The Nottinghamshire Biodiversity Opportunity Mapping Project

Ashfield District



November 2016

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Ashfield District
FINAL REPORT

Credits:

Report produced by Chris Jackson (Nottinghamshire Biodiversity Action Group, NottsBAG), with mapping and data analysis undertaken by both Chris Jackson and Karen Taylor (Nottinghamshire County Council). The production of the Ashfield BOM report was made possible due to funding by Ashfield District Council.

1. Aim of the Project

The aim of this project is to produce a Biodiversity Opportunity Map (BOM) for Ashfield District. This work was undertaken to support the work of Ashfield District Council but also to help to underpin the wider work of the Nottinghamshire Biodiversity Action Group (BAG), the Local Biodiversity Action Plan (LBAP) partnership for Nottinghamshire.

2. Background and context to the Project

In 2008 the Nottinghamshire BAG resolved to produce a Biodiversity Opportunity Map for the County, in order to:

- Help us have a better understanding of the current distribution of biodiversity in the County
- Provide a spatial vision for how partners want the biodiversity of the County to look in the long and medium term
- Identify the most effective way to re-create habitat networks at a landscape-scale
- Help to focus partners' resources on optimising biodiversity gain
- Help to deliver our contribution to the England Biodiversity Strategy, such as for monitoring and reporting, and target-setting for habitats and species
- Inform spatial planning, including the delivery of Green Infrastructure
- Inform agri-environment targeting
- Underpin Biodiversity Offsetting
- Guide the work of the Local Nature Partnership and Local Enterprise Partnership
- Inform a wide range of other strategies, such as for climate change and ecosystem services
- Provide a robust case for developing funding bids
- Influence policy makers, landowners and land managers

Initially, the BAG intended to adapt the Regional BOM (which was under development at the time) into a County model, but over the next two years it became clear that for technical reasons this was not possible. Partners resolved to develop our own model that would best suit our needs in Nottinghamshire and would draw widely on best practice from around the UK. The availability of funds to progress the work was, however, a seriously limiting factor, particularly as the County Phase 1 mapping was only available as a hard copy and has never been digitised (due to cost).

A task and finish group of the BAG was established - the BOM Working Group (see Appendix 1) - to determine the best approach on behalf of partners, and after reviewing several models from other counties, a decision was made in 2012 to utilise the Habitat Network Model developed in the National Forest, as this was most closely correlated to what we aimed to achieve and could be run on the computer software (MapInfo) available to the partners. The National Forest Company team was willing to share both their Habitat Network Model and their considerable staff expertise, having developed their model in-house.

The opportunity then arose to bid for funds from various sources to begin the BOM process on discrete parts of the county. Initially this work took place in Sherwood during 2012/3 and this work was funded by Natural England. Subsequently funding was provided by the Trent Vale Landscape Partnership Scheme and the Nottinghamshire County Council Minerals and Waste Team, to undertake the BOM process in the Trent Valley. This process was undertaken in two phases, firstly in the Trent Vale between Newark and Gainsborough and secondly in the area between Nottingham and Newark. In 2013/14 funding was made available by two local authorities (Rushcliffe Borough Council and Broxtowe Borough Council) in conjunction with funds from the Environment Agency to undertake the BOM process within Broxtowe and Rushcliffe (west of the A46), including the final section of the Trent Valley between the eastern edge of Nottingham (Netherfield) and through the city to the county boundary with Derbyshire. Funding to undertake the BOM process in the remaining part of Rushcliffe Borough (Rushcliffe east of the A46) was made available by Rushcliffe Borough Council in 2014/15. In 2015/16, Ashfield District Council were able to provide funding to pay to undertake the BOM process across the parts of this district that fell outside of the Sherwood BOM area.

A report detailing the outputs from the Trent Valley BOM (the central and northern sections) was produced in September 2013 and this was followed by a report detailing the BOM outputs for the Borough of Broxtowe, produced in March 2014. A report for Rushcliffe, West of the A46, was produced in October 2014 and this was followed by the production of a report detailing the outputs of the BOM exercise for the East of Rushcliffe in March 2015. The two Rushcliffe reports were merged into a final report for the whole of Rushcliffe, produced in July 2015. In February 2016, a second Trent Valley BOM Report was produced that finally combined the results of the BOM process for the three sections of the Trent Valley in Nottinghamshire. In 2016 funding was found through the development stage of the Sherwood Landscape Partnership Scheme to produce a BOM report detailing the outcomes of the Sherwood BOM process that had taken place three years earlier.

This current document is the most recent BOM Report to be produced and covers Ashfield District. A draft document for this area was produced in June 2016, and feedback received after circulation of this document have, where appropriate, been incorporated into this final report.

3. Methodology

The following methodology has been used in undertaking the BOM process, which has been agreed by the BOM Working Group and the BAG:

- Geo-rectification of 1997-8 Phase 1 habitat map image files within MapInfo
- Digitisation of the Phase 1 habitat maps using MapInfo
- Updating of the Phase 1 habitat maps using aerial photography interpretation (2007, 2009 and 2013 flights), BAG LBAP habitat mapping data, and latest Local Wildlife Site knowledge from the Nottinghamshire Biological and Geological Records Centre (NBGRC).

- Assigning relevant habitats to one of the four broad habitat types - woodland, acid grassland & heathland, other grassland, and wetland (see Appendix 2 for details of which habitats make up the four broad habitat types).
- Data cleaning within MapInfo to ensure that there were no gaps or overlaps in the mapped data
- Running of the Habitat Network Modelling (see below for further details of the model)
- Stakeholder workshops to annotate the Habitat Network maps (see below) based on the four broad habitat types (woodland, acid grassland & heathland, other grassland and wetland)
- Collation and digitisation of the workshop outputs to produce Biodiversity Opportunity Maps for the four broad habitat types
- Production of draft report for comment
- Amendment of Biodiversity Opportunity Maps following feedback and production of final report

4. The Habitat Network Model

The Habitat Network Model developed by the National Forest Company is based on the permeability of different habitats to the movement of species. It uses a generic 'focal' species to represent each of the four habitat networks (i.e. woodland, heathland and acid grassland, other grassland and wetland), and every Phase 1 habitat that is mapped is assigned a permeability value for each of the four generic species. The permeability values are based on the work of Roger Catchpole at Natural England and have been slightly modified to reflect Nottinghamshire circumstances (see Appendix 3).

The Model then uses "least cost analysis" to calculate how far the focal species can move from its core habitat, with species moving further through more permeable habitats than through less permeable ones; for example, the woodland focal species can move well through habitats that are similar to woodland, such as scrub, but not through habitats which are very different to woodland, such as arable farmland or grassland. Therefore, core habitats that are surrounded by more permeable habitats will allow for stronger networks than those separated by impermeable ones. Where areas of core habitat become linked, these are referred to as Habitat Networks. To assist in the interpretation of this data, Habitat Networks have been placed into different categories depending on their size (which is the size of the Habitat Network, not the size of the core habitat contained within the Habitat Network), so that large Habitat Networks (containing areas of well connected habitats) can be distinguished from small Habitat Networks (representing isolated and fragmented areas of habitat).

5. Workshops

A stakeholder workshop was held during the process of gathering the information to go into this report. The workshop was held on Tuesday 29th February 2016 at Ashfield District Council's offices in Kirkby-in-Ashfield. The workshop was attended by 31

individuals from 17 organisations. In addition, information to inform the wetland opportunity maps was obtained from staff at the regional Environment Agency's Trentside office during March 2016.

Appendix 4 provides a list of attendees for the workshop.

During the workshops, participants were asked to annotate the Habitat Network maps for each of the four broad habitat types, for two timescales – a long term 50 year period, and a shorter term 10 year period. They were asked to resist the temptation to necessarily link together all the Habitat Networks, and to think about the size and scale of habitats to be created, and where these might be best located within the landscape. Participants were also asked to follow the principles set out in 'Making Space for Nature' – Better, Bigger, More, Connected, using the following definitions:

Better: *Areas of existing, but degraded habitat, which need their condition improved*, e.g. scrubby heathland or mixed woodland with a high proportion of non-natives. This particularly relates to those sites that are in (very) poor condition.

Bigger: *Areas onto which existing habitat can be expanded*, e.g. adjacent areas of conifer plantation or arable land, which help make existing areas larger and also buffer them from other land uses. For the purposes of this workshop, an arbitrary limit will be used whereby 'bigger' can be up to doubling of the site (after which time it becomes 'more').

More: *New areas of habitat to increase the overall resource* - e.g. creation of new heathland or woodland on arable land, in areas that do not abut existing habitat that can be made 'bigger' (or where the size of an existing site is more than doubled).

Connected: *Enhancing existing, and creating new, connections between existing/planned areas of habitat*, either through continuous corridors or by using stepping stones, so that currently isolated habitat blocks are linked up. Obviously 'bigger' and 'more' may result in the creation of new connections anyway, and 'better' may result in the enhancement of existing connections, so this relates particularly to things like narrow, linear linking strips of habitat (along road verges or disused railway lines) or very small patches of habitat that will act as stepping stones which on their own don't deliver substantial areas of new habitat.

A range of other data was available to workshop participants to help assist in determining where activities to best deliver these principles should be located. This was:

- Agricultural Land Classification
- Environment Agency Flood Maps (Zone 2 and Zone 3)
- Environmental Stewardship and English Woodland Grant Scheme agreements

- Land owned by BAG partners (Forestry Commission, Nottinghamshire County Council, Nottinghamshire Wildlife Trust and the Woodland Trust)
- Locally designated site boundaries (Local Wildlife Sites, previously known as Sites of Importance for Nature Conservation and Local Nature Reserves)
- National Character Areas
- Phase 1 habitat maps
- Statutorily designated site boundaries (Sites of Special Scientific Interest)
- Wetland Vision map (for reedbed and floodplain grazing marsh)

6. Outputs

The Ashfield BOM Project has four mapping outputs:

a) "*The Basemap*" (Appendix 5), which shows all habitats across 125.84 sq km within the project area (including a 250m buffer), based on the digitised 1997-8 Phase 1 survey, updated with reference to aerial photography, the BAG's LBAP habitat mapping data, and knowledge of Local Wildlife Sites from the Nottinghamshire Biological and Geological Record Centre (NBGRC).

b) "*The Habitat Network Maps*" (Appendix 6), which have been produced in MapInfo using the National Forest's Habitat Network Model, for each of the four broad habitat types (woodland, grassland, wetland and heathland/acid grassland).

c) The "*Biodiversity Opportunity Maps*" (see Section 9 – Maps and tables), which incorporate (i) the "Long Term 50 Year Opportunities" and (ii) the "*Short Term 10 Year Opportunities*". The former are BAG partners' shared vision and aspirations for what might be achieved over a 50 year time frame, based on the assumptions of a sympathetic funding and planning climate and guided by the current distribution of habitats and their potential for extension based primarily on geology, soils and hydrology. This map also includes details of the longer-term landscape scale visions and targets of BAG partners where they are already in place, but is moderated by permanent constraints such as large settlements and roads. The latter, which overlay the Long Term 50 Year Opportunities, show shorter-term aspirations based upon current or proposed projects and known constraints such as substantial approved development sites, new planned infrastructure and areas of highest value farmland. Each area on the maps is numbered, with a description of the opportunity contained in the accompanying table.

d) The "*Focal Area Maps*" (see Section 9 – Maps and tables), identifying locations where there appears to be a particular concentration of opportunities, which may be for the same habitat type or across different habitat types. These can be used to prioritise activities so that they have the maximum benefit.

7. What the BOM shows

The following conclusions have been drawn following the workshop and the production of the Biodiversity Opportunity Maps:

i. Priority habitats

The BOM maps indicate that Ashfield is a particularly important area for its biodiversity and that this part of Nottinghamshire supports a diverse range of habitat types. All four of the broad habitats are well represented within the district and concentrations of opportunities for each of these have been identified as part of the BOM process.

Woodland (see Map 1, page 13) - Opportunities for woodland are much more widespread across Ashfield, although the BOM identifies certain areas where clusters of opportunities for this habitat type occur. Woodland opportunities tend to be clustered in two main areas in the south and east of the district.

Heathland & Acid Grassland (see Map 2, page 15) - Acid grassland and heathland habitat is limited to the eastern edges of Ashfield District and these areas are very much associated with the underlying geology (Sherwood Sandstones). As a result, all the opportunities for this important broad habitat type seek to build on and reconnect the existing habitat blocks in the east of Ashfield.

Other Grassland (see Map 3, page 17) - Grassland opportunities tend to be spread across Ashfield and clusters occur in many parts of the district. Clusters of opportunity occur in Bentick/Kirkby Grives area, south of Hucknall, west of Bagthorpe, the Meden valley, around Huthwaite and at Brierley.

Wetland (see Map 4, page 20) - As to be expected, the wetland opportunities in Ashfield are associated with the main river catchments within the district - the rivers Erewash, Leen, Maun and Meden. In addition, on some areas of restored or previously worked land the potential to build on existing pond/wetland networks could be enhanced through the creation of pondscapes.

ii. Focal Areas

The BOM maps show that there are several areas where existing habitats and associated opportunities are concentrated, referred to here as 'Focal Areas'. The input of the participants at the workshops has shown that there are substantial opportunities in both the short and long term to enhance and expand these habitats, to buffer them and to link them up to create a stronger habitat network across a landscape scale. These Focal Areas, shown on Map 5 in section 9, are:

1. **Beauvale and Felley:** this focal area (which extends into Broxtowe) is predominantly focused on improving and enhancing existing areas of woodland and grassland as well as looking to buffer these areas and establish better connections between them across the landscape. The area incorporates large blocks of existing woodland in the vicinity of Felley/Annesley with smaller blocks to the east around

Bagthorpe where there is a greater focus on improving the habitat connectivity between grasslands.

2. **Erewash Catchment:** an area with great potential for improving the wetland and grassland habitats (and to a lesser extent the woodland network) in this long, linear focal area stretching along the Erewash Valley from Kirkby-in-Ashfield southwards to Toton in Broxtowe (and also including land in Derbyshire). The Erewash Valley offers opportunities to improve existing core areas of habitat, the opportunity to create new areas of habitat that can buffer and protect these core areas and also the opportunity to improve habitat connectivity along the valley by creating linking pieces of habitat between the existing habitat blocks.
3. **Kirkby-Bentinck-Annesley Woodhouse:** potential for improving the existing habitat network across this area with a particular focus on calcareous and neutral grasslands. A number of the existing sites provide some very good areas of core habitat and the surrounding landscape offers a lot of opportunities within which habitat connectivity can be improved. The western part of this focal area also provides good opportunities for improving the existing network of ponds and wetlands.
4. **Leen Catchment:** this focal area has the potential for improving the existing wetland and grassland network along the River Leen and its tributaries. Opportunities to improve these habitats occur between Bestwood and Newstead and along the tributary of the River Leen that runs from the Whyburn area through Hucknall to the main river. The focal area also includes opportunities to enhance the existing network of calcareous and neutral grasslands located between Hucknall and Bulwell, where it extends into both Gedling and Nottingham City.
5. **Newstead and Annesley:** this Focal Area offers opportunities for improving the biodiversity resource for all four of the broad habitat types. The existing woodland resource which is widespread but very fragmented and work should look at enhancing stands of existing broad leaved woodland and buffering these as well as improving connectivity between these sites. There is also potential to enhance the existing heathland/acid grassland resource. Golf courses at Hollinwell and at Coxmoor support existing habitat patches which could be enhanced, offering good opportunities for reconnecting this resource. In addition the Focal Area offers opportunities for improving and creating better connections between existing wetland sites as well as between areas of neutral and calcareous grassland, such as is found at the former Annesley Pit Top (now Newstead and Annesley Country Park).
6. **North Ashfield:** potential exists to enhance and create habitats throughout this wide and varied landscape. The majority of this area sits within the Meden catchment and as a result there is a lot of potential to enhance existing wetland and grassland habitats along the river and its tributaries, as well as improving the habitat connectivity between these sites. The area also includes potential to enhance areas of calcareous and neutral grasslands along the Teversal Trails and along other disused railways in the area where they connect into existing areas of grassland around Huthwaite. In addition, there is an opportunity to enhance the existing

woodland network, with a focus on improving the existing plantation woodlands on the old pit tips at Silverhill and Brierley Forest and create better connections between these and through the wider landscape.

iii. Wider Landscape

It is significant that the BOM identifies a large number of smaller habitat cluster areas, scattered throughout Ashfield, but it also appears to indicate that there are parts of Ashfield where there are no opportunities. However, in these areas, opportunities do exist: improved hedgerow networks and shelterbelts can be used to improve linkages between woodlands; improving areas of commercial forestry through the creation of better links between blocks of existing broad-leaved woodland or glades; grassland strips around fields and along roads can help link up isolated grassland sites; and the improved management of ditches and other watercourses can link up wetlands. Although not specifically picked out in the BOM, such opportunities can be delivered through agri-environment schemes and by inclusion within Forest Design Plans. It should also be noted that the BOM picks out the River Valleys and their associated streams and ditches, as key features within the landscape that can be used to improve connectivity throughout the whole of Ashfield.

iv. Conflicts and other considerations

It is evident that some areas are appropriate for the creation of more than one type of habitat. In such instances, it may be possible to incorporate both (or all) habitats into a single location through careful planning; alternatively, it may be that one habitat is deemed to be more important than another. Similarly, there may be instances where habitat creation at one location will affect an adjacent area where habitat currently exists (or could be created). Such instances should be looked at on a case-by-case basis as and when opportunities arrive, with the help of specialist ecological input.

It should also be noted that these are ecological opportunities; no account has been taken at this time of other factors such as land ownership and current land use, or of other factors such as flood risk management or public access. These would, of course, need to be considered at the time that opportunities are taken forward.

A number of Invasive non-native species (INNS) are known to be present across the landscape within Ashfield District, however it is not the purpose of the Ashfield BOM to deal with the detail of preventing the spread and controlling the distribution of these species. It is assumed that work to control these species should be undertaken at a landscape scale and where feasible projects that seek to enhance the biodiversity of particular areas (one of the focal areas perhaps) should also look to control and eradicate INNS within these areas.

v. Opportunities for species

The BOM focuses on habitats, but implicit within this is the expectation that works to make habitats better and bigger, to create more of them, and to ensure that they are

linked up, will also benefit the priority species[1] which use these habitats. The species which are likely to particularly benefit from the opportunities identified in this report are:

- Birds, such as woodlark and nightjar. Breeding waders and wintering wildfowl (using wet grassland), and scrub species such as willow tit, turtle dove and grasshopper warbler
- Mammals, including bats, water vole and harvest mouse
- Herpetofauna, including common frog, common toad, common lizard and grass snake
- Invertebrates, including white-clawed crayfish
- Fish, including brown trout, bullhead and spined loach
- Lepidoptera, including habitat-specialist butterflies and moths
- Plants, including calcareous grassland specialists

Examples of simple actions for some of these species, that were identified as part of the workshop and that could be undertaken within Ashfield included; the planting of sallow in woodlands as an early nectar source for moths and other inverts, ensuring that woodland rides are mown after late September so as not to damage the larvae and foodplants of lepidoptera, and the creation of ponds within school grounds and allotments. These are just a few examples of actions that could be undertaken that would have a widespread benefit to specific species groups.

8. Next steps

The opportunities highlighted in this report will be quantified and used to estimate the scale of habitat creation and restoration that can be delivered across Ashfield, and used as part of the next round of target setting for the Nottinghamshire Local Biodiversity Action plan (LBAP).

However, the report should be seen as a living document that will be updated as better data becomes available or as new opportunities are identified.

[1] Species of Principal Importance for Conservation in England, as identified through Section 41 of the Natural Environment and Rural Communities Act (2006)

9. Maps and tables

Map 1 Woodland Biodiversity Opportunity Map
Table 1 Biodiversity Opportunity table for Woodland (W)

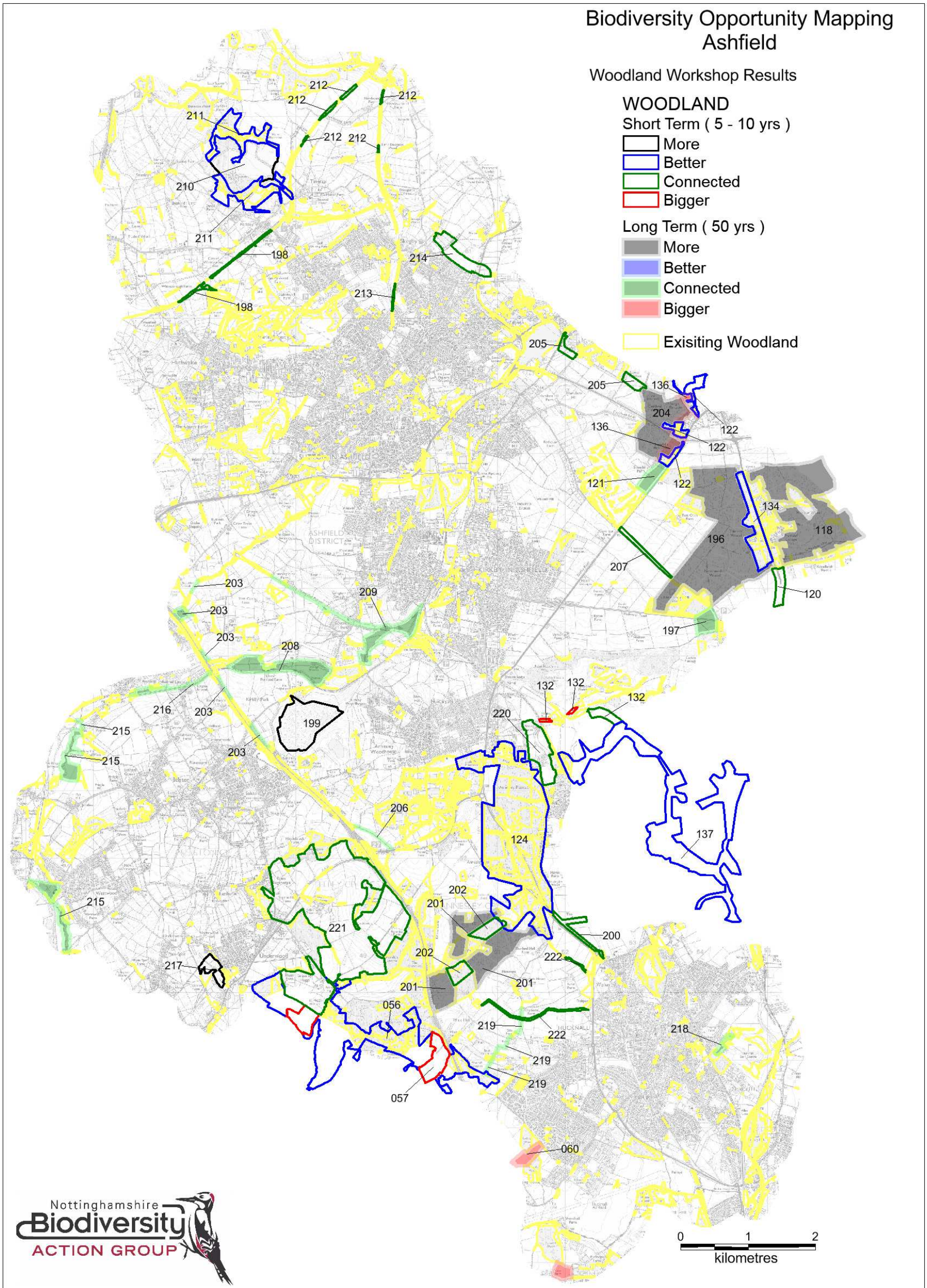
Map 2 Heathland and Acid Grassland Biodiversity Opportunity Map
Table 2 Biodiversity Opportunity table for Heathland and Acid Grassland (H)

Map 3 Grassland Biodiversity Opportunity Map
Table 3 Biodiversity Opportunity table for Grassland (G)

Map 4 Wetland Biodiversity Opportunity Map
Table 4 Biodiversity Opportunity table for Wetland (M)

Map 5 Focal Areas

Map 1 - Woodland Biodiversity Opportunity Map

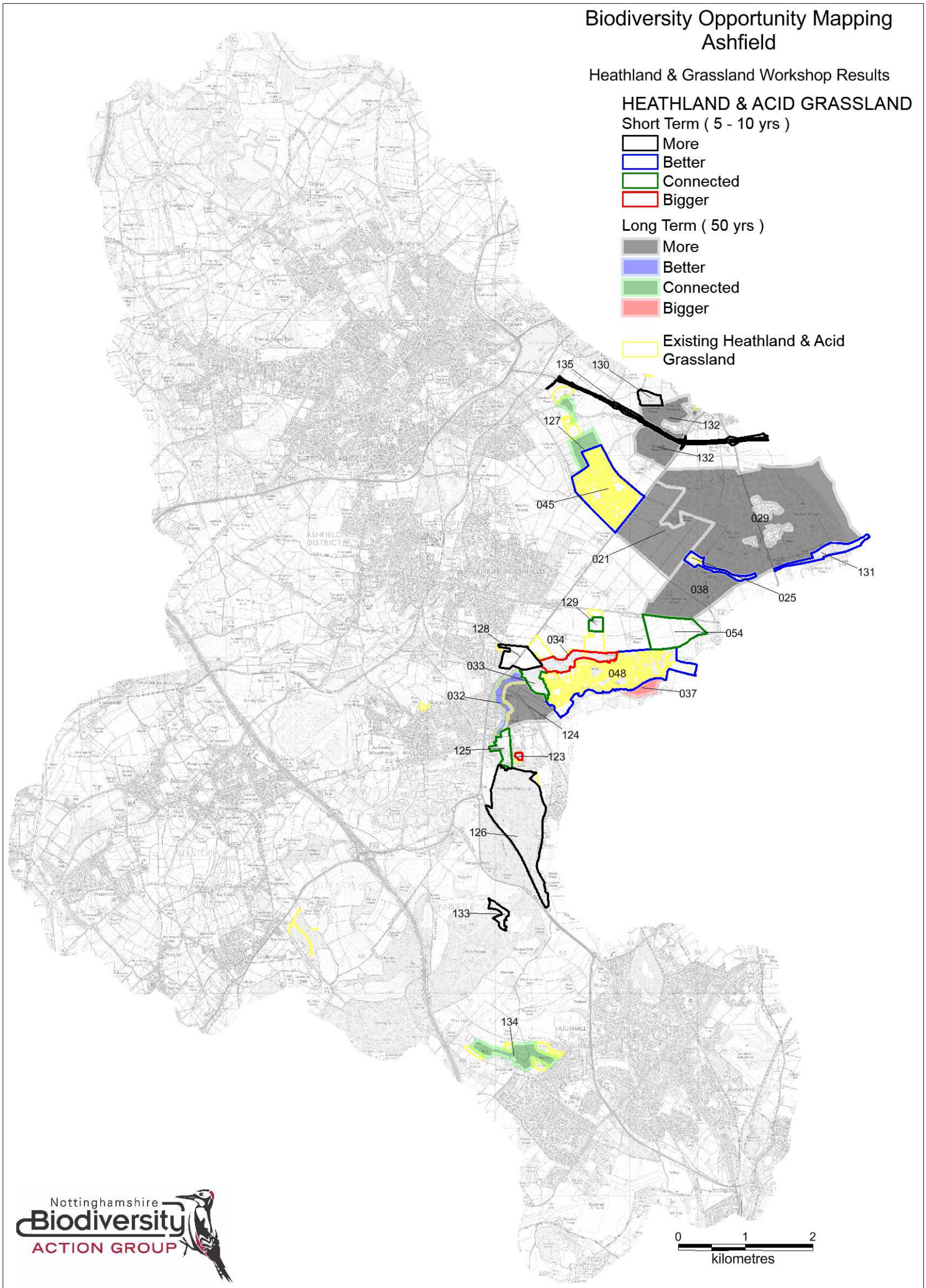


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Table 1 - Biodiversity Opportunity table for Woodland (W)

Report ID	Map Display ID	Opportunity
Brx	056	Watnall Coppice, Watnall Spinney, Moor Green/Beauvale Estate. Enhance and connect these larger blocks of woodland. GJ
Brx	057	New woodland planting to link major woodlands near Haggs Farm. JB
Brx	060	Woodland planting to link New farm Wood and Seller's Wood, and Seller's Wood and Bulwell Wood. Eelhole Wood, Low Wood, Starth Wood. NK
SHER-S	118	Buffer existing broadleaf woodland habitat and improved linkages within existing broadleaf woodland at this site through the Forestry Design Plan.
SHER-S	120	Woodland Shelter Belt - target project.
SHER-S	121	Linking woodland block.
SHER-S	122	Better quality - buffering to create linkages with woodland.
SHER-S	124	Annesley Wood - Restore to broadleaved species mix.
SHER-S	132	Strengthen corridors
SHER-S	134	Retain as woodland - Important moths associated with the Bilberry Star which grows under the tree cover here (i.e moths needing Bilberry growing under trees).
SHER-S	136	Better quality - buffering to create linkages with woodland.
SHER-S	137	Enhance and buffer existing woodlands
Ashfield	196	Thieves Wood: conversion of coniferous wood to broad-leaf wood: ongoing over 50 years on felling of crop. DS & Improving broad-leaf linkages between existing coniferous compartments by planting broad-leaved trees or by maintaining regeneration trees along rides and woodland edges. MGo
Ashfield	197	Create connecting woodland habitat between Thieves Wood and Newstead Abbey Park.DS
Ashfield	198	Improve woodland connectivity along Silverhill Trail to connect Brierley and Silverhill parks. DS
Ashfield	199	Bentink Tip restoration to create a golf course includes opportunities for woodland creation. MH & Golf course restoration requirement is to acid and calcareous grassland, scrub and wetlands. JB
Ashfield	200	Top Wighay Farm Development - opportunty to create a woodland connection along A611 to Wighay Farm Wood. JAR
Ashfield	201	Park Forest - change from coniferous to broad-leaf on cropping trees. JAR
Ashfield	202	Park Forest - create habitat connection between existing broad-leaf by creating broadleaf strips through coniferous sections. JAR
Ashfield	203	Woodland connections along M1 margins
Ashfield	204	Cauldwell Wood/Stonehills Plantation - Conversion to broad-leaf wood. MGW
Ashfield	205	Lower Oakham/Summit - connectivity between existing woods. MGW
Ashfield	206	Create/improve Woodland/Hedgerow connection alongside public footpath. MGW
Ashfield	207	Two Oaks sand quarry - roadside bunds already planted with woodland. DS
Ashfield	208	Erewash Valley - create a woodland connection between Bentink and Pinxton. DS
Ashfield	209	Create a woodland connection along dismantled railway to Portland Park. DS
Ashfield	210	Replacement of coniferous wood with broad-leaf at Silverhill. NC
Ashfield	211	Enhancing existing broad-leaved woodland at Silverhill, eg. through the removal of non-natives. NC
Ashfield	212	Existing hedgerows along Teversal Trails - improve condition if required (KB). Need to be mindful of calcareous and neutral grassland linkages - existing and potential. NC
Ashfield	213	Improve woodland connectivity along cycle way from Skegby Bottoms to Stoneyford Road. DS
Ashfield	214	Create woodland connection through new development at Beck Lane, Skegby. MGW
Ashfield	215	Create woodland connection along Erewash river valley by Pye Bridge.MH
Ashfield	216	Woodland connectivity improvements along railway corridor at Brookhill Industrial estate.NC
Ashfield	217	Underwood Colliery/Pit tips - NCC owned. Potential to expand existing woodland area. Opportunity to plant grazing land for woodland or wood pasture. MG
Ashfield	218	Leen Valley Golf Course - link planted areas with woodland and hedgerows. LS
Ashfield	219	Enhance/establish hedgerow/woodland connectivity between Watnall Coppice and Whyburn Farm. MGW
Ashfield	220	Linking by hedgerow or woodland strips through Mosley Farm and/or around new developments on the old Annesley Pit site.
Ashfield	221	Felley priory, Greasley estate - Small improvements to hedgerows, field overplanting, shelter belts on edges of arable fields etc - to strengthen the whole network. JB
Ashfield	222	Riparian woodland planting in Baker Lane brook catchment, to help reduce flood risk to Hucknall. DJW

Map 2 - Heathland & Acid Grassland Biodiversity Opportunity Map

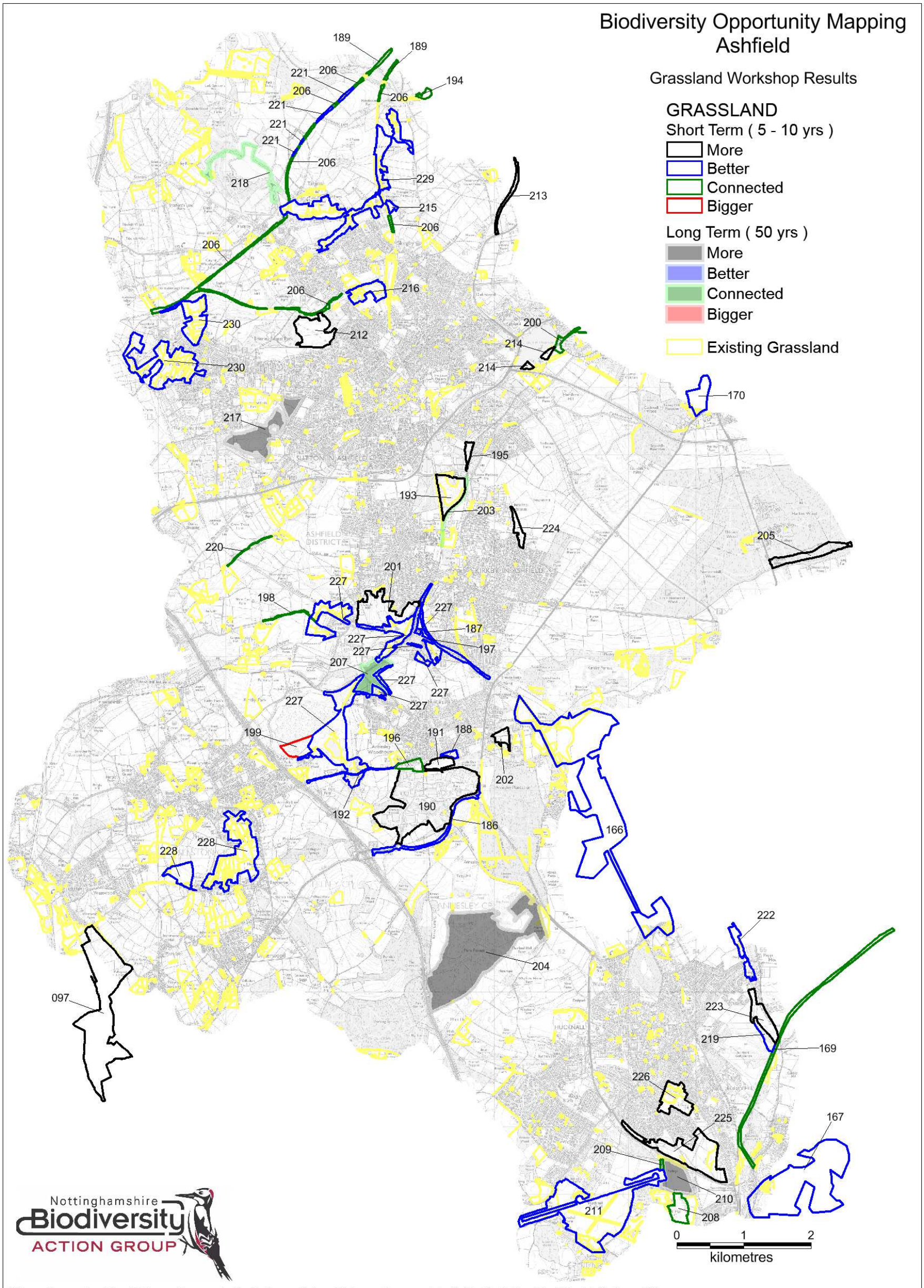


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Table 2 - Biodiversity Opportunity table for Heathland & Acid Grassland (H)

Report ID	Map Display ID	Opportunity
SHER-S	021	Two Oaks Farm - Heathland restoration on mineral site. Opportunity to create wide headlands now to encourage colonisation by plants/inverts rather than 50 years from now (SHER-S) & Approved restoration scheme for- Two Oaks farm quarry is to 50% heathland and grassland. But will be subject to a ROMP within the next 10 years, and this should secure 100% acid grassland and heathland. JB (Ashfield)
SHER-S	025	Open areas -acid grassland/heathland habitat needs improved management and expanding/linking with other heath/grassland habitats where possible.
SHER-S	029	Creation of heathland/acid grassland along rides and to replace some areas of conifer in Thieves and Harlow Woods (SHER-S) & Be aware that Thieves Wood is a moth LWS. The moths in question are associated with bilberry growing in the shade of conifer and oak. Do not remove conifer and oak in these locations and plant more bilberry in similar locations. SW (Ashfield)
SHER-S	032	Robin Hood Hills - Heathland restoration (SHER-S) & Improve Heathland habitat, manage bracken and expand cover of Heather/Bilberry etc. LS (Ashfield) & Currently threatened by planning application by landfill, which would affect lizards, nightjar, woodlark and would fragment the LWS network. JB (Ashfield)
SHER-S	033	Improve connectivity of heathland between Robin Hood Hills and Hollinwell.
SHER-S	034	Restoration to heathland & broadleaved woodland (SHER-S), & Opportunity to remove coniferous woodland in favour of acid grassland/heathland. LS (Ashfield)
SHER-S	037	Restoration to heathland from Arable.
SHER-S	038	Little Normanshill Wood - Mosaic creation, heathland & woodland.
SHER-S	045	Coxmoor Golf Club - Heathland course has Sherwood Forest Trust management plan but benefit from more active engagement (SHER-S) & Golf-course management. Poor management restricting habitat quality - heather but few heathland species - change regime at Coxmoor and Hollingwell. ADL (Ashfield)
SHER-S	048	Hollinwell Golf Course - Existing area of heath/acid grassland (SHER-S) & Golf-course management. Poor management restricting habitat quality - heather but few heathland species - change regime at Coxmoor and Hollingwell. ADL (Ashfield)
SHER-S	054	Target landowner to encourage ELS etc application to create wildlife corridor (SHER-S) &Link existing sites and Two Oaks Quarry, Coxmoor. Most habitat there of potential with quarry. Would involve only loss of small area of arable between Hollinwell and Thieves Wood. RJ (Ashfield BOM)
Ashfield	123	Annesley Rows - owned by NCC and managed by Annesley Parish Council. Small, young plantation woodland could be felled to extend area of acid grassland. MGu
Ashfield	124	Encourage sympathetic land management practices to enhance current habitat and provide connectivity. MGW
Ashfield	125	Cemetery is existing LWS (Acid grassland. Steep upper slopes, potential for acid grassland creation for connecting habitat between Robin Hood Hills and Annesley Plantation. Site contains football pitches, play area and a skate park - Parish land. RJ/WK
Ashfield	126	Create new Heathland/Grassland habitat through rides and possibly compartment management. LS
Ashfield	127	Link existing sites and Two Oaks Quarry, Coxmoor. Most habitat there of potential with quarry. Would involve only loss of small area of arable between Hollinwell and Thieves Wood. RJ
Ashfield	128	Grass field surrounding existing acid grassland/heath. Change of management? Could create/restore acid grassland. MGW
Ashfield	129	Potential to connect areas of existing habitat. SM
Ashfield	130	Disused pit - restore to acid grassland/heathland with FC/NWT. ADL
Ashfield	131	Enhance/restore wetlands and acid grassland. Requires better management/bracken control. ADL
Ashfield	132	Bigger and better connected networks of heathland (potential) within existing Forestry Commission woodlands. MG & Needs exploring with FC, evidence of historic heathlands in this area. KB
Ashfield	133	Area of open habitat that could benefit from bracken control (Exact area unknown). MGu
Ashfield	134	Approach landowners to connect acid grasslands (x4) through field margins etc. IW
Ashfield	135	Extend and enhance: land along roadside of MARR route potentially linked to development of housing and industrial to the north. DS

Map 3 - Grassland Biodiversity Opportunity Map



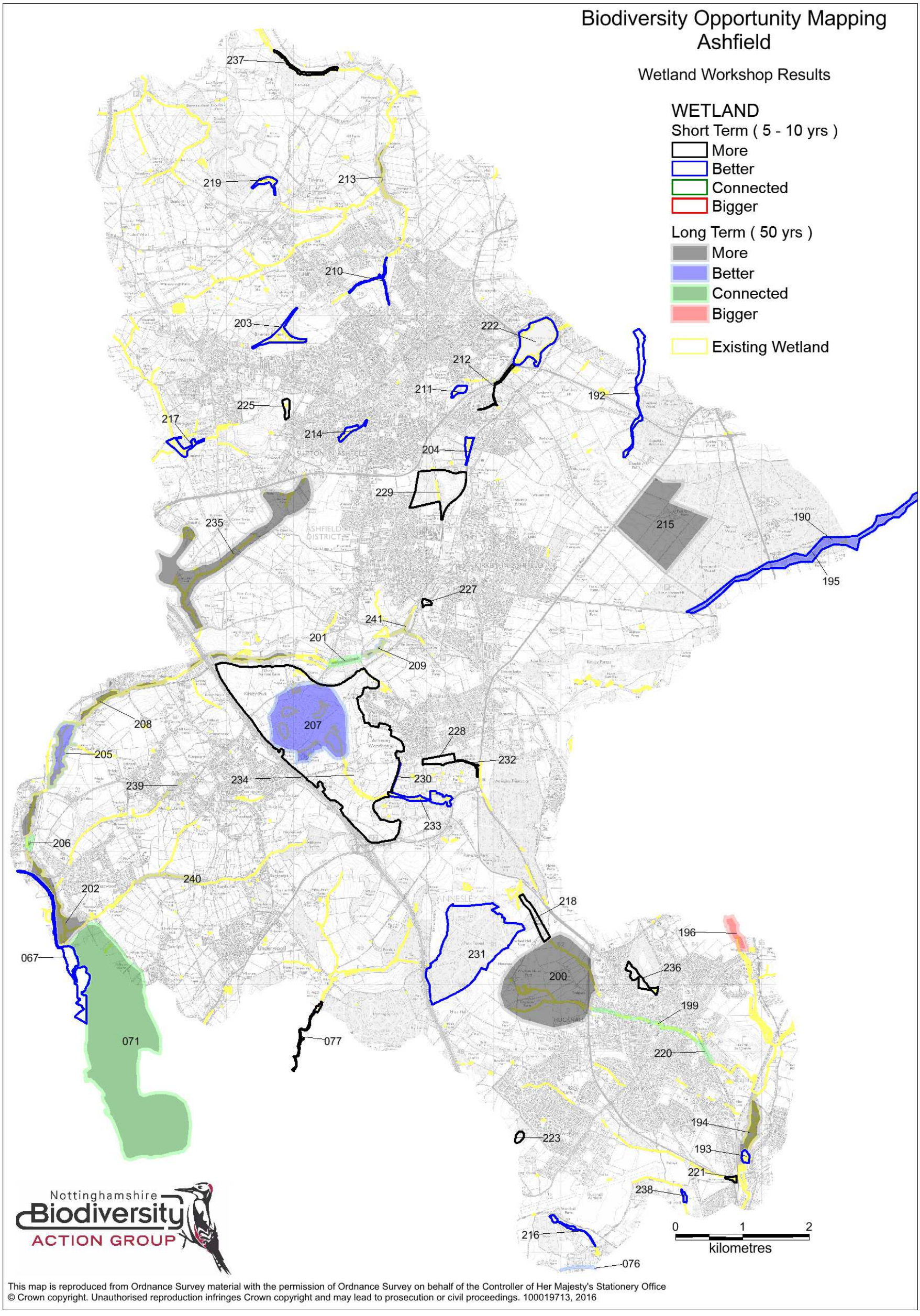
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Table 3 - Biodiversity Opportunity table for Grassland (G)

Report ID	Map Display ID	Opportunity
Brx	097	Major grassland re-creation potential. Project as part of Erewash Valley LL area. JB
SHER-S	166	Newstead & Annesley CP, Freckland Wood & Linby Trail Area - Neutral grassland & calcareous grassland enhancement. NC
SHER-S	167	Bestwood Tip (NCC) - Neutral grassland. Early colliery restoration currently grazed. Potential to modify grazing regime etc to improve ecology. NC
SHER-S	169	Calverton Branch Line (NCC) - Recently acquired. NCC applying for funding. Verges/embankment as neutral grassland by clearing & preventing open areas from scrubbing over. NC
SHER-S	170	Mansfield Cemetery maintain and improve areas of grassland.
Ashfield	186	Road sides rich in wildflowers currently being degraded by regular maintenance and overgrowth in some areas. PO
Ashfield	187	Calcareous grassland, excellent quality. Robin Hood line from Newstead tunnel to Kirkby in Ashfield, Railway station - enhance by removing sapling Ash trees and Hawthorne. ADL
Ashfield	188	Forest road neutral grassland - designated as such around September 2015 - good habitat for Grass snakes. This site offers opportunities for enhancement. ADL
Ashfield	189	Better connected - connections to Pleasley Pit Country Park with existing Grasslands along disused railway lines. Consult with Friends of Pleasley Pit Country Park. KB
Ashfield	190	Verges and internal grasslands and woodland glades. Wildflower areas around ponds/wetness. Grass snakes etc. Better ecological management and improvement of existing Business Park grasslands, to match the interest shown by one of two companies, would increase the number, quantity of wild flowers, grass snakes and other biodiversity etc . PO
Ashfield	191	ADC land - oakwood fields - work to commence to improve area to include wild flower meadows, remove pine plantations and scrub, and to enhance grass snake habitats. ADL
Ashfield	192	Manage and enhance the existing grass verges on Salmon Lane - Ancient Hedgerow and verges. Yellow archangel etc. PO
Ashfield	193	Remove tree plantations from Pit Tip. Encourage better botanical diversity - create calcareous or acid grassland depending on pH. ADL
Ashfield	194	There are likely existing calcareous and neutral grasslands along the river Meden into Mansfield. There is also key archaeological linkages. KB
Ashfield	195	North Sutton train station. Remove concrete culver to allow 'river' to cut its own course - flood grassland - requires botanical diversity in grassland. ADL
Ashfield	196	Improve grasslands located behind properties on Forest Road/Salmon Lane. This forms a corridor to open land to the west and an important link in the GI corridor. PO
Ashfield	197	Grassland and SUDS site next to Portland Park car-park - bring in to better management. ADL
Ashfield	198	Grassland road verges - improved management required to maintain the habitat and to ensure a good link between grasslands continues to exist. PO
Ashfield	199	Bentinck Void/Tip. Good calcareous grassland habitat developing. Under new management but requires ongoing management and habitat expansion on the correct substrate. Important herptile assemblages. JB
Ashfield	200	Possible better connected grassland along and adjacent to the railway line. Land ownership needs investigating. From surrounding paths around Kingsmill reservoir and surrounding area - eastwards into Mansfield. KB
Ashfield	201	Castle Hill - potential to work with the landowner to improve and expand grassland habitat, link to Kirkby Grives SSSI. JB
Ashfield	202	Create/restore grassland in pony fields and land owned by Annesley and Felley Parish Council. Overgrown, possible grass snake presence. PO
Ashfield	203	Use Robin Hood Line to improve connectivity between existing and potential new habitats - rail line has 'wide' unusual 'grassland'. ADL
Ashfield	204	Potential for increasing open habitats long term within Forest Design Plan. MGo
Ashfield	205	Create grassland buffer on the slope down to Rainworth Water. RT
Ashfield	206	Improve linkages along disused railways - Teversal, Brierley, Skegby. RT
Ashfield	207	Connect up existing SSSI's and Kirkby Grives and Annesley Woodhouse quarry. RT
Ashfield	208	Connect grassland habitats at Bulwell Hall. DJW
Ashfield	209	Connecting Farleys Way with Rolls Royce Grassland. DJW
Ashfield	210	Longterm extension/ buffer for calcareous grassland.
Ashfield	211	Rolls Royce site: Calcareous grassland - ensure this key site is managed appropriately after the new housing development is complete. SD
Ashfield	212	Rooley Tip (Brierley Park) grassland. Rough grassland that could be improved. MW
Ashfield	213	Better management of Road Side Verges along A617 out to Pleasley. DS
Ashfield	214	Kingsmill reservoir grazing - restore horse grazed land and convert to higher quality grassland.
Ashfield	215	Restoration of spp rich grassland which is scrubbing over. Owned by STW? NC
Ashfield	216	Stoneyford Quarry area - land coming into ADC control/management. Improve condition of LWS grasslands. NC
Ashfield	217	Rookery Park/Sutton Landfill - create spp-rich grassland (currently rough/spp-poor). NC

Report ID	Map Display ID	Opportunity
Ashfield	218	Improve grassland linkages through Silverhill. NC
Ashfield	219	Improve wet grassland along the Leen and adjacent to the golf course by creating additional wetland/scrape features. Site important for waders in winter, such as snipe and amphibians. LS
Ashfield	220	Coal measure grassland along top of arable. Enhance and managed. A good connection between other LWS grasslands.
Ashfield	221	Improve condition of existing SSSI grasslands - Build up of thatch in grassland on steep cutting sides. Possibility of burning selected areas or grazing? MGu
Ashfield	222	Bring relatively species rich grasslands into management - regular mowing and/or grazing required. LS
Ashfield	223	Opportunities for habitat development/creation along the Leen corridor with management/creation of sites owned or managed by ADC and Friends of Moor Pond Wood. Extend habitat corridor into fields adjacent to Leen Ponds, these are currently arable. LS
Ashfield	224	Beacon Drive and Holidays Hill. ADC owned land, open space and play area. Scope to improve/increase grassland. WK
Ashfield	225	Broomhill farm. Bring wider grassland area into management. MGu
Ashfield	226	Improve grassland management for parts of Titchfield Park and Hucknall cemetery to benefit biodiversity.
Ashfield	227	Maintain and enhance these important and floristically rich areas of calcareous and neutral grassland south of Kirkby-in-Ashfield. NC
Ashfield	228	Maintain and enhance an important concentration of good quality neutral grasslands around Bagthorpe, between Underwood and Selston. NC
Ashfield	229	Maintain and enhance an important concentration of good quality neutral grasslands south of Teversal and alongside the River Meden. NC
Ashfield	230	Maintain and enhance an important concentration of good quality neutral grasslands in the Huthwaite area. NC

Map 4 - Wetland Biodiversity Opportunity Map



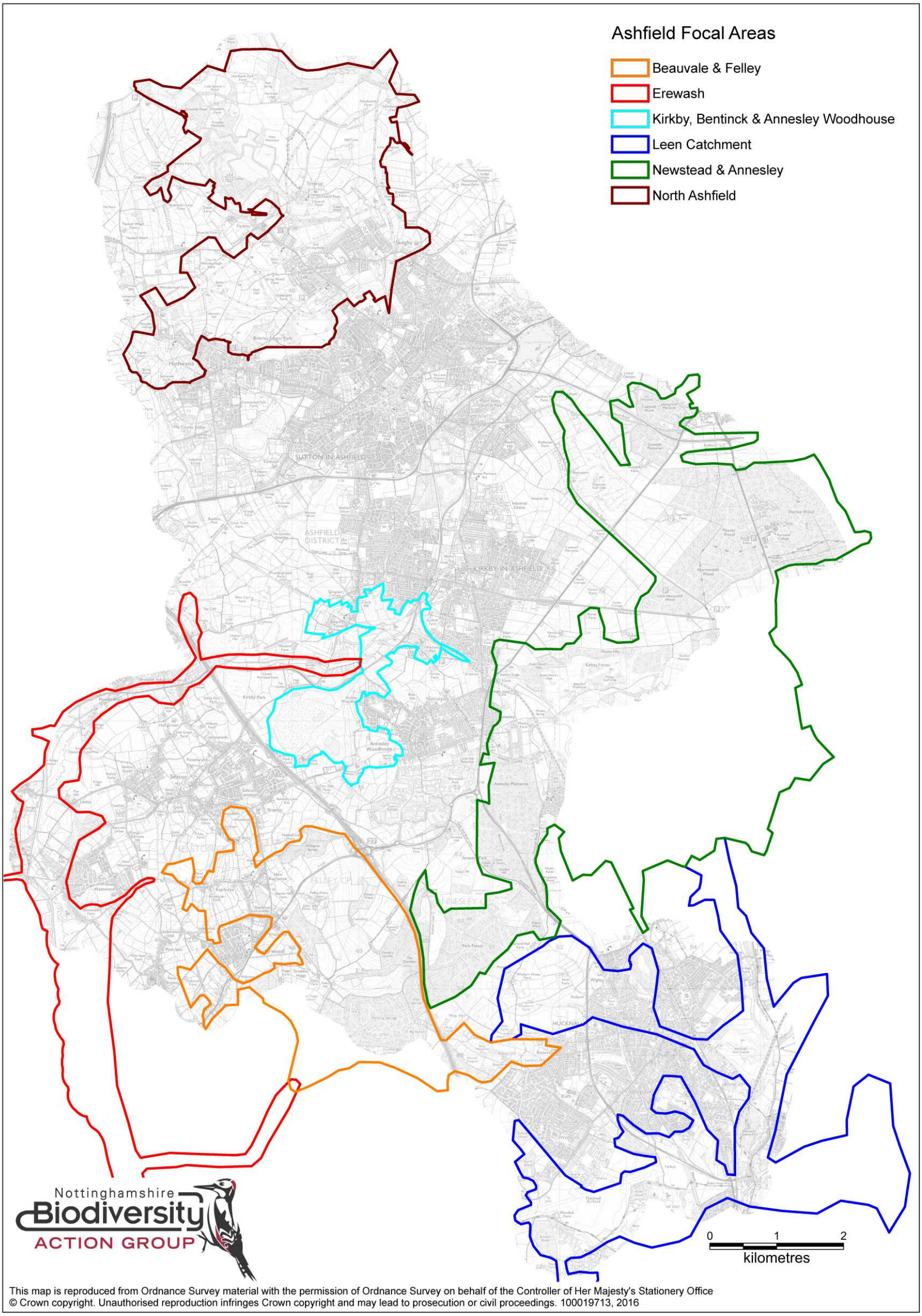
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Table 4 - Biodiversity Opportunity table for Wetland (M)

Report ID	Map Display ID	Opportunity
Brx	067	Enhancement, linking and buffering of Erewash meadows/Aldercarr/Jacksdale complex. JB (Brx). & Connect Cromford Canal to existing wetland enhancement opportunity in Broxtowe. Canal and River Trust projects -Codnor reservoir, Friends of Crompton Canal, White-clawed Crayfish. Land to east used by CRT during restorations - landowner known. IW (Ashfield).
Brx	071	Maintain habitat connectivity for high grass snake population. JEO
Brx	076	Ditch/Stream between Sellers Wood & Dismantled Railway. May feed the ponds at Sellers Wood. Possible check on OS maps/drainage plans. FA
Brx	077	Moorgreen Reservoir, not owned by CRT but by a fishing club who may be open to habitat creation + management along margins. RB (Brx) & Land alongside Moorgreen reservoir has opportunities to improve habitat. IW (Ashfield).
SHER-S	190	Wetland habitat restoration & enhancement, over the long term (SHER - S) & Improve Rainworth Water tributary through Thieves Wood. DS (Ashfield).
SHER-S	192	Cauldwell Brook/River Maun - Monitor crayfish & create additional habitat to allow expansion of population into new areas. Replace culvert with wildlife friendly culvert & remove stream from pipes.
SHER-S	193	Enhance Bestwood Reedbed
SHER-S	194	Potential to enhance wetland habitat adjacent to and within Mill lakes and Bestwood reedbed
SHER-S	195	Wetland habitat restoration & enhancement, over the short term (SHER - S) & Improve Rainworth Water tributary through Thieves Wood. DS (Ashfield).
SHER-S	196	Potential to create diverse wetland
Ashfield	199	Improve Baker Lane Brook through removal of culverts along its length as and when new development opportunities come forward. Could be delivered through Green Infrastructure. DJW
Ashfield	200	Wetland habitat creation - farmland ponds, debris, dams and marshy areas to help slow flows and reduce flood risk to Hucknall. Catchment area may be larger than shown. DJW & Potential for habitat creation in order to create flood relief for the Hucknall Town Centre Improvements/ also creation of compensatory habitat for proposed developments in this area. KM
Ashfield	201	Potential culvert removal to create connecting habitat. DJW &Culverted section in danger of collapse, daylighting attempts during development failed but this is a key project area. KM
Ashfield	202	Improve floodplain habitats adjacent to the River Erewash e.g create floodplain grazing marsh. DJW) & Flooding problems in the Jacksdale area could be helped with habitat enhancement measures in the floodplain that increase flood storage capacity. KM
Ashfield	203	Brierley Forest Park - ADC owned - scrapes and improvements to ponds etc. SD & Increase the number of ponds at Brierley Forest Park. JO
Ashfield	204	Maun Valley Grassland - ADC owned. Introduce more scrapes/improve habitat. Allow streams to meander. Create deeper slower moving watercourses - water vole habitat. SD & Some river channel restoration complete but concrete drainage channels still present so more to do. Reedbed creation could help to tackle water contamination coming from upstream pit tip. KM
Ashfield	205	Enhance floodplain habitats adjacent to the River Erewash. DJW
Ashfield	206	Improve connectivity of the River Erewash through culvert removal and renaturalisation. DJW
Ashfield	207	Area within potential HS2 corridor - chance to enhance grasslands and ponds. IW & Improve quality of ponds around Bentinck tip and void for Great Crested Newts, grass snakes and water voles, if still present. (NC) Newly designated SSSI pond and culverted watercourse under the spoil heap. It would be costly to daylight, but combined with SSSI designates site taking out of culvert may provide some benefits to wildlife/habitats. KM
Ashfield	208	Improve floodplain habitat to create grazing marsh. DJW) & area suffers from poaching adjacent to the watercourse and would benefit from creation of buffer strips alongside the River Erewash. KM
Ashfield	209	Reedbed habitat creation. Scrape creation in the floodplain. Improve habitat management of ponds. DJW & Landownership known of Fry's Dam Fishing Ponds. PO
Ashfield	210	Land due to be transferred to ADC - Skegby Hall. Some nice streams with potential to enhance these for wildlife. Also potential for wetland creation adjacent to the channels (scrapes and ponds). Habitat adjacent to LWS grassland. DJW & this area includes a series of online ponds that could be improved by taking them offline and turned into backwaters. Habitat enhancements to tackle pollution in this area should also be considered. KM
Ashfield	211	Sutton Lawns, ADC owned, marginal planting around ponds. SD
Ashfield	212	River Maun upstream of Kings Mill Reservoir (partly owned by ADC). Remove culvert through Maun Industrial Estate and de-canalise the river directly upstream of reservoir, between Coxmoor Road and MARR. NC
Ashfield	213	Potential to create floodplain grazing marsh along the River Meden corridor. Possibly scrapes and ponds. DJW
Ashfield	214	Enhance Calladine pond and adjacent watercourse. MW
Ashfield	215	Inclusion of new ponds and wetland in restoration at Two Oaks quarry. DS
Ashfield	216	Ponds and stream next to Bullwell wood - improve habitat quality for White-clawed crayfish present. NC
Ashfield	217	Nunn Brook Park - improve condition of existing Great Crested Newt ponds and create new ponds. NC
Ashfield	218	Enhance Wighay Brook from Big Pond - remove confers from brook side, create marsh/flood storage, halt acidification. JAR
Ashfield	219	East Silverhill ponds - Improvements - planting marginals and maintaining water levels. LS/MGu

Report ID	Map Display ID	Opportunity
Ashfield	220	De-culvert Baker Lane Brook (At Porchester Close Plantation). LS/MGu
Ashfield	221	Farleys brook/ Hucknall. Create siltation pond that can be cleaned out and/or reedbed filter area to reduce-prevent polluted urban-grey water and sewage from the Hucknall system entering the main Leen. LS/Mu
Ashfield	222	King's Mill Res, ditch management - enhance/restore for resident water vole population. MGW & extend and enhance existing reedbed to assist with desilting proposals. KM
Ashfield	223	Excavate a pond or series of small ponds where tributary arises (at a spring) at the centre of Eelhole wood. This will benefit and provide a refuge for White-clawed crayfish. LS
Ashfield	224	Newstead stocking yard - increase number and depth of wet scrapes so that they hold water for longer in Spring/Summer. MGu
Ashfield	225	Rookery Park Triangle - create wet scrapes in wet grassland ajacent to the pond to extend wetland habitat and buffer pond. MGu
Ashfield	226	Extend pond north of Moor Pond Wood boundary by deepening and connect pond with that in Dam Banks. LS
Ashfield	227	Recressco Glass Recycling - As and when, make sure any SUDS schemes are designed to be beneficial to wildlife. CLI
Ashfield	228	Lane End Nature area. Semi-dry wetland in need or improvement and expansion. WK & Wet towards south of ADC area - create scrapes and restore pond on southern boundary and see management plan. PO
Ashfield	229	Look at opening area up to increase wetland areas. JO & Pollution of stream thought to be coming from this area, potential to intercept with habitat creation - reedbed perhaps? KM
Ashfield	230	Wet ditch, particularly in winter. Supports frogs. This is a particularly important habitat for the local grass snake population and needs to be maintained and enhanced. PO
Ashfield	231	Park Forest - manage existing Ponds and wetlands to encourage GCN to move across site - open up canopy (Sycamore). ADL
Ashfield	232	The ditch and pond forming the southern boundary to Little Oak Plantation could benefit from restoration work to recreate a continuous wetland corridor for the local populations of grass snakes and amphibians. PO
Ashfield	233	This area forms the source of the Cuttail brook and the wetlands unite various ponds, streams and marshy areas across the Sherwood Business Park. This is an important wetland complex and should be maintained and enhanced. PO
Ashfield	234	Potential pondscape focus area: based around Bentinck Void SSSI - designed for GCNs. Perhaps secure if through HS2. JB
Ashfield	235	Dumbles Pondscape - manage existing ponds, create new ones in clusters. JB
Ashfield	236	Potential for habitat creation, in order to create flood relief for the Hucknall Town Centre Improvements. KM
Ashfield	237	Largely arable area that could benefit with greater habitat buffering of the river channel. KM
Ashfield	238	Control/removal of signal crayfish from fishing ponds to prevent degradation of good wetland habitats both within the ponds themselves and more widely across the Leen catchment. KM
Ashfield	239	Surface water flooding issues at Sleepy Hole, Selston, could be helped by the creation of habitat enhancement measures in the floodplain that increase flood storage capacity. KM
Ashfield	240	Poaching by livestock is a problem in this location on the Bagthorpe Brook. Measures to protect the river channel could enhance the river habitat. KM
Ashfield	241	River erosion in the vicinity of Portland Park SSSI caused in response to the filling in of a pond in the area (historical). Habitat enhancements could be part of measures to tackle the erosion issue. KM

Map 5 - Focal Areas



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Appendix 1 - BOM Working Group

Nottinghamshire County Council

Nottinghamshire Wildlife Trust

Nottinghamshire Biological and Geological Records Centre

Environment Agency

Royal Society for the Protection of Birds

The National Forest Company

Appendix 2 - Composition of broad habitat types

The following table indicates the phase 1 habitats that form the four broad habitat types.

Broad habitat type - WOODLAND	
PBW	Broadleaved woodland - plantation
BW	Broadleaved woodland - semi-natural
PMW	Mixed woodland - plantation
MW	Mixed woodland - semi-natural
Broad habitat type - HEATHLAND & ACID GRASSLAND	
SAG	Acid grassland - semi-improved
AG	Acid grassland - unimproved
ADH	Dry dwarf shrub heath - acid
BDH	Dry dwarf shrub heath - basic
DGM	Dry heath/acid grassland mosaic
WH	Wet dwarf shrub heath
WGM	Wet heath/acid grassland mosaic
Broad habitat type - OTHER GRASSLAND	
SCG	Calcareous grassland - semi-improved
CG	Calcareous grassland - unimproved
SNG	Neutral grassland - semi-improved
NG	Neutral grassland - unimproved
SBW	Parkland and scattered trees - broadleaved
Orchard	Parkland and scattered trees - broadleaved
SCW	Parkland and scattered trees - coniferous
SMW	Parkland and scattered trees - mixed
Broad habitat type - WETLAND	
BB	Blanket bog
DB	Dry modified bog
BM	Fen - basin mire
FPM	Fen - flood plain mire
VM	Fen - valley mire
AF	Flush and spring - acid/neutral flush
BF	Flush and spring - basic flush
IV	Marginal/inundation - inundation
MV	Marginal/inundation - marginal
MG	Marsh/marshy grassland
RB	Raised bog
Reedbed	Reedbed
RW	Running water
RWB	Running water - brackish
RWD	Running water - dystrophic
RWE	Running water - eutrophic
RWC	Running water - marl
RWM	Running water - mesotrophic
RWO	Running water - oligotrophic
SW	Standing water
SWB	Standing water - brackish
SWD	Standing water - dystrophic
SWE	Standing water - eutrophic
SWC	Standing water - marl
SWM	Standing water - mesotrophic
SWO	Standing water - oligotrophic
SP	Swamp
WB	Wet modified bog

Appendix 3 - Permeability values

The following four tables provide a list of Phase 1 habitats and the permeability scores assigned to each of these Phase 1 habitats. The four tables correspond to one of the four broad habitat types (woodland, heathland & acid grassland, other grassland and wetland), and the permeability scores listed indicate how permeable each Phase 1 habitat is to the relevant generic 'focal' species associated with the broad habitat type in question.

The permeability score given for each Phase 1 habitat falls between 1 and 50. A score of 1 indicates that the habitat is a core/source habitat for the broad habitat type. A low score above 1 indicates a habitat that is very permeable to the generic focal species associated with the broad habitat type in question, whilst a score of 50 indicates that the habitat is very impermeable for that focal species.

The final column in each table indicates the source of the information. Where the source is given as JNCC the information has come directly from work by Natural England (Catchpole 2010). Where the source is given as NFC the information has come from the habitat network modelling work undertaken by the National Forest Company. The data from NFC principally relates to a variety of urban habitats not listed in the Phase 1 habitat survey handbook, such as roads, tracks, buildings, airports, railways, suburbs, gardens etc. The exception to this is orchards for which a permeability value has been given based on a similar Phase 1 habitat type (in this case parkland/scattered trees).

In addition, some of the permeability scores devised by Catchpole have been altered to best serve local biodiversity conditions, and some additional habitats have been added to the list of habitats and assigned a permeability score based on similarly structured/functioning habitats. In this case the source of the data is given as NCC. These local amendments are highlighted below:

- To reflect the importance of Open Mosaic Habitat on Previously Developed Land in Nottinghamshire this habitat has been assigned its own Phase 1 habitat code. The permeability scores have been based on similar open habitat types.
- To identify the importance of Reedbed restoration work within Nottinghamshire this habitat was assigned its own Phase 1 habitat code. The permeability scores have been based on similar habitat types.

Reference

Catchpole, R. (2010) England Habitat Network (EHN 2.0) – Metadata. *Natural England*

GRASSLAND

GRASSLAND			
Phase 1 Code	**Phase 1 Habitat Name**	**Grassland Cost**	**Definition Source**
ROAD	A or B road	50	NFC
SAG	Acid grassland - semi-improved	2	NCC
AG	Acid grassland - unimproved	2	NCC
RUNWAY	Airport runway	50	NFC
BG	Bare ground	20	JNCC
P	Bare peat	5	JNCC
BB	Blanket bog	20	JNCC
X	Boundary removed	0	JNCC
CB	Bracken - continuous	10	JNCC
SB	Bracken - scattered	10	JNCC
PBW	Broadleaved woodland - plantation	20	JNCC
BW	Broadleaved woodland - semi-natural	20	JNCC
BUILD	Buildings	20	NFC
Building	Buildings	20	NFC
Buildings	Buildings	20	NFC
SCG	Calcareous grassland - semi-improved	1	JNCC
CG	Calcareous grassland - unimproved	1	JNCC
CS	Caravan site	0	JNCC
CA	Cave	50	JNCC
PCW	Coniferous woodland - plantation	20	JNCC
CW	Coniferous woodland - semi-natural	20	JNCC
AM	Cultivated/disturbed land - amenity grassland	50	JNCC
A	Cultivated/disturbed land - arable	50	JNCC
ESP	Cultivated/disturbed land - ephemeral/short perennial	5	JNCC
DD	Dry ditch	0	JNCC
ADH	Dry dwarf shrub heath - acid	10	JNCC
BDH	Dry dwarf shrub heath - basic	10	JNCC
DGM	Dry heath/acid grassland mosaic	2	JNCC
DB	Dry modified bog	20	JNCC
EB	Earth bank	0	JNCC
BM	Fen - basin mire	5	JNCC
FPM	Fen - flood plain mire	5	JNCC
VM	Fen - valley mire	5	JNCC
F	Fence	0	JNCC
AF	Flush and spring - acid/neutral flush	5	JNCC
BF	Flush and spring - basic flush	5	JNCC
PH-	Hedges - defunct - species-poor	20	JNCC
RH-	Hedges - defunct - species-rich	20	JNCC
PH	Hedges - intact - species-poor	20	JNCC
RH	Hedges - intact - species-rich	20	JNCC
PHT	Hedges - with trees - species-poor	20	JNCC
RHT	Hedges - with trees - species-rich	20	JNCC
I	Improved grassland	50	JNCC
AC	Inland cliff - acid/neutral	50	JNCC
BC	Inland cliff - basic	50	JNCC
IS	Introduced shrub	20	JNCC
LH	Lichen/bryophyte heath	15	JNCC
LP	Limestone pavement	50	JNCC
IV	Marginal/inundation - inundation	20	JNCC
MV	Marginal/inundation - marginal	20	JNCC
MG	Marsh/marshy grassland	5	JNCC
MI	Mine	20	JNCC
PMW	Mixed woodland - plantation	20	JNCC
MW	Mixed woodland - semi-natural	20	JNCC
MH	Montane heath/dwarf herb	15	JNCC
MWAY	Motorway or major dual carriageway	50	NFC
SNG	Neutral grassland - semi-improved	1	JNCC
NG	Neutral grassland - unimproved	1	JNCC
NR	Non-ruderal	10	JNCC
OMHOPDL	Open Mosaic Habitat	5	NCC
AR	Other exposure - acid/neutral	50	JNCC
BR	Other exposure - basic	50	JNCC
SBW	Parkland and scattered trees - broadleaved	1	JNCC
Orchard	Parkland and scattered trees - broadleaved	1	NFC
SCW	Parkland and scattered trees - coniferous	1	JNCC
SMW	Parkland and scattered trees - mixed	1	JNCC
SI	Poor semi-improved grassland	2	JNCC
Q	Quarry	50	JNCC
RAIL	Railway line	50	NFC
RB	Raised bog	20	JNCC
FB	Recently felled woodland - broadleaved	20	JNCC
FC	Recently felled woodland - coniferous	20	JNCC
FM	Recently felled woodland - mixed	20	JNCC
Reedbed	Reedbed	20	NCC
R	Refuse tip	20	JNCC
RW	Running water	50	JNCC
RWB	Running water - brackish	50	JNCC
RWD	Running water - dystrophic	50	JNCC
RWE	Running water - eutrophic	50	JNCC
RWC	Running water - marl	50	JNCC
RWM	Running water - mesotrophic	50	JNCC
RWO	Running water - oligotrophic	50	JNCC
AS	Scree - acid/neutral	50	JNCC
BS	Scree - basic	50	JNCC
DS	Scrub - dense/continuous	20	JNCC
SS	Scrub - scattered	20	JNCC
SWALL	Sea wall	0	JNCC
S	Spoil	20	JNCC
SW	Standing water	50	JNCC
SWB	Standing water - brackish	50	JNCC
SWD	Standing water - dystrophic	50	JNCC
SWE	Standing water - eutrophic	50	JNCC
SWC	Standing water - marl	50	JNCC
SWM	Standing water - mesotrophic	50	JNCC
SWO	Standing water - oligotrophic	50	JNCC
SUBURB	Suburban/rural development	10	NFC
Gardens	Suburban/rural development	10	NFC
Paved	Suburban/rural development	50	NFC
SP	Swamp	20	JNCC
TR	Tall ruderal	10	JNCC
TRACK	Track or minor access road	50	NFC
Path	Track or minor access road	50	NFC
?	Unknown	50	NFC
INDUST	Urban industrial development	30	NFC
URBAN	Urban residential/commerical development	20	NFC
W	Wall	0	JNCC
WH	Wet dwarf shrub heath	10	JNCC
WGM	Wet heath/acid grassland mosaic	2	JNCC
WB	Wet modified bog	20	JNCC

HEATHLAND & ACID GRASSLAND

HEATHLAND & ACID GRASSLAND			
Phase 1 Code	**Phase 1 Habitat Name**	**Heathland & Acid Grassland Cost**	**Definition Source**
ROAD	A or B road	50	NFC
SAG	Acid grassland - semi-improved	1	NCC
AG	Acid grassland - unimproved	1	NCC
RUNWAY	Airport runway	50	NFC
BG	Bare ground	30	JNCC
P	Bare peat	20	JNCC
BB	Blanket bog	3	JNCC
X	Boundary removed	0	JNCC
CB	Bracken - continuous	20	JNCC
SB	Bracken - scattered	20	JNCC
PBW	Broadleaved woodland - plantation	35	JNCC
BW	Broadleaved woodland - semi-natural	35	JNCC
BUILD	Buildings	50	NFC
Building	Buildings	50	NFC
Buildings	Buildings	50	NFC
SCG	Calcareous grassland - semi-improved	50	JNCC
CG	Calcareous grassland - unimproved	40	JNCC
CS	Caravan site	0	JNCC
CA	Cave	50	JNCC
PCW	Coniferous woodland - plantation	20	JNCC
CW	Coniferous woodland - semi-natural	20	JNCC
AM	Cultivated/disturbed land - amenity grassland	50	JNCC
A	Cultivated/disturbed land - arable	50	JNCC
ESP	Cultivated/disturbed land - ephemeral/short perennial	50	JNCC
DD	Dry ditch	0	JNCC
ADH	Dry dwarf shrub heath - acid	1	JNCC
BDH	Dry dwarf shrub heath - basic	1	JNCC
DGM	Dry heath/acid grassland mosaic	1	JNCC
DB	Dry modified bog	3	JNCC
EB	Earth bank	0	JNCC
BM	Fen - basin mire	30	JNCC
FPM	Fen - flood plain mire	30	JNCC
VM	Fen - valley mire	30	JNCC
F	Fence	0	JNCC
AF	Flush and spring - acid/neutral flush	30	JNCC
BF	Flush and spring - basic flush	30	JNCC
PH-	Hedges - defunct - species-poor	10	JNCC
RH-	Hedges - defunct - species-rich	10	JNCC
PH	Hedges - intact - species-poor	10	JNCC
RH	Hedges - intact - species-rich	10	JNCC
PHT	Hedges - with trees - species-poor	10	JNCC
RHT	Hedges - with trees - species-rich	10	JNCC
I	Improved grassland	50	JNCC
AC	Inland cliff - acid/neutral	50	JNCC
BC	Inland cliff - basic	50	JNCC
IS	Introduced shrub	10	JNCC
LH	Lichen/bryophyte heath	10	JNCC
LP	Limestone pavement	50	JNCC
IV	Marginal/inundation - inundation	40	JNCC
MV	Marginal/inundation - marginal	40	JNCC
MG	Marsh/marshy grassland	30	JNCC
MI	Mine	30	JNCC
PMW	Mixed woodland - plantation	35	JNCC
MW	Mixed woodland - semi-natural	35	JNCC
MH	Montane heath/dwarf herb	10	JNCC
MWAY	Motorway or major dual carriageway	50	NFC
SNG	Neutral grassland - semi-improved	30	JNCC
NG	Neutral grassland - unimproved	30	JNCC
NR	Non-ruderal	20	JNCC
OMHOPDL	Open Mosaic Habitat	10	NCC
AR	Other exposure - acid/neutral	50	JNCC
BR	Other exposure - basic	50	JNCC
SBW	Parkland and scattered trees - broadleaved	30	JNCC
Orchard	Parkland and scattered trees - broadleaved	30	NFC
SCW	Parkland and scattered trees - coniferous	30	JNCC
SMW	Parkland and scattered trees - mixed	30	JNCC
SI	Poor semi-improved grassland	30	JNCC
Q	Quarry	50	JNCC
RAIL	Railway line	50	NFC
RB	Raised bog	3	JNCC
FB	Recently felled woodland - broadleaved	10	JNCC
FC	Recently felled woodland - coniferous	10	JNCC
FM	Recently felled woodland - mixed	10	JNCC
Reedbed	Reedbed	40	NCC
R	Refuse tip	30	JNCC
RW	Running water	50	JNCC
RWB	Running water - brackish	50	JNCC
RWD	Running water - dystrophic	50	JNCC
RWE	Running water - eutrophic	50	JNCC
RWC	Running water - marl	50	JNCC
RWM	Running water - mesotrophic	50	JNCC
RWO	Running water - oligotrophic	50	JNCC
AS	Scree - acid/neutral	50	JNCC
BS	Scree - basic	50	JNCC
DS	Scrub - dense/continuous	10	JNCC
SS	Scrub - scattered	10	JNCC
SWALL	Sea wall	0	JNCC
S	Spoil	30	JNCC
SW	Standing water	50	JNCC
SWB	Standing water - brackish	50	JNCC
SWD	Standing water - dystrophic	50	JNCC
SWE	Standing water - eutrophic	50	JNCC
SWC	Standing water - marl	50	JNCC
SWM	Standing water - mesotrophic	50	JNCC
SWO	Standing water - oligotrophic	50	JNCC
SUBURB	Suburban/rural development	50	NFC
Gardens	Suburban/rural development	50	NFC
Paved	Suburban/rural development	50	NFC
SP	Swamp	40	JNCC
TR	Tall ruderal	20	JNCC
TRACK	Track or minor access road	50	NFC
Path	Track or minor access road	50	NFC
?	Unknown	50	NFC
INDUST	Urban industrial development	50	NFC
URBAN	Urban residential/commercial development	50	NFC
W	Wall	0	JNCC
WH	Wet dwarf shrub heath	1	JNCC
WGM	Wet heath/acid grassland mosaic	1	JNCC
WB	Wet modified bog	3	JNCC

WETLAND

WETLAND			
Phase 1 Code	**Phase 1 Habitat Name**	**Wetland Cost**	**Definition Source**
ROAD	A or B road	50	NFC
SAG	Acid grassland - semi-improved	20	NCC
AG	Acid grassland - unimproved	20	NCC
RUNWAY	Airport runway	50	NFC
BG	Bare ground	40	JNCC
P	Bare peat	20	JNCC
BB	Blanket bog	1	JNCC
X	Boundary removed	0	JNCC
CB	Bracken - continuous	30	JNCC
SB	Bracken - scattered	30	JNCC
PBW	Broadleaved woodland - plantation	50	JNCC
BW	Broadleaved woodland - semi-natural	50	JNCC
BUILD	Buildings	50	NFC
Building	Buildings	50	NFC
Buildings	Buildings	50	NFC
SCG	Calcareous grassland - semi-improved	40	JNCC
CG	Calcareous grassland - unimproved	50	JNCC
CS	Caravan site	0	JNCC
CA	Cave	50	JNCC
PCW	Coniferous woodland - plantation	40	JNCC
CW	Coniferous woodland - semi-natural	40	JNCC
AM	Cultivated/disturbed land - amenity grassland	50	JNCC
A	Cultivated/disturbed land - arable	50	JNCC
ESP	Cultivated/disturbed land - ephemeral/short perennial	40	JNCC
DD	Dry ditch	0	JNCC
ADH	Dry dwarf shrub heath - acid	5	JNCC
BDH	Dry dwarf shrub heath - basic	5	JNCC
DGM	Dry heath/acid grassland mosaic	5	JNCC
DB	Dry modified bog	1	JNCC
EB	Earth bank	0	JNCC
BM	Fen - basin mire	1	JNCC
FPM	Fen - flood plain mire	1	JNCC
VM	Fen - valley mire	1	JNCC
F	Fence	0	JNCC
AF	Flush and spring - acid/neutral flush	1	JNCC
BF	Flush and spring - basic flush	1	JNCC
PH-	Hedges - defunct - species-poor	30	JNCC
RH-	Hedges - defunct - species-rich	30	JNCC
PH	Hedges - intact - species-poor	30	JNCC
RH	Hedges - intact - species-rich	30	JNCC
PHT	Hedges - with trees - species-poor	30	JNCC
RHT	Hedges - with trees - species-rich	30	JNCC
I	Improved grassland	50	JNCC
AC	Inland cliff - acid/neutral	50	JNCC
BC	Inland cliff - basic	50	JNCC
IS	Introduced shrub	30	JNCC
LH	Lichen/bryophyte heath	20	JNCC
LP	Limestone pavement	50	JNCC
IV	Marginal/inundation - inundation	1	JNCC
MV	Marginal/inundation - marginal	1	JNCC
MG	Marsh/marshy grassland	1	JNCC
MI	Mine	40	JNCC
PMW	Mixed woodland - plantation	50	JNCC
MW	Mixed woodland - semi-natural	50	JNCC
MH	Montane heath/dwarf herb	20	JNCC
MWAY	Motorway or major dual carriageway	50	NFC
SNG	Neutral grassland - semi-improved	30	JNCC
NG	Neutral grassland - unimproved	20	JNCC
NR	Non-ruderal	30	JNCC
OMHOPDL	Open Mosaic Habitat	20	NCC
AR	Other exposure - acid/neutral	50	JNCC
BR	Other exposure - basic	50	JNCC
SBW	Parkland and scattered trees - broadleaved	30	JNCC
Orchard	Parkland and scattered trees - broadleaved	30	NFC
SCW	Parkland and scattered trees - coniferous	30	JNCC
SMW	Parkland and scattered trees - mixed	30	JNCC
SI	Poor semi-improved grassland	30	JNCC
Q	Quarry	50	JNCC
RAIL	Railway line	50	NFC
RB	Raised bog	1	JNCC
FB	Recently felled woodland - broadleaved	20	JNCC
FC	Recently felled woodland - coniferous	20	JNCC
FM	Recently felled woodland - mixed	20	JNCC
Reedbed	Reedbed	1	NCC
R	Refuse tip	40	JNCC
RW	Running water	1	NCC
RWB	Running water - brackish	1	NCC
RWD	Running water - dystrophic	1	NCC
RWE	Running water - eutrophic	1	NCC
RWC	Running water - marl	1	NCC
RWM	Running water - mesotrophic	1	NCC
RWO	Running water - oligotrophic	1	NCC
AS	Scree - acid/neutral	50	JNCC
BS	Scree - basic	50	JNCC
DS	Scrub - dense/continuous	30	JNCC
SS	Scrub - scattered	30	JNCC
SWALL	Sea wall	0	JNCC
S	Spoil	40	JNCC
SW	Standing water	1	NCC
SWB	Standing water - brackish	1	NCC
SWD	Standing water - dystrophic	1	NCC
SWE	Standing water - eutrophic	1	JNCC
SWC	Standing water - marl	1	JNCC
SWM	Standing water - mesotrophic	1	JNCC
SWO	Standing water - oligotrophic	1	JNCC
SUBURB	Suburban/rural development	50	NFC
Gardens	Suburban/rural development	50	NFC
Paved	Suburban/rural development	50	NFC
SP	Swamp	1	JNCC
TR	Tall ruderal	30	JNCC
TRACK	Track or minor access road	50	NFC
Path	Track or minor access road	50	NFC
?	Unknown	50	NFC
INDUST	Urban industrial development	50	NFC
URBAN	Urban residential/commercial development	50	NFC
W	Wall	0	JNCC
WH	Wet dwarf shrub heath	5	JNCC
WGM	Wet heath/acid grassland mosaic	5	JNCC
WB	Wet modified bog	1	JNCC

WOODLAND

WOODLAND			
Phase 1 Code	**Phase 1 Habitat Name**	**Woodland Cost**	**Definition Source**
ROAD	A or B road	50	NFC
SAG	Acid grassland - semi-improved	30	NCC
AG	Acid grassland - unimproved	30	NCC
RUNWAY	Airport runway	50	NFC
BG	Bare ground	40	JNCC
P	Bare peat	25	JNCC
BB	Blanket bog	30	JNCC
X	Boundary removed	0	JNCC
CB	Bracken - continuous	20	JNCC
SB	Bracken - scattered	20	JNCC
PBW	Broadleaved woodland - plantation	1	JNCC
BW	Broadleaved woodland - semi-natural	1	JNCC
BUILD	Buildings	40	NFC
Building	Buildings	40	NFC
Buildings	Buildings	40	NFC
SCG	Calcareous grassland - semi-improved	30	JNCC
CG	Calcareous grassland - unimproved	30	JNCC
CS	Caravan site	0	JNCC
CA	Cave	50	JNCC
PCW	Coniferous woodland - plantation	20	JNCC
CW	Coniferous woodland - semi-natural	20	JNCC
AM	Cultivated/disturbed land - amenity grassland	50	JNCC
A	Cultivated/disturbed land - arable	50	JNCC
ESP	Cultivated/disturbed land - ephemeral/short perennial	40	JNCC
DD	Dry ditch	0	JNCC
ADH	Dry dwarf shrub heath - acid	25	JNCC
BDH	Dry dwarf shrub heath - basic	25	JNCC
DGM	Dry heath/acid grassland mosaic	25	JNCC
DB	Dry modified bog	30	JNCC
EB	Earth bank	0	JNCC
BM	Fen - basin mire	20	JNCC
FPM	Fen - flood plain mire	20	JNCC
VM	Fen - valley mire	20	JNCC
F	Fence	0	JNCC
AF	Flush and spring - acid/neutral flush	20	JNCC
BF	Flush and spring - basic flush	20	JNCC
PH-	Hedges - defunct - species-poor	1	JNCC
RH-	Hedges - defunct - species-rich	1	JNCC
PH	Hedges - intact - species-poor	1	JNCC
RH	Hedges - intact - species-rich	1	JNCC
PHT	Hedges - with trees - species-poor	1	JNCC
RHT	Hedges - with trees - species-rich	1	JNCC
I	Improved grassland	50	JNCC
AC	Inland cliff - acid/neutral	50	JNCC
BC	Inland cliff - basic	50	JNCC
IS	Introduced shrub	1	JNCC
LH	Lichen/bryophyte heath	40	JNCC
LP	Limestone pavement	50	JNCC
IV	Marginal/inundation - inundation	20	JNCC
MV	Marginal/inundation - marginal	20	JNCC
MG	Marsh/marshy grassland	20	JNCC
MI	Mine	40	JNCC
PMW	Mixed woodland - plantation	1	JNCC
MW	Mixed woodland - semi-natural	1	JNCC
MH	Montane heath/dwarf herb	40	JNCC
MWAY	Motorway or major dual carriageway	100	NFC
SNG	Neutral grassland - semi-improved	30	JNCC
NG	Neutral grassland - unimproved	30	JNCC
NR	Non-ruderal	20	JNCC
OMHOPDL	Open Mosaic Habitat	5	NCC
AR	Other exposure - acid/neutral	50	JNCC
BR	Other exposure - basic	50	JNCC
SBW	Parkland and scattered trees - broadleaved	5	JNCC
Orchard	Parkland and scattered trees - broadleaved	5	NFC
SCW	Parkland and scattered trees - coniferous	30	JNCC
SMW	Parkland and scattered trees - mixed	5	JNCC
SI	Poor semi-improved grassland	30	JNCC
Q	Quarry	50	JNCC
RAIL	Railway line	50	NFC
RB	Raised bog	30	JNCC
FB	Recently felled woodland - broadleaved	5	JNCC
FC	Recently felled woodland - coniferous	5	JNCC
FM	Recently felled woodland - mixed	5	JNCC
Reedbed	Reedbed	20	NCC
R	Refuse tip	40	JNCC
RW	Running water	50	JNCC
RWB	Running water - brackish	50	JNCC
RWD	Running water - dystrophic	50	JNCC
RWE	Running water - eutrophic	50	JNCC
RWC	Running water - marl	50	JNCC
RWM	Running water - mesotrophic	50	JNCC
RWO	Running water - oligotrophic	50	JNCC
AS	Scree - acid/neutral	50	JNCC
BS	Scree - basic	50	JNCC
DS	Scrub - dense/continuous	1	JNCC
SS	Scrub - scattered	1	JNCC
SWALL	Sea wall	0	JNCC
S	Spoil	40	JNCC
SW	Standing water	50	JNCC
SWB	Standing water - brackish	50	JNCC
SWD	Standing water - dystrophic	50	JNCC
SWE	Standing water - eutrophic	50	JNCC
SWC	Standing water - marl	50	JNCC
SWM	Standing water - mesotrophic	50	JNCC
SWO	Standing water - oligotrophic	50	JNCC
SUBURB	Suburban/rural development	25	NFC
Gardens	Suburban/rural development	25	NFC
Paved	Suburban/rural development	50	NFC
SP	Swamp	20	JNCC
TR	Tall ruderal	20	JNCC
TRACK	Track or minor access road	50	NFC
Path	Track or minor access road	50	NFC
?	Unknown	50	NFC
INDUST	Urban industrial development	50	NFC
URBAN	Urban residential/commerical development	40	NFC
W	Wall	0	JNCC
WH	Wet dwarf shrub heath	25	JNCC
WGM	Wet heath/acid grassland mosaic	25	JNCC
WB	Wet modified bog	30	JNCC

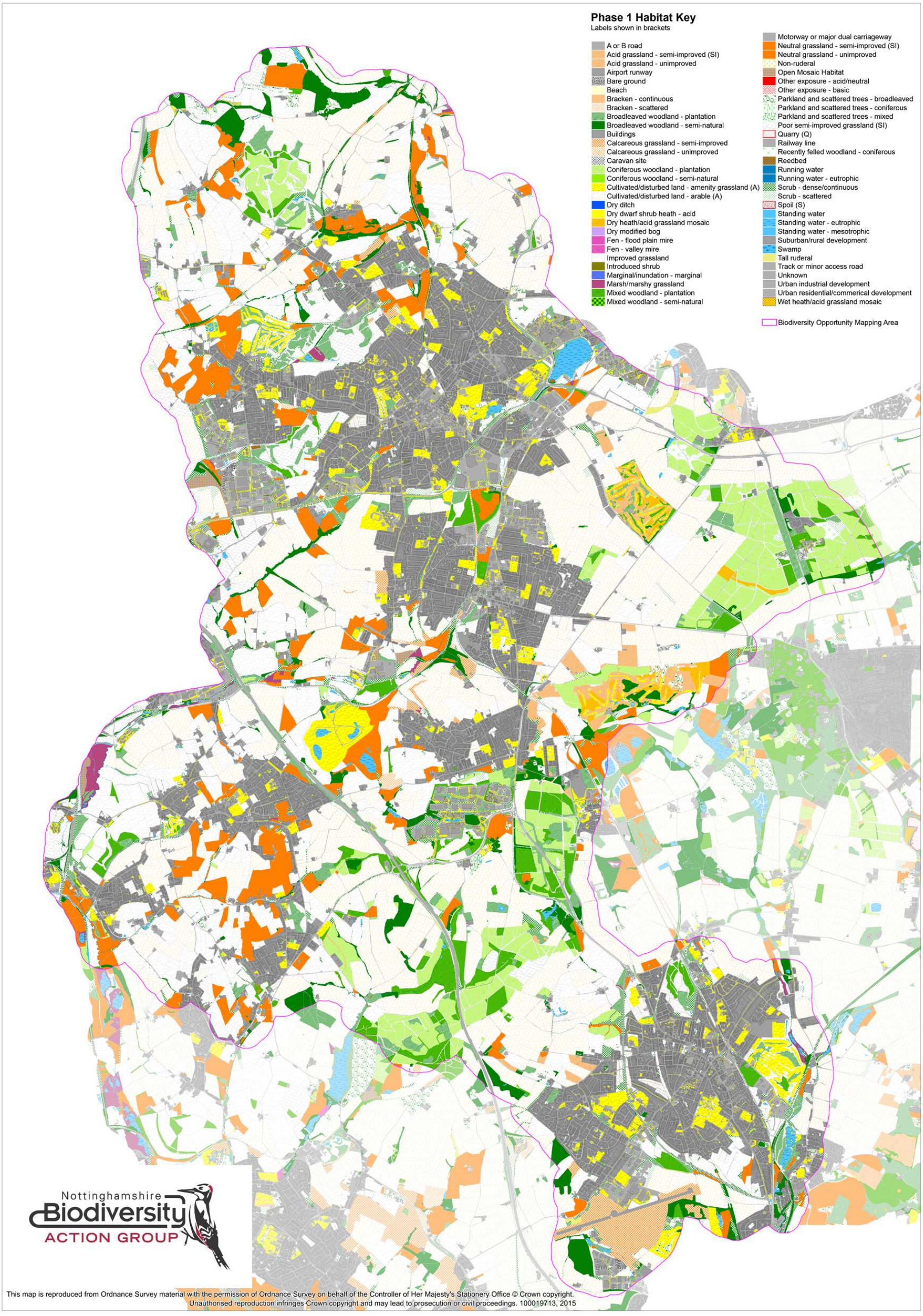
Appendix 4 - List of workshop attendees

Ashfield BOM Workshop, 29th February 2016 - list of Attendees				
Name	**Initials**	**Organisation**	**Position**	**E-mail**
Kira Besh	KB	Mansfield District Council	Sustainable Planning Officer	kbesh@Mansfield.gov.uk
Dayle Bickley	DB	Nottinghamshire County Council	Student Placement	dayle.bickley@nottscc.gov.uk
Janice Bradley	JB	Nottinghamshire Wildlife Trust	Head of Conservation Policy and Planning	Jbradley@nottswt.co.uk
Sue Butler	SB	NWT (A&M LocalG)	Vice Chair	
Rosy Carter	RC	Lowland Derbyshire and Nottinghamshire Local Nature Partnership	Local Nature Partnership Co-ordinator	rosy.carter@d2n2lep.org
Barbara Chalkley	BC	ACCESS	Committee member	
Julie Clayton	JC	Ashfield District Council	Forward Planning Officer	J.Clayton@ashfield-dc.gov.uk
Nick Crouch	NC	Nottinghamshire County Council	Senior Practitioner Nature Conservation	nick.crouch@nottscc.gov.uk
Sarah Daniels	SD	Ashfield District Council	Locality Team Leader	S.Daniel@ashfield-dc.gov.uk
Molly Gorman	MGo	Forestry Commission	Ecologist	molly.gorman@forestry.gsi.gov.uk
Mark Guy	MGu	Nottinghamshire County Council	Countryside Officer	mark.guy@nottscc.gov.uk
Malcolm Hackett	MH	Nottinghamshire County Council	Senior Practitioner Greenwood	malcolm.hackett@nottscc.gov.uk
Jake Hill	JH	Nottinghamshire County Council	Student Placement	jake.hill@nottscc.gov.uk
Claire Install	CSI	Leicestershire & Rutland Wildlife Trust	Senior Conservation Officer	cinstall@lrwt.org.uk
Chris Jackson	CJ	Notts BAG	Biodiversity Officer	chris.jackson@nottscc.gov.uk
Rob Johnson	RJ	Nottinghamshire Biological & Geological Record Centre		NBGRCG@nottinghamcity.gov.uk
Wil Kent	WK	Ashfield District Council	Investment & Projects Officer (Kirkby & Woodhouse)	W.Kent@ashfield-dc.gov.uk
Andy Lowe	ADL	Nottinghamshire Wildlife Trust	Western Conservation Officer	alowe@nottswt.co.uk
Sue McDonald	SM	Nottinghamshire County Council	Community Liaison Officer	sue.mcdonald@nottscc.gov.uk
Nick Moyes	NM	Lowland Derbyshire LBAP Partnership	Biodiversity Projects Officer	Nick.Moyes@derbyshire.gov.uk
Peter Olko	PO	NWT (A&M LocalG)	Chair	peter.olko@btclick.com
John Osborne	JEO		County Hertile Recorder	jeosbourne@btinternet.com
Jonathan Rhodes	JAR		Local Amateur Naturalist	jonathan@countrysideman.com
Lee Scudder	LS	Nottinghamshire County Council	Countryside Officer	Lee scudder@nottscc.gov.uk
David Shaw	DS	NWT (A&M Local Group) & representing Butterfly Conservation East Midlands		dshaw.home@ntlworld.com
Ruth Tall	RT	Natural England	Lead Adviser	ruth.tall@naturalengland.org.uk
Michael Walker	MGW	Nottinghamshire Bat Group	Chair	mwalker@nottswt.co.uk
Melanie Wheelwright	MW	Ashfield District Council	Investment and Projects Officer (Sutton)	M.Wheelwright@ashfield-dc.gov.uk
Dan Widdowson	DJW	Environment Agency	Biodiversity Officer	dan.widdowson@environment-agency.gov.uk
Imogen Wilde	IW	Canal & River Trust (CRT)	Ecologist	Imogen.Wilde@canalrivertrust.org.uk
Sheila Wright	SW	Nottingham Natural History Museum		Sheila.Wright@nottinghamcity.gov.uk
Environment Agency – additional comments from EA teams – March 2016				
Katie McNamara	KM	Environment Agency	Biodiversity Officer	katie.mcnamara@environment-agency.gov.uk

Appendix 5 - The Basemap

Map 1 - Phase 1 Habitat map for Ashfield (includes 250m buffer)

Map 1 - Phase 1 Habitat Map for Ashfield



Appendix 6 – Habitat Network maps

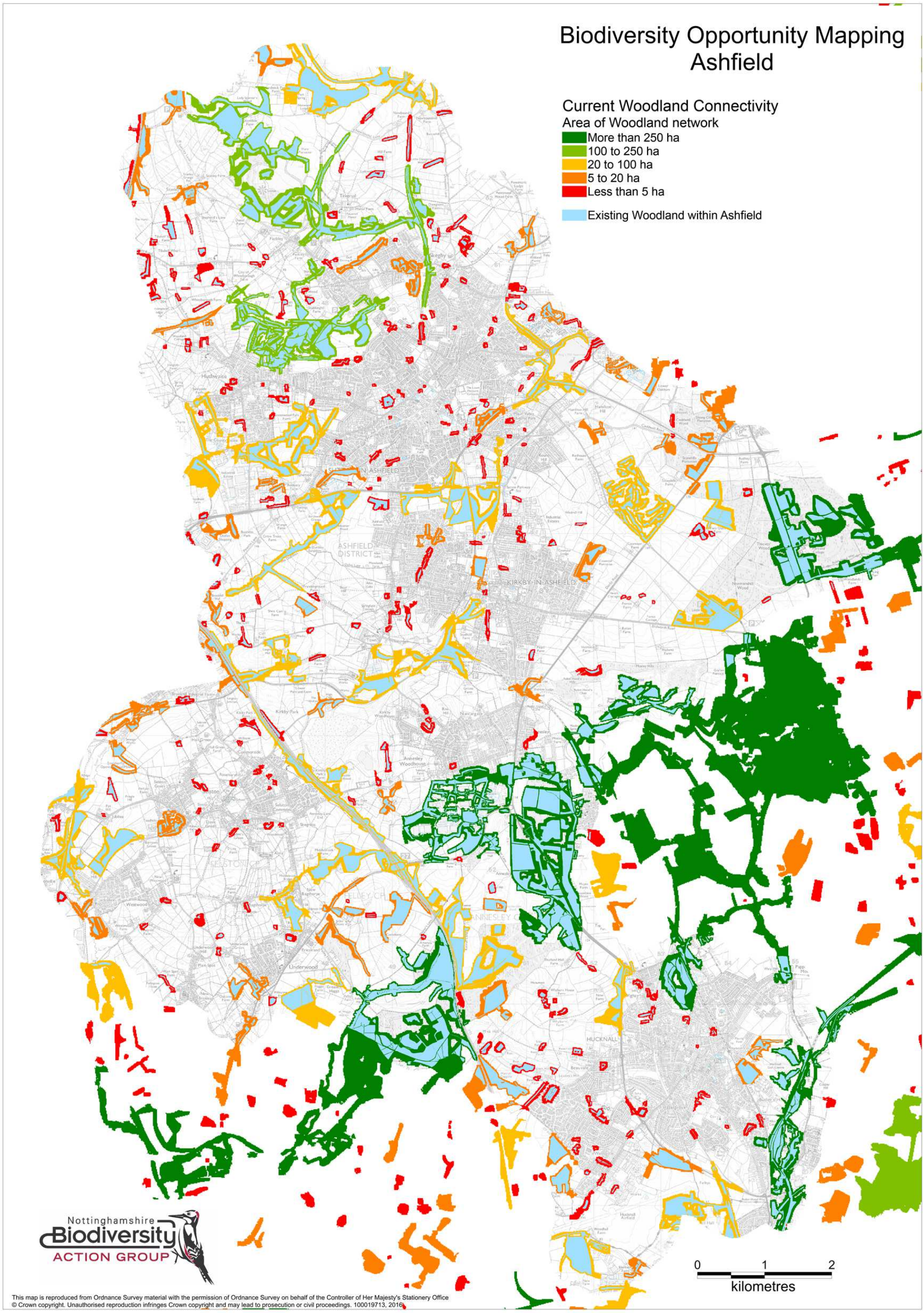
Map 1 Current Woodland Connectivity

Map 2 Current Heathland & Acid Grassland Connectivity

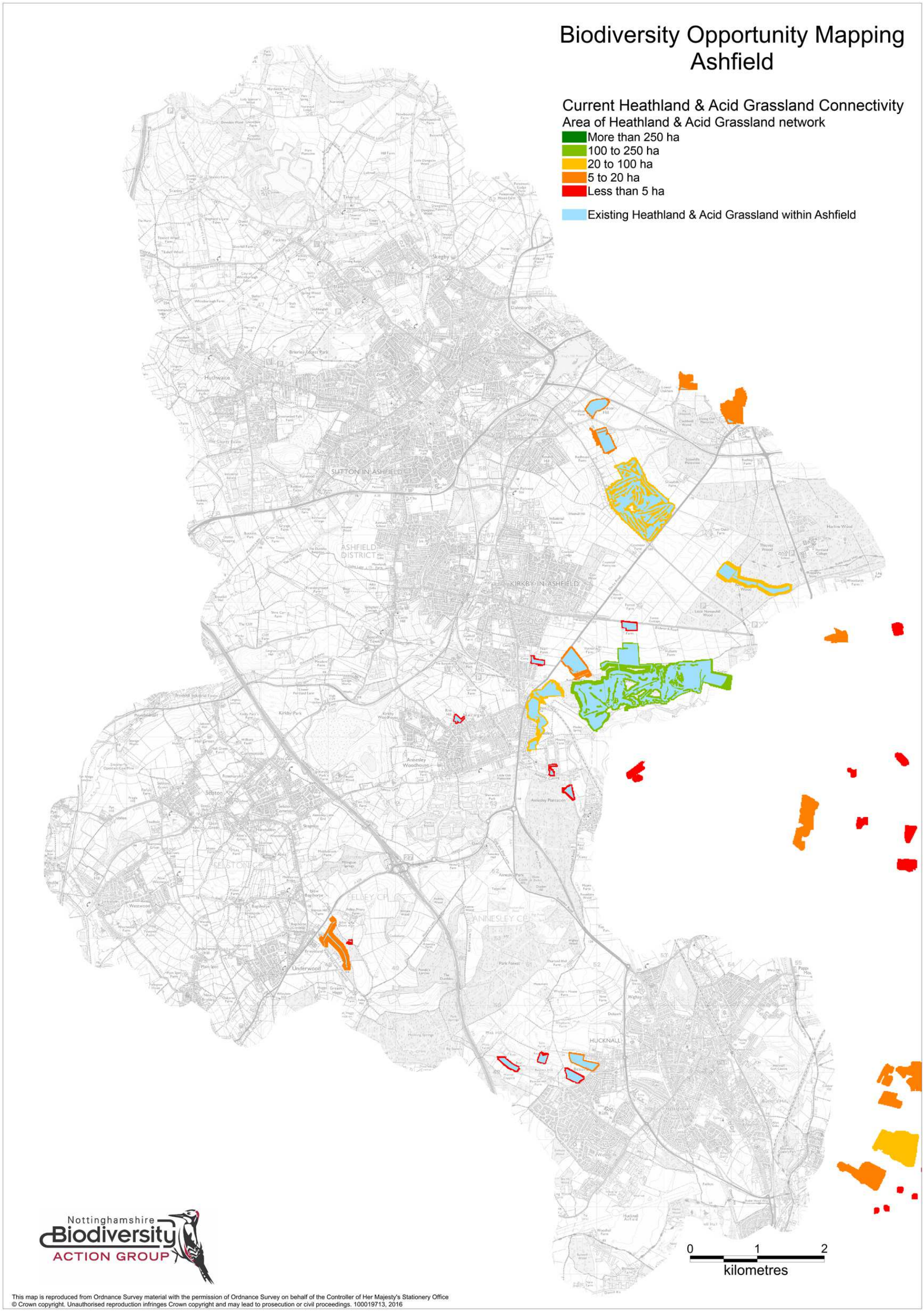
Map 3 Current Grassland Connectivity

Map 4 Current Wetland Connectivity

Map 1 - Current Woodland Connectivity

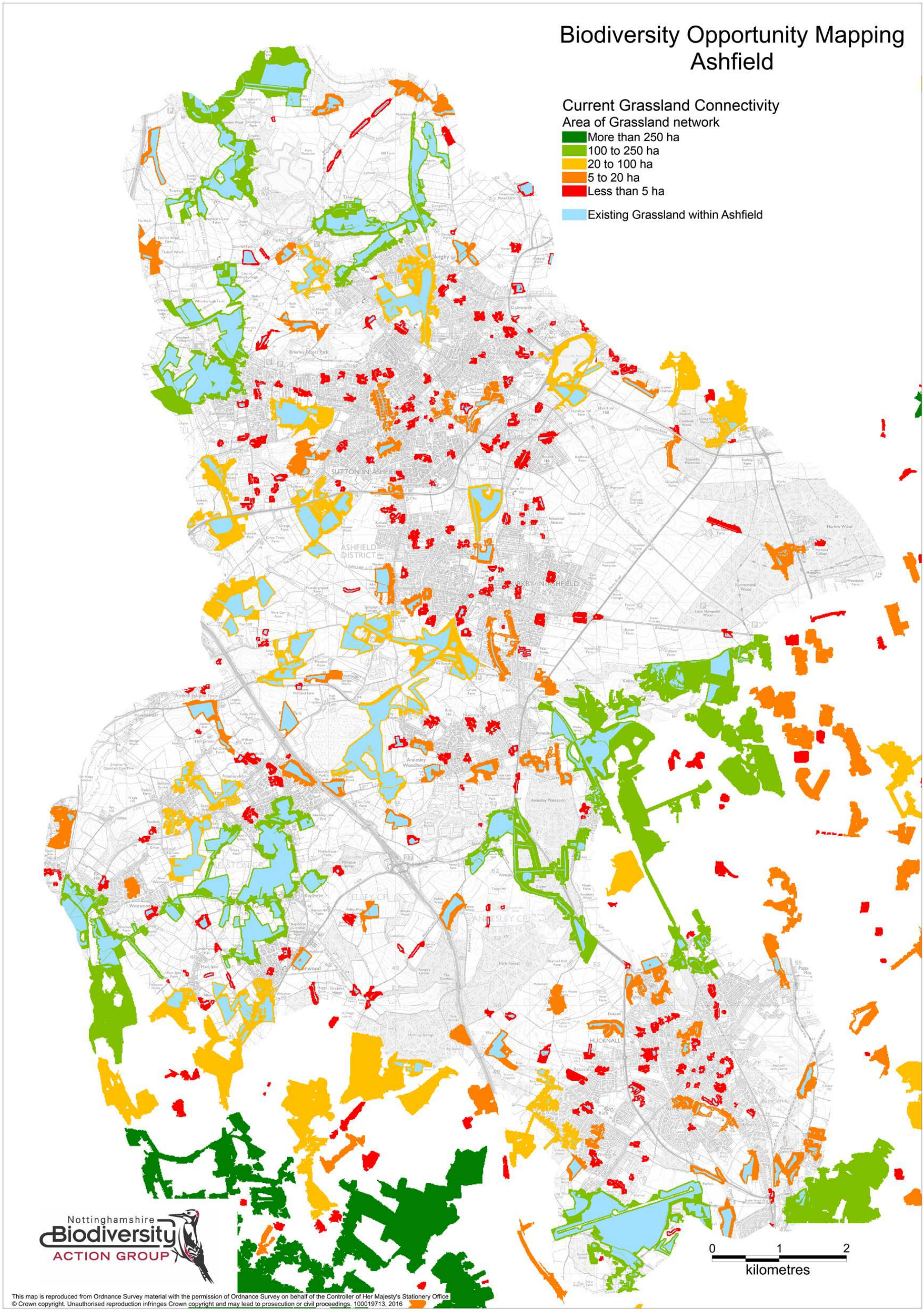


Map 2 - Current Heathland and Acid Grassland Connectivity

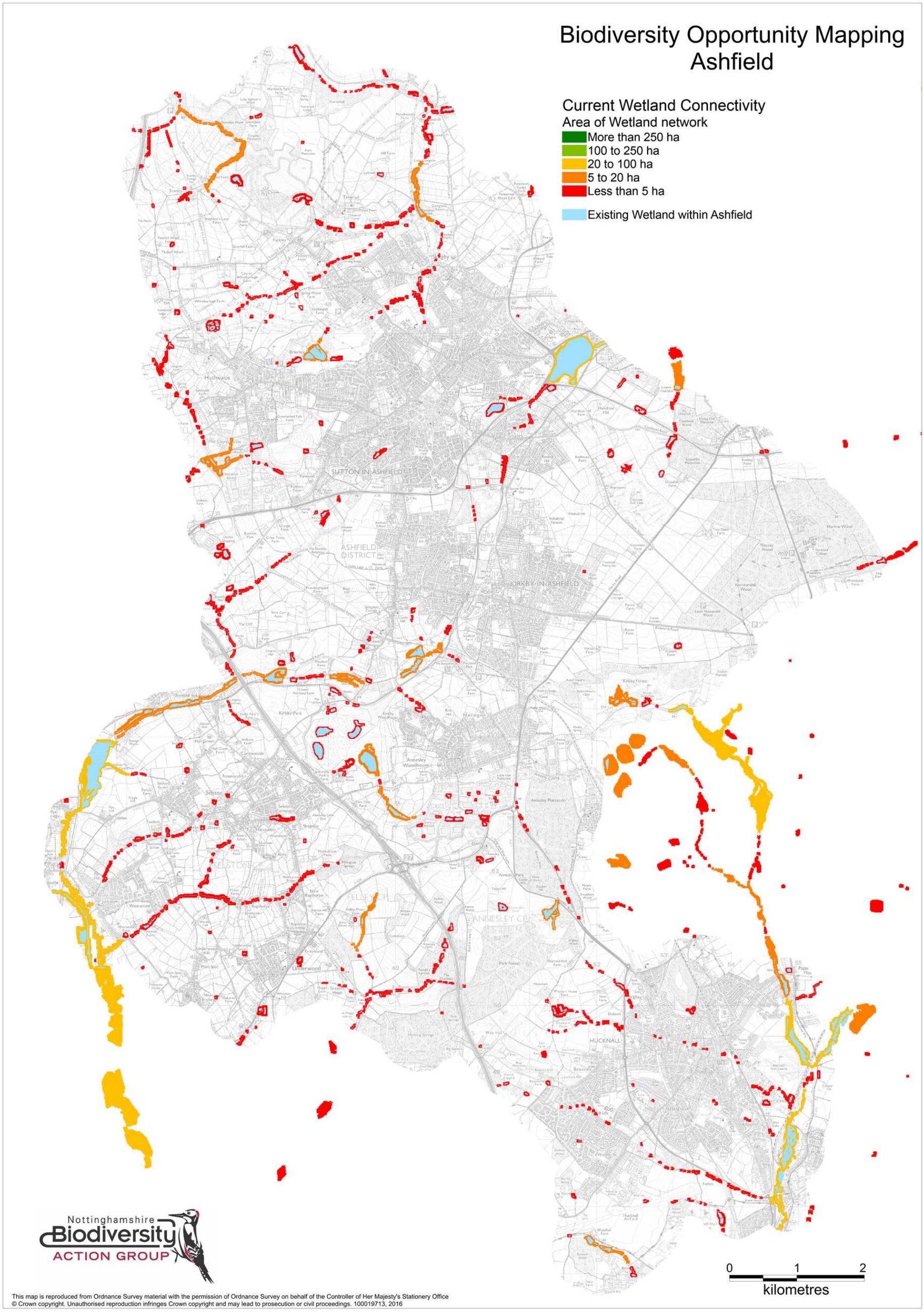


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Map 3 - Current Grassland Connectivity



Map 4 - Current Wetland Connectivity



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