produce a robust and defensible evidence base for the Habitats Regulations Assessment of the LDF

4. METHODOLOGY

The following tasks were identified:

- Collation of existing data held by the Herefordshire Biological Records Centre, Natural England and Countryside Council for Wales

- Liaison with Natural England, the Countryside Council for Wales and any other relevant individuals or organisations to locate information regarding the species and the SACs

- Analysis of aerial photographs and the Phase I habitat map for Herefordshire to assess habitat suitability where possible

- Site visits (where there is public access) to verify the above

- Identification of need for further field survey in relation to strategic sites

- Digitisation of all previously un-digitised or newly-available information

- Production of a report and maps of the data

5. RESULTS

Map 1

Location of the Wye Valley Woodlands SAC and the Wye Valley and Forest of Dean Bat Sites SAC with records of greater and lesser horseshoe bats

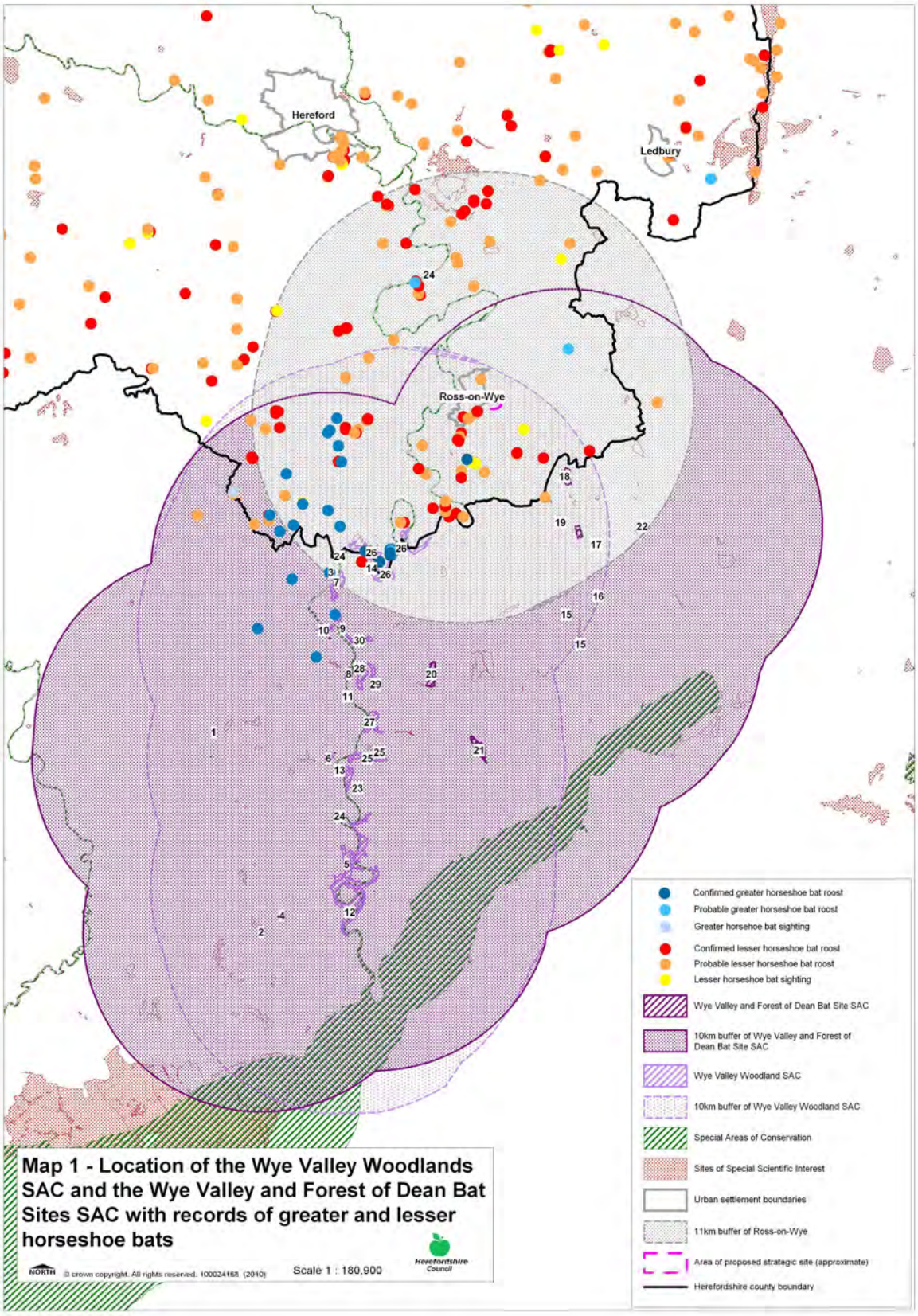
A buffer zone of 10km has been drawn around the sites to indicate the distance recommended in the West Midlands Regional Spatial Strategy as being the likely zone of influence. The SACs are made up of a number of SSSIs. Appendix A includes the SAC citations for information; Appendix B has the constituent SSSI citations.

The existing Unitary Development Plan (UDP) settlement boundary of Ross-on-Wye has also been plotted; this has an 11km buffer from the centre of the town in order to identify the SAC sites within approximately 10km of the town.

The existing records of greater and lesser horseshoe bats in Southern Herefordshire and Monmouthshire held by the Herefordshire Biological Records Centre and provided by the Countryside Council for Wales have also been plotted.

The records have been categorised as follows:

- Confirmed lesser horseshoe bat roost
- Probable lesser horseshoe bat roost
- Lesser horseshoe bat sighting
- Confirmed greater horseshoe bat roost
- Probable greater horseshoe bat roost
- Greater horseshoe bat sighting


Hereford
Ledbury
Ross-on-Wye
Confirmed greater horseshoe bat roost
Probable greater horseshoe bat roost
Greater horseshoe bat sighting
Confirmed lesser horseshoe bat roost
Probable lesser horseshoe bat roost
Lesser horseshoe bat sighting
Wye Valley and Forest of Dean Bat Site SAC
10km buffer of Wye Valley and Forest of Dean Bat Site SAC
Wye Valley Woodland SAC
10km buffer of Wye Valley Woodland SAC
Special Areas of Conservation
Sites of Special Scientific Interest
Urban settlement boundaries
11km buffer of Ross-on-Wye
Area of proposed strategic site (approximate)
Herefordshire county boundary
Map 1 - Location of the Wye Valley Woodlands SAC and the Wye Valley and Forest of Dean Bat Sites SAC with records of greater and lesser horseshoe bats
© crown copyright. All rights reserved. 100024168. (2010)
Scale 1 : 180,900
Herefordshire Council

Map 2

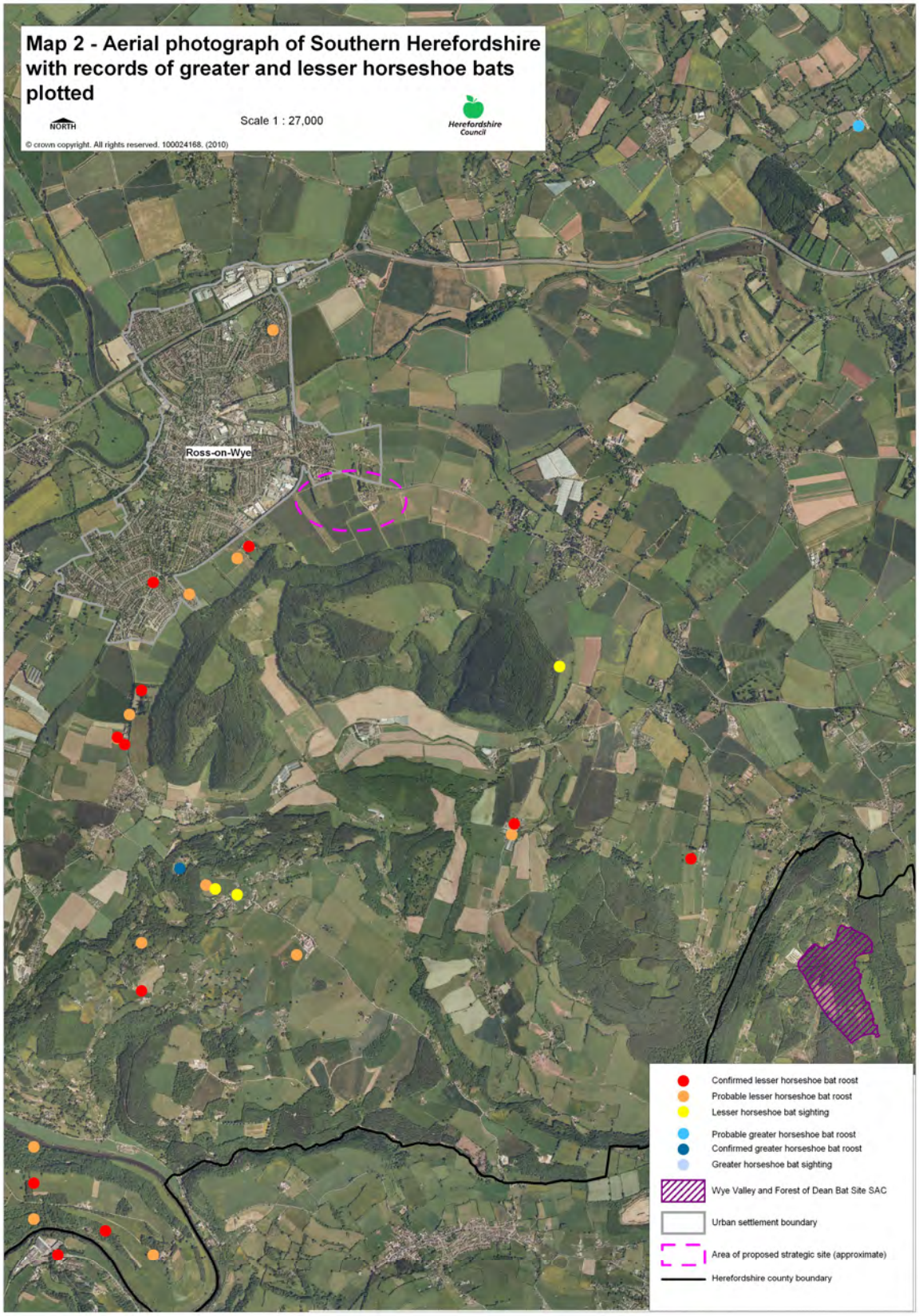
Aerial photograph of Southern Herefordshire with records of greater and lesser horseshoe bats plotted

The aerial photograph is from 2009 with all records of greater and lesser horseshoe bats plotted; the categories of bat records are as for Map 1. The proposed strategic site at Hildersley as identified in Herefordshire Council's Place Shaping Paper Consultation (January 2010) has also been shown to the east of Ross-on-Wye.

Most the greater and lesser horseshoe bat records are associated with woodland, or are within relatively close proximity to woodland habitat.

The nearest record of lesser horseshoe bats to the proposed strategic site is more than 600m away (at Alton Court).

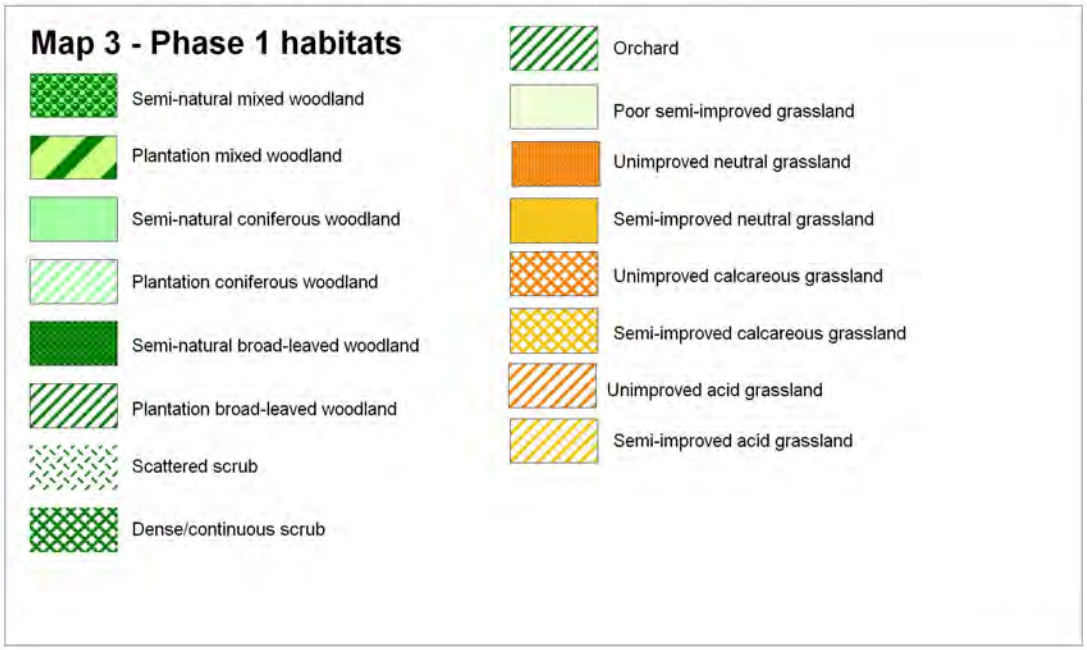
There are no records of greater horseshoe bats nearby; there is one probable roost site more than 3km to the south.


Map 2 - Aerial photograph of Southern Herefordshire with records of greater and lesser horseshoe bats plotted
NORTH
Scale 1 : 27,000
Herefordshire Council
© crown copyright. All rights reserved. 100024168. (2010)
Ross-on-Wye
Confirmed lesser horseshoe bat roost
Probable lesser horseshoe bat roost
Lesser horseshoe bat sighting
Probable greater horseshoe bat roost
Confirmed greater horseshoe bat roost
Greater horseshoe bat sighting
Wye Valley and Forest of Dean Bat Site SAC
Urban settlement boundary
Area of proposed strategic site (approximate)
Herefordshire county boundary

Map 3

Phase I habitats with records of greater and lesser horseshoe bats plotted

This map shows the habitats likely to be used by horseshoe bats extracted from the 1999-2004 Phase I habitat survey of Herefordshire (the Millennium Map). The Phase I habitats included are:

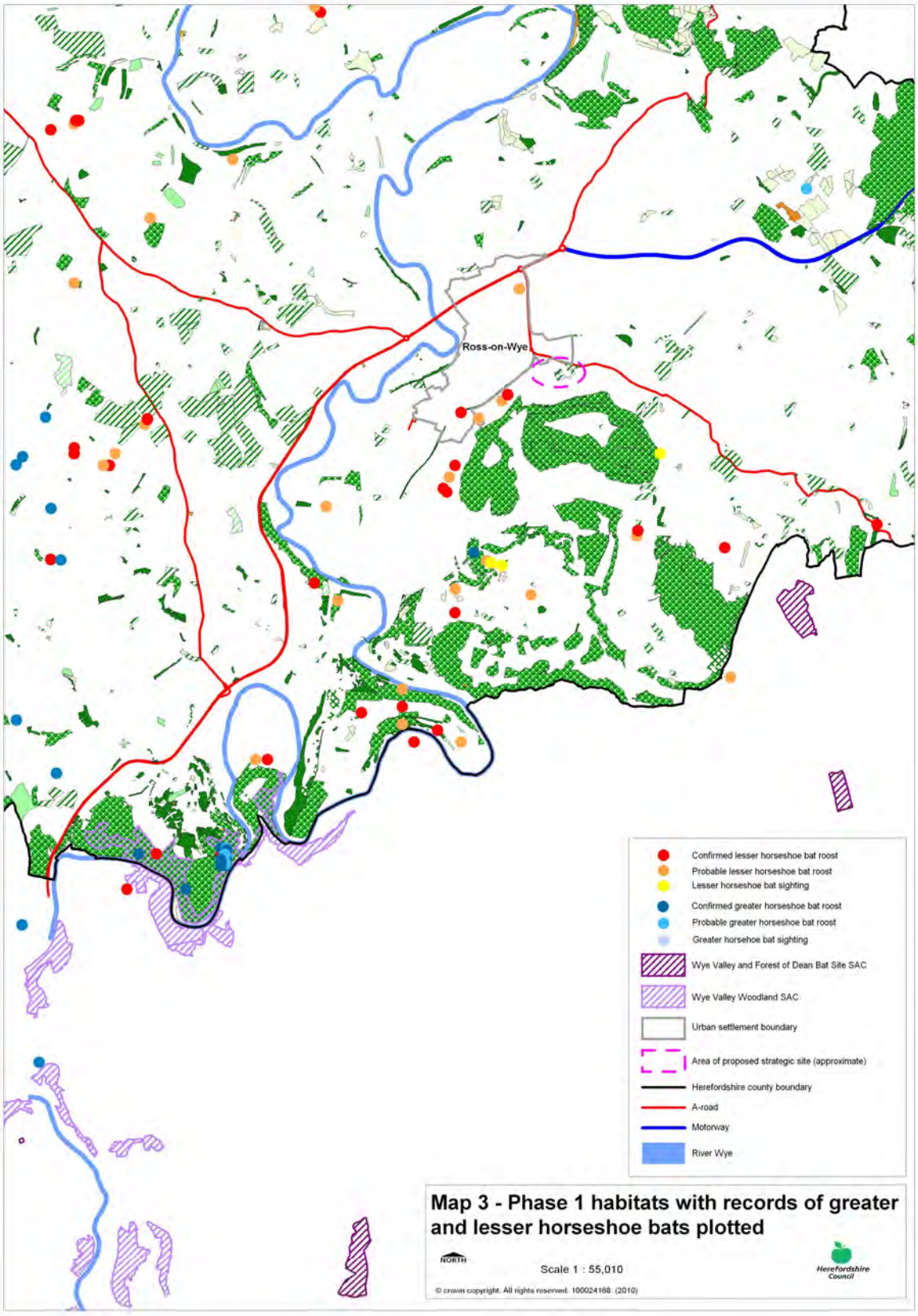


There are extensive areas of woodland in south east Herefordshire, forming the edge to the Forest of Dean.

Orchard and grassland habitats are also important foraging habitats for greater horseshoe bats, and also provide links between more wooded habitats for both species.

The SAC sites have been plotted to provide context.

The categories of bat records are as for Map 1.


Ross-on-Wye
Confirmed lesser horseshoe bat roost
Probable lesser horseshoe bat roost
Lesser horseshoe bat sighting
Confirmed greater horseshoe bat roost
Probable greater horseshoe bat roost
Greater horsehoe bat sighting
Wye Valley and Forest of Dean Bat Site SAC
Wye Valley Woodland SAC
Urban settlement boundary
Area of proposed strategic site (approximate)
Herefordshire county boundary
A-road
Motorway
River Wye
Map 3 - Phase 1 habitats with records of greater and lesser horseshoe bats plotted
NORTH
Scale 1 : 55,010
Herefordshire Council
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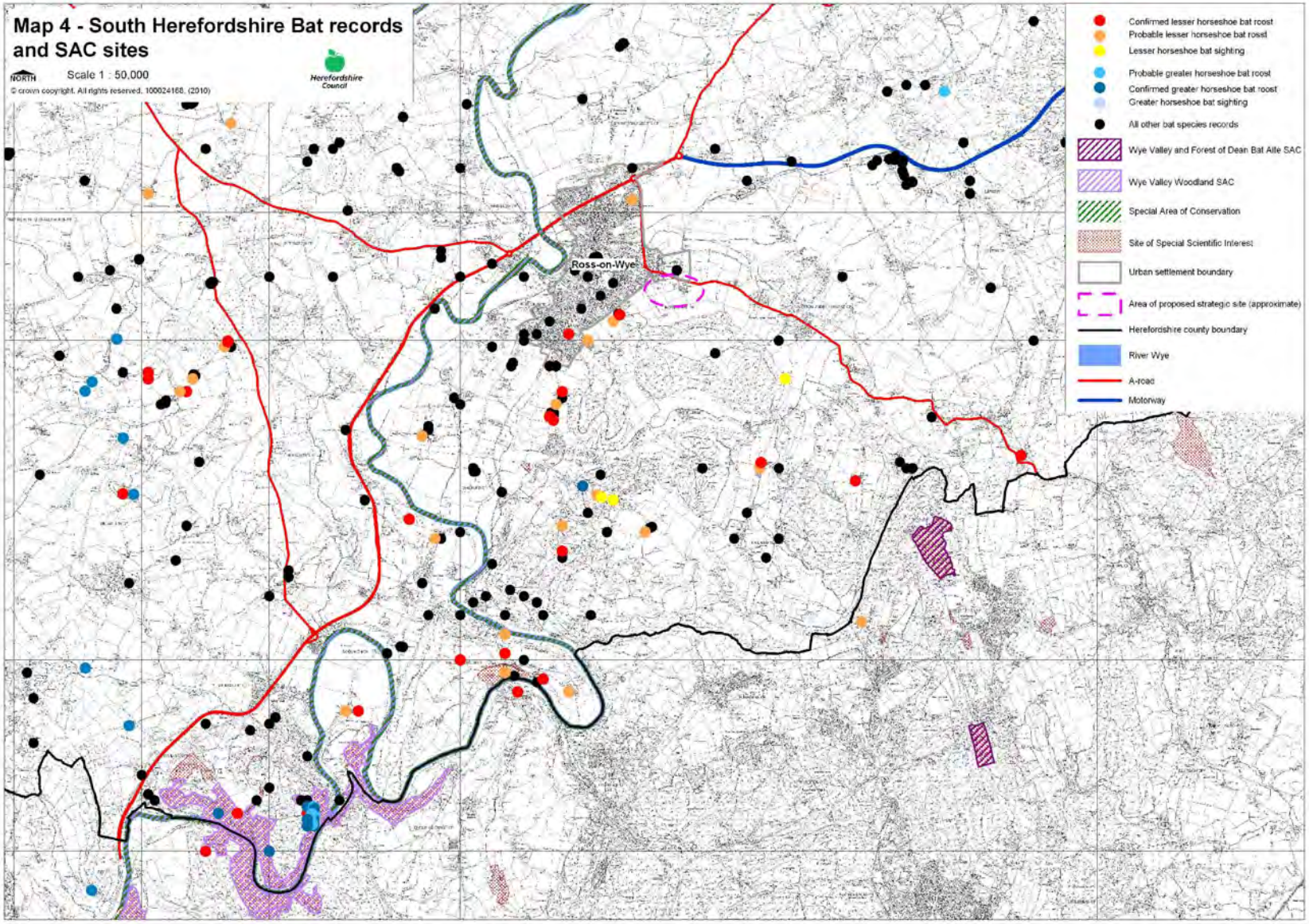
Map 4

South Herefordshire Bat records and SAC sites

This map shows the proximity of the nearest SAC sites to Ross-on-Wye and the proposed strategic site at Hildersley.

This gives a general picture of bat activity in the area.

Also shown is the River Wye SAC although the horseshoe bats are not one of its designated features.


Map 4 - South Herefordshire Bat records and SAC sites
Scale 1 : 50,000
NORTH
© crown copyright. All rights reserved. 100024168. (2010)
Herefordshire Council
Ross-on-Wye
Confirmed lesser horseshoe bat roost
Probable lesser horseshoe bat rossl
Lesser horseshoe bat sighting
Probable greater horseshoe bat roost
Confirmed greater horseshoe bat roost
Greater horseshoe bat sighting
All other bat species records
Wye Valley and Forest of Dean Bat Alte SAC
Wye Valley Woodland SAC
Special Area of Conservation
Site of Special Scientific Interest
Urban settlement boundary
Area of proposed strategic site (approximate)
Herefordshire county boundary
River Wye
A-road
Motorway

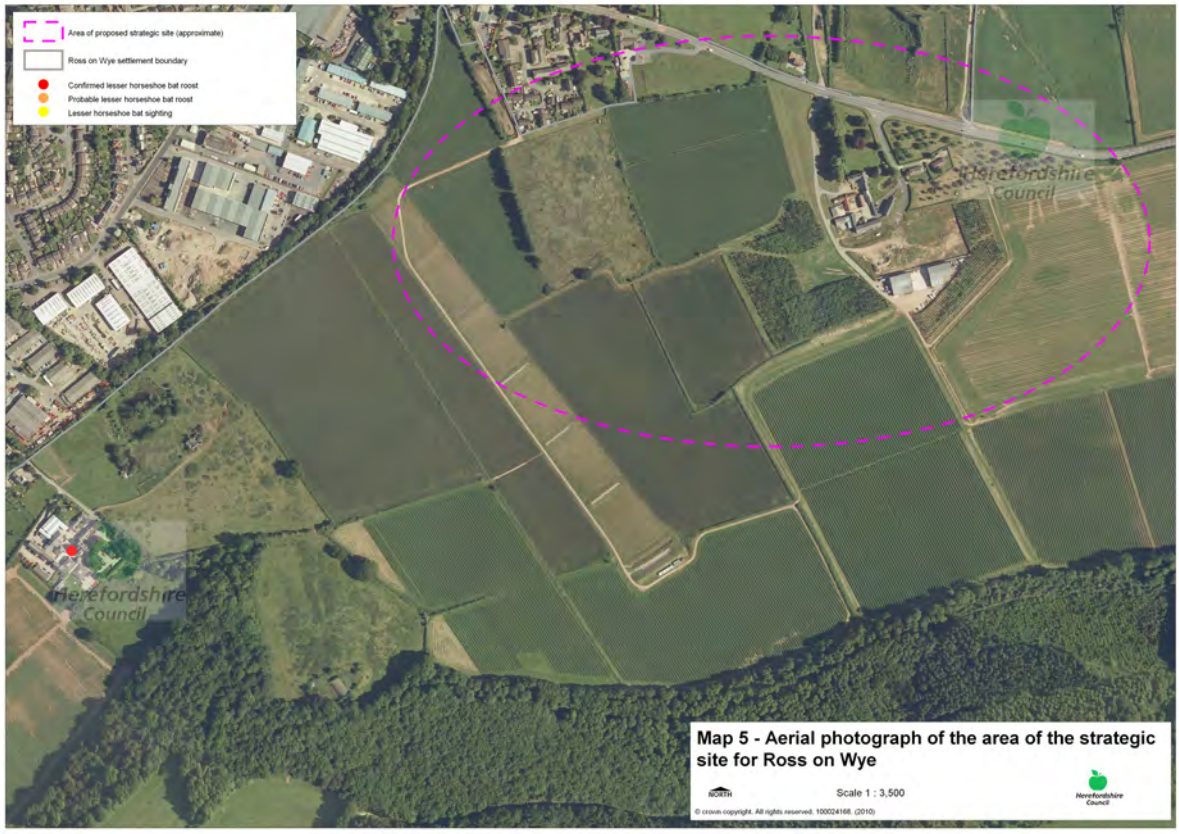
Map 5

Aerial photograph of the area of the strategic site for Ross on Wye

This aerial photograph from 2009 shows the current land uses within the strategic site.

The urban area to the west can be identified, as well as the wooded, disused railway corridor that forms the urban perimeter here and the location of the nearby woodlands of Penyard Park and Chase Wood.

The land-use is predominantly arable, although there is recent broad-leaf plantation around the buildings at Hildersley and an orchard to the east.



Map 6

Phase I habitat map of the area of the strategic site for Ross on Wye

This is an extract from the Phase I habitat map of Herefordshire (1999-2004), updated in 2009, showing all habitats mapped. The following habitats were identified and mapped on the site:

A1.1.1 Broadleaved woodland

A1.1.2 Broad-leaved plantation

A1.1.2 Orchard (broad-leaved plantation)*

B4 Improved grassland

G1 Standing open water

J1.1 Arable

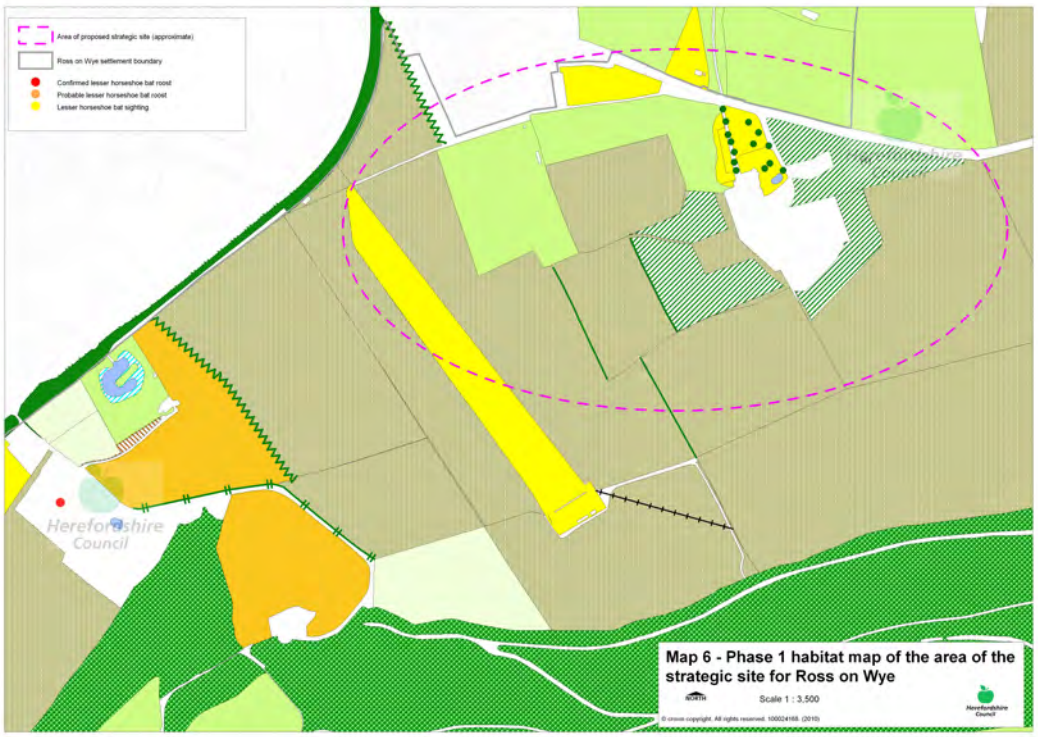
J1.2 Amenity grassland

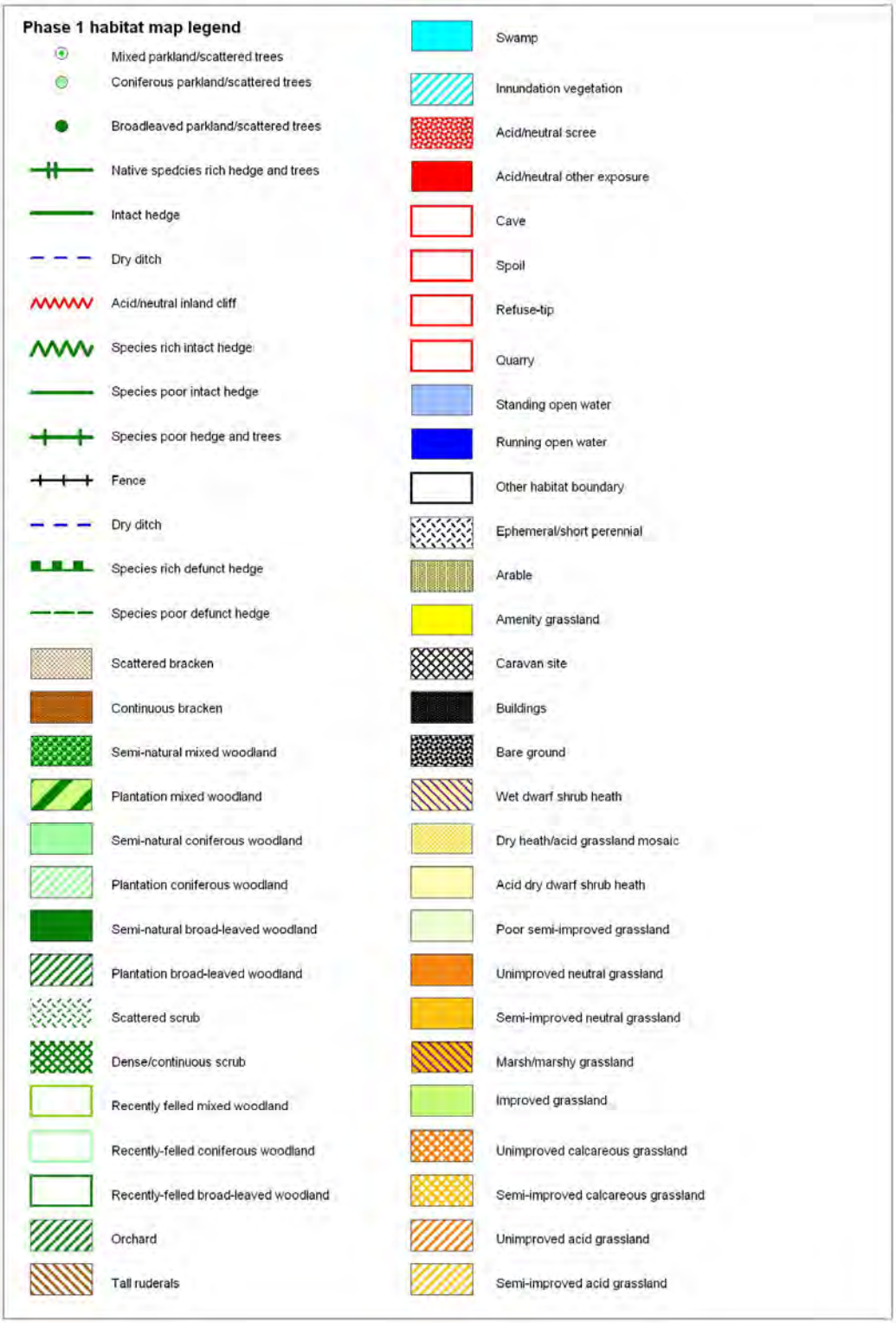
* The JNCC Phase I habitat survey guidance does not include a classification category for orchard, so it has been classified as broad-leaved plantation woodland.

Boundaries were not mapped as part of the Millennium Map project, but some hedgerow features were recorded in the recent update. The following types of boundary were identified on the Hildersley site:

J2.1.1 Native species-rich intact hedge

J2.1.2 Species-poor intact hedge




Phase 1 habitat map legend
Mixed parkland/scattered trees
Coniferous parkland/scattered trees
Broadleaved parkland/scattered trees
Native spedcies rich hedge and trees
Intact hedge
Dry ditch
Acid/neutral inland cliff
Species rich intact hedge
Species poor intact hedge
Species poor hedge and trees
Fence
Dry ditch
Species rich defunct hedge
Species poor defunct hedge
Scattered bracken
Continuous bracken
Semi-natural mixed woodland
Plantation mixed woodland
Semi-natural coniferous woodland
Plantation coniferous woodland
Semi-natural broad-leaved woodland
Plantation broad-leaved woodland
Scattered scrub
Dense/continuous scrub
Recently felled mixed woodland
Recently-felled coniferous woodland
Recently-felled broad-leaved woodland
Orchard
Tall ruderals
Swamp
Innundation vegetation
Acid/neutral scree
Acid/neutral other exposure
Cave
Spoil
Refuse-tip
Quarry
Standing open water
Running open water
Other habitat boundary
Ephemeral/short perennial
Arable
Amenity grassland
Caravan site
Buildings
Bare ground
Wet dwarf shrub heath
Dry heath/acid grassland mosaic
Acid dry dwarf shrub heath
Poor semi-improved grassland
Unimproved neutral grassland
Semi-improved neutral grassland
Marsh/marshy grassland
Improved grassland
Unimproved calcareous grassland
Semi-improved calcareous grassland
Unimproved acid grassland
Semi-improved acid grassland

Photographs of Ross-on-Wye area

Photo 1: View across to the Strategic Site from the public footpath above Alton Court

Photo 2: View from disused railway corridor across firing range to the Strategic Site. Penyard Park is in the distance and the row of conifers within the site is in view.

Photo 3: View from public footpath above Alton Court; the young plantation around Hildersley is visible in the middle distance.

Photo 4: View along disused railway corridor

Photo 5: Alton Court; known small maternity roost of lesser horseshoe bats

6. CONSTRAINTS

The absence of bat records in an area does not mean that the bats are absent, merely that they have not been recorded in the area. This has been a broadly desk-based study; a full bat activity survey of the area has not been undertaken.

It is now more than 10 years since the Millennium Map Project was commenced and some of the habitat data may be out-of-date.

7. ANALYSIS

7.1 Bat populations in Herefordshire

Herefordshire has a diverse range of semi-natural habitats and fourteen of the eighteen species of bat found in the United Kingdom occur within the county. There are scattered and dense areas of woodlands as well as other semi-natural habitats that are known to provide foraging and roosting opportunities for many bat species, as well as numerous redundant agricultural buildings that also provide suitable roosting locations.

7.2 Habitats used by horseshoe bats

Lesser horseshoe bats are typically found in lowland areas of un-intensive agriculture with woodlands and well-defined hedgerows. They use broadleaf woodland as their main foraging habitat, but also commute and forage along well-developed hedgerows and riparian corridors.

Greater horseshoe bats also forage in semi-natural woodland, but will also use more open parkland, orchard and grassland habitats, especially those that are cattle grazed; dung beetles associated with cow pats provide an important food resource for this species during the summer months.

Both horseshoe bat species typically hibernate in underground sites such as caves and mines as well as disused railway tunnels during the winter months.

Southern Herefordshire has many ideal habitats for this species, offering all of the above features. The Wye Valley, with its limestone geology, has many natural caves as well as artificial mines and structures such as disused lime kilns that provide hibernation sites; many have significant horseshoe bat populations during the winter months, hence their designations as sites of European importance.

As well as the hibernation sites within the Wye Valley Woodlands SAC and the Wye Valley and Forest of Dean Bat Sites SAC, there are also hibernation sites to the north of these in some of the disused railway tunnels of the former Hereford to Gloucester railway line.

7.3 Distribution of lesser horseshoe bat records in Southern Herefordshire

The UK range of lesser horseshoe bats is restricted to the south west of England, the West Midlands and most of Wales. They are found across much of Herefordshire, particularly in the south of the county, with numerous roosts and ‘in flight’ records held by the Herefordshire Biological Records Centre.

Summer roost and 'in-flight' records around Ross-on-Wye appear to be primarily associated with woodland and woodland edge habitats as well as suitable buildings within these areas.

There are a number of hibernation sites within the Wye Valley and Forest of Dean Bat Sites SAC that lie within 10km of the market town of Ross-on-Wye. Some of the bats that are present in these sites are likely to spend the summer months in southern Herefordshire, but many are also likely to be found in maternity or other sites within the Wye Valley and Forest of Dean area.

7.4 Distribution of greater horseshoe bat records in Southern Herefordshire

The greater horseshoe bat records are more limited across southern Herefordshire. Most records are concentrated within the Symonds Yat area, although there are also a few to the north of this around the village of Llangarron.

There is one record of a greater horseshoe bat roosting 3km to the south of Ross-on-Wye, but that dates from 1972.

7.5 Habitats around the proposed strategic site at Ross-on-Wye

Chase Wood and Penyard Park lie to the south east of Ross-on-Wye, with continuous woodland cover on the steep slopes. This provides good foraging habitat for horseshoe bats. There is a known maternity roost of lesser horseshoe bats at Alton Court, from which there is a good habitat link (mature hedgerow) to the woodland areas to the south and east.

The land uses within the proposed strategic site at Ross-on-Wye are broadly arable; fields are divided by low hedgerows or grass headlands, both of which provide little cover for horseshoe bats.

There is an orchard to the east of Hilderlsey Farm that could provide a foraging area for both species; it is not likely to be a significant one as it is not directly linked to other suitable habitats and also close to noise and light disturbance from the A40. In the event of development taking place at the Hildersley site, this orchard should be retained. Opportunities to provide habitat linkages to the wider countryside and the woodlands to the south should also be sought.

An area of broadleaf plantation has also been created around the buildings at Hildersley. This will develop into foraging habitat for horseshoe bats, but again is not linked to the wider landscape with suitable features for these species.

8. CONCLUSIONS

- Southern Herefordshire has a diversity of habitats and buildings that provide ideal habitat for horseshoe bats.
- The strategic site at Ross-on-Wye has largely unsuitable habitat for lesser and greater horseshoe bats, the areas proposed for development being predominantly arable.
- The hedgerows on the site are mostly trimmed and less than 2 metres in height. Other field margins are of grass and tall herb headlands.
- There is a high hedgerow and row of conifers that could provide a commuting corridor, but neither is linked to the woodland on Penyard Hill.
- The wildlife corridor along the disused railway line will be unaffected by development; there may also be opportunities to provide further planting as a buffer to this. The retention of this wildlife corridor will secure a commuting and foraging route for all bat species as well as other wildlife.
- The orchard habitat that is present on the Hildersley site can be retained, enhanced and managed appropriately as part of any development proposal.
- There will be opportunities to enhance habitats within and adjacent to the site to benefit local bat populations and accommodate specific measures for horseshoe bats.
- A bat survey of the farm and other buildings at Hildersley is recommended to confirm that no horseshoe bats are present.