Guidance on applying 'Hertfordshire's Ecological Networks' within the planning system

1 Purpose of this document

This is a guidance document produced by the Hertfordshire Local Nature Partnership (LNP) to accompany the 2013 report on Hertfordshire's Ecological Networks[i]. Its purpose is to put into the context of the National Planning Policy Framework[ii] (NPPF) the outputs of the Hertfordshire ecological networks mapping project and to provide guidance on their incorporation into Local Plans and sustainable development policies, as well as their interpretation in a Development Control context. All the different project outputs have been combined into one Geographical Information System (GIS) dataset. That dataset, in conjunction with this guidance, will allow Hertfordshire's local planning authorities to effectively use the ecological networks mapping outputs to inform their forward planning and development management roles. It is here to help further both the objectives of sustainable development and the Natural Environment White Paper[iii] for mutual benefit. The dataset and this guidance should be seen as an enabler.

Whilst the dataset is a very useful tool and every effort has been made here to describe how to interpret and apply it by non-ecologists, it must be recognised that this is a complex task and cannot completely take the place of specialist ecological advice.

2 Introduction

The Government's 2011 Natural Environment White Paper recognises that nature conservation cannot be purely focused on protecting existing sites. Remaining sites are now just too small and fragmented to safeguard our full range of habitats and species on their own. This is bad for our health, wellbeing and economy. The white paper calls for a much wider approach to reversing the long-term decline in biodiversity by expanding and linking habitats to restore ecosystem function. The National Planning Policy Framework strongly reflects this principle and places an expectation on local planning authorities to '*plan for biodiversity at a landscape-scale*' and to '*identify and map components of local ecological networks*'.

A project completed in 2013 sought to address gaps in Hertfordshire's evidence base to allow a better understanding of how and where to locally respond to the challenges outlined by the white paper and the NPPF. The project produced a new Hertfordshire habitat inventory with the latest available data, and then used these data to generate habitat network maps. Habitat network maps identify how habitats are spatially related to each other and where the highest priorities and greatest opportunities exist for expanding them and linking them together. This strategic approach ensures that efforts can be targeted to where they are of most potential benefit. It also ensures that

the right combination of habitats are created in the right places, to maximise habitat network integrity, whilst minimising unintended consequences of locking out the potential to restore functioning networks of one habitat for the sake of another. This is the first time ecological networks have been mapped in Hertfordshire and the dataset now allows local planning authorities to appropriately respond to the relevant policies in the NPPF. The key policy in the NPPF of direct relevance is paragraph 117. Compliance with the mitigation hierarchy, embodied in paragraph 118, is essential in properly ensuring a net gain to ecological networks. The National Planning Practice Guidance also sets out the principle that:

> *"Local and neighbourhood plans and planning decisions have the potential to affect biodiversity outside as well as inside designated areas of importance for biodiversity. Local planning authorities and neighbourhood planning bodies should therefore seek opportunities to work collaboratively with other partners, including Local Nature Partnerships, to develop and deliver a strategic approach to protecting and improving the natural environment based on local priorities and evidence. Equally, they should consider the opportunities that individual development proposals may provide to enhance biodiversity."*

The 2013 Hertfordshire ecological networks mapping project identifies the strategic priorities and which/where habitats need to be maintained, restored and created. The original project produced a number of individual outputs that need to be examined and interpreted in context of each other by ecological experts to be able to apply them to habitat projects on the ground. The project has now been extended to integrate the various outputs into one combined GIS dataset ('Hertfordshire's Ecological Networks Combined Dataset') that can be more easily interpreted on its own by non-ecologists, as far as realistically possible. This single combined dataset is the subject of the description and guidance given below.

2.1 General explanation and limitations of the dataset

The dataset recognises existing, and opportunities for creation of new, habitats of principal importance for the conservation of biodiversity in England, according to those listed in Section 41 of the Natural Environment and Rural Communities Act 2006 (link to listed habitats).

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Not all NERC Act habitats were mapped. A table of those NERC Act habitats relevant to Hertfordshire can be found in Appendix 3. This lists those habitats that were mapped and those that weren't. This means there will be some areas not identified by the dataset where NERC Act habitats exist (e.g. hedgerows). Moreover, the dataset was compiled from existing survey information and further examination of aerial photos. Therefore, there will be some habitat patches missed by the dataset and some habitat patches identified by the dataset that may no longer be of the same quality. It must never be assumed that there are no habitats outside those identified by the dataset. Ecological

surveys, on a case-by-case basis, are always recommended, to ensure decisions are based on the most accurate and up-to-date information.

The dataset is driven purely by raw data and mathematical models, with no human-interpretation applied. Therefore the patches of existing habitat recognised on the map are precise boundaries, to the best currently available knowledge. Areas identified on the map for habitat creation, on the other hand, are indicative boundaries predicted by mathematical models, and should be used as a guide only. Ecology is a complex subject and mathematical models cannot generate complete automation of decisions. It is generally recommended, in the context of individual planning proposals, that developers and planning case officers seek further expert ecological advice to ensure the most appropriate interpretation and application of the dataset. In conjunction with this, further survey of habitats and soils will often be needed.

Areas identified on the map for habitat creation do not exclude any existing land uses, nor do they propose that 'wall-to-wall' habitat creation will always be appropriate or even possible. The Herts & Middlesex Wildlife Trust publication, 'How to Build a Living Landscape'[iv] (link to PDF), gives a guide to how a habitat network can be 'built into' any of Hertfordshire's main land uses, without significantly impacting on the purpose or functionality of that land use.

3 How to use the dataset

The Herts LNP published its Guiding Principles for Local Planning Authorities[v] in February 2014. This translates national policy and guidance to a local context. It forms the framework for the LNP's expectations of planning and so those principles are not repeated here. The following guidance describes how the information in the Hertfordshire Ecological Network Priorities dataset can add value as an additional evidence base, and how it should be used by planners accordingly.

The ecological networks dataset has applications in both development management and plan-making contexts. These are described separately under sub-headings below.

For a more detailed description of the dataset and how its different components fit together, please refer to the later section of this guidance document: 5 Technical description of the dataset.

3.1 Development management

The ecological networks dataset can be used in a development management context to inform both the masterplanning of individual proposals and an appraisal of their appropriateness. It is equally applicable to planning case officers as it is to developers themselves. The earlier the dataset is used in the process of developing a proposal, the greater the chance of that proposal contributing in a positive and cost-effective way to the integrity of Hertfordshire's ecological networks.

The dataset, and this accompanying guidance, is intended as a tool to aid understanding of how a development proposal can plan a net gain for ecological networks. Its primary use is to identify strategic priorities for habitat creation and to indicate the most appropriate habitat types to focus

on. Wider biodiversity-related planning policies and principles, such as the mitigation hierarchy and protected species legislation, are covered elsewhere and not repeated here.

It is a strategic dataset and this guidance is only relevant to development proposals where there is potential for either a significant positive contribution to, or negative impact on, the integrity of ecological networks. Very minor developments, such as extensions or conversions of existing buildings will clearly be outside the scope of ecological networks. At the other end of the scale, large housing schemes and infrastructure projects are likely to have the greatest potential to do either the most good or greatest harm.

This guidance may be used to help inform developers when preparing the environmental statements that are needed for many types of development under the Environmental Impact Assessment Regulations. An awareness of the ecological networks which exist will be valuable for anyone considering the environmental impacts of schemes. As schemes which require environmental statements tend to be larger they may also have greater opportunities to create new habitats and linkages between habitats. This guidance will therefore best be used early in the planning of developments. Local Planning Authorities are therefore encouraged to make developers aware of this guidance and the ecological networks dataset as early as possible; particularly when approached for pre-application advice, or when giving scoping opinions on matters which need to be considered in environmental statements.

The guidance below is based around identifying appropriate actions and principles to apply to the different areas on the map. For any development proposal the first stage is to identify how the different features within the dataset are distributed across the proposed development area. This will involve viewing the map component of the dataset and interrogating the associated data table for each of the map features within and around the proposed site. For ease of use, the map component of the dataset is colour-coded by the overarching categories in the first column of the data table.

Green areas on the map (values of 1 in the first column of the data table)

- These patches contain habitats listed within S41 of the NERC Act and should be avoided by development and protected by the development management system.
- Adjacent or surrounding development should provide for the enhancement of these habitats through ongoing positive conservation management. The data table identifies the habitat type that must be maintained.
- Development causing significant harm to these patches should normally be refused. Where there is unavoidable harm in the context of overriding public interest, the mitigation hierarchy should be applied. Depending on the circumstances, all other areas on the map could potentially be candidate areas for applying appropriate compensation measures. The same actions described for restoring and creating habitats to enhance ecological networks equally apply to compensation measures. NB a simple 1:1 ratio of compensation for habitat area damaged is unlikely to be enough due to the poor success rate and risks involved in creating new habitats to the same standard as those lost. In reality the ratio is likely to be much higher, in some cases up to a 1:10 ratio of harm to compensation area. Other habitat types are considered irreplaceable (eg. ancient woodland) and can never be adequately compensated if lost.

<u>Purple areas on the map (values of 2 in the first column of the data table)</u>

- These patches contain habitats not currently qualifying under S41 of the NERC Act but with high potential to do so. Whilst not receiving the same level of statutory and policy-based protection as the green areas, they should nonetheless be avoided by development and protected by the development management system where reasonable to do so. This is because they are important components of ecological networks and it is much quicker, less risky and more cost-effective to restore these habitats than to create new ones elsewhere.
- Enhancements to the ecological network can be carried out through restoring these habitat patches to the most appropriate S41 NERC Act habitat type. This would be provided through a combination of one-off capital works and ongoing positive conservation management. The data table specifies the target habitat type most appropriate to restore these patches to.

<u>Orange/yellow/cream areas on the map (values of 3a, 3b and 3c in the first column of the data table)</u>

- These patches contain no mapped existing habitats of any significance. Therefore, in the context of the ecological networks dataset, these areas are suitable for appropriate development.
- These areas also form the potential for new habitat corridors to be created to improve ecological network integrity. The dataset identifies the relative priorities for habitat creation to form corridors and other links (eg. habitat 'stepping stones') between existing habitat patches. Orange areas are predicted to be of higher priority than yellow, which are predicted to be of higher priority than cream (values of 3a > 3b > 3c respectively in the first column of the data table). These relative priorities should be taken into account in the design of masterplans, by focusing habitat corridors primarily on the orange areas and then yellow and then cream, as appropriate. Development proposals containing large areas of orange on the map will need to plan the most sensitively and produce the greatest enhancements to the ecological network. The dataset simply predicts relative priority for habitat creation, not necessarily realistic sizes of such projects. Whilst it will normally be unlikely that whole areas coloured in orange on the map would be allocated for creating habitat, it is expected that where orange areas on the map exist, development should aim to provide ecologically functioning corridors from one end of their land to the other.
- There are no hard and fast rules for determining the scale of habitat corridors because it depends on the context and also the scale of development (with larger developments able to contribute the most). However, corridors should be of a scale to allow them to properly function ecologically. For example, a simple Green Infrastructure corridor consisting of a footpath with only a small verge of habitat is unlikely to function ecologically. As a general principle, the wider, larger and more continuous the corridor, the more it will contribute to the integrity of the ecological network.
- Opportunities for habitat creation projects to comprehensively link up existing habitats within and around the development envelope should be designed into the masterplan. This should be done at the earliest possible stage in the process, normally at the same time as other infrastructure, in order to ensure that contributions are both meaningful and cost-effective. If habitat corridors are designed into the masterplan as an afterthought, good opportunities will be missed and habitat creation projects are likely to be less appropriate

and less cost-effective. Worst case scenario would be total and permanent severance of a network. It is highly recommended that expert ecological advice is sought in the earliest stages in the design of a masterplan.

- The dataset identifies the most appropriate predicted habitat types to focus on in any given area on the map. Habitat recommendations are found in the Target habitat type column of the table. Where more than one habitat type is recommended, it may be appropriate to focus on just one of them or to try and combine all habitat recommendations into the habitat corridor being created. It is strongly recommended that expert ecological advice is sought in cases where more than one habitat type is recommended or where a soil test contra-indicates the recommended habitat type.

The above guidance focuses on how the dataset can be applied to a specific development proposal area. In some circumstances the opportunities for carrying out ecological enhancements, or even compensation, may be very low priority within the development envelope. In these cases it may be appropriate to carry out an appropriate level of habitat restoration and creation elsewhere where priorities are predicted by the dataset to be higher. However, such opportunities are likely to be rare because it would require available land for such projects under the developer's control.

The dataset could also be used to inform future biodiversity offsetting schemes in the county. However, there are no current schemes in the county and biodiversity offsetting is still being evaluated and developed elsewhere. If and when biodiversity offsetting is adopted in Hertfordshire the guidance here will be updated to reflect that new application.

3.2 Plan-making

The dataset can be used to inform local plan production in a number of ways. Some examples are given below, but there are likely to be further opportunities for integrating this work within the local plan process. This 'Plan-making' section only gives an overview of principles to be applied. It does not go into detail in context of the different values in the dataset because these have already been covered by the 'Development management' section above. Rather than repeating much of this information twice, the principles outlined in this 'Plan-making' section should be applied in conjunction with the detail in the 'Development management' section when considering the appropriateness of strategic land allocations and development management policies.

Strategic land allocations

The dataset can be used to identify how important is any given proposed strategic land allocation in the context of ecological networks. By extension, the dataset helps indicate both how sensitive a site's development would need to be and how significant the opportunities at the site are for strengthening the ecological network.

The dataset lends itself to use in Strategic Environmental Assessments and Sustainability Appraisals, which are an integral part of the plan-making process. The main functions of those assessments are to assess the likely effects of plans, assess reasonable alternatives, and to identify possible mitigation and compensation measures for development. The dataset's emphasis on possible new

habitat creation and its guidance on appropriate habitats for linking into networks will particularly help identify such mitigation and compensation measures.

Under normal circumstances, and as long as existing NERC Act habitat areas are not allocated, areas of predicted high priority for restoring ecological networks will <u>not</u> normally preclude a site from being a proposed strategic land allocation for development or being part of a larger land allocation. Instead the NPPF makes it clear that development should provide an appropriate net gain to biodiversity and that development can be a positive mechanism for restoring ecological networks. It is expected that strategic land allocations would be of a scale that would allow appropriate development to occur, whilst preserving (avoiding) the existing components of the ecological network (such as protected sites) and providing plenty of additional space and opportunity for meaningful enhancements of that network (through restoring and creating habitats, as identified by the dataset).

<u>Areas of opportunity and individual planning briefs within strategic land allocations</u>

The dataset can be used to understand where the greatest opportunities exist for increasing network connectivity and for protecting existing important components of the network.

In practice this would mean highlighting the importance of avoiding development over the areas identified in the first column of the data table certainly by a value of 1, and also by a value of 2 as far as reasonably possible, as well as the importance of the creation of continuous appropriate habitats around and between them, particularly in areas defined by values of 3a in the first column of the data table. New developments should not wholly sever ecological networks, nor lock out the potential for restoring network connectivity. It is therefore important to ensure that areas of opportunity for habitat restoration and creation are defined to form a coherent ecological network through the strategic land allocation.

The greater the proportional area within a proposed strategic land allocation that consists of values of 1, 2 or 3a in the first column of the dataset table, the more sensitive the development would need to be in that area and the greater the levels of enhancements to the ecological network that would be expected.

Individual planning briefs could be drafted to give details of the existing habitats and opportunities to restore or create habitat. The dataset can be used ('target habitat type' column in the table) to specify the habitat(s) most appropriate to focus on in a given area.

<u>Development management policies outside of strategic land allocations</u>

When dealing with individual planning applications on areas and sites outside of those identified, a development management policy could be applied.

Depending on the structure of a particular Local Plan, and where it is in its stage of development, specific policy wording in relation to ecological networks could fit either into existing development management policy documents or into a new supplementary policy document. More detailed guidance of what should be expected generally of development is described in the Development management section. Parts of that guidance could be translated into development management policy statements.

There are already good relevant policy statements in a number of district/borough Local Plan documents. Therefore rather than propose a model policy here, it is suggested that relevant policy statements are reviewed to ensure they capture the key principles of this guidance and include reference to the ecological networks dataset described here, as a tool to evidence and inform application of those policies. Key highest-level principles would include protecting existing ecological assets and improving the quality, extent and connectivity of habitat networks, according to priorities informed by the ecological networks dataset.

4 Further guidance

The Hertfordshire LNP would expect all Local Plans in the county to incorporate this guidance and the ecological networks dataset in order to reflect the policies in the NPPF and contribute meaningfully to sustainable development. Whilst it is hoped that this would be done in a relatively consistent way, it is recognised that Local Plans are all at different stages of their development and therefore may need to look at different ways of doing this. For those Local Plans that are already completed, it may be appropriate to integrate the ecological networks dataset and this guidance into supplementary policy.

The dataset will be maintained by the Herts Environmental Records Centre (HERC) and regular updates will be made available. It will be important for there to be an ongoing exchange of information and close collaboration between planning authorities and HERC in order to ensure that the dataset is kept up to date. New information on existing habitats or new losses or gains of habitat through the planning system can be recorded by HERC and reflected in future iterations of the dataset. This will provide planning authorities on an ongoing basis with the best possible evidence base and will also allow them to fulfil the NPPF requirement to '*identify suitable indicators for monitoring biodiversity in the plan'*.

5 Technical description of the dataset

The dataset is a single GIS layer, consisting of a colour-coded semi-transparent map and a data table. Each row of data in the table is associated with an individual feature on the map. These features are colour-coded according to the first column in the data table (representative of existing habitat status and type, and action required). A map picture of the whole county is provided in Appendix 1. A sample of the table is shown in Appendix 2. A description of each of the table columns is given below:

5.1 Existing Habitat Status Category and Existing Habitat Status Description

These two columns represent the same data; the first column is a simple code relating to descriptions in the second column:

- **1** (green on the map) = **Existing S41 NERC Act habitat**. These comprise of all remaining good-quality patches of Section 41 habitats in the county mapped by the project (see Appendix 3 for further details), to the best available knowledge. These include habitat patches within statutory (SPA, SAC, SSSI) and non-statutory (LWS) designated sites. They also include some known habitat patches not previously recognised as designated sites, but where analysis of aerial photographs has provided new information about the site.
- **2** (purple on the map) = **Existing habitat not currently qualifying under S41 NERC Act**. These include all known existing patches of habitats in a poor or degraded condition. They still have existing value, contributing to ecological networks, but are expected to require a degree of habitat restoration in order for them to maximise that contribution.
- **3a** (orange on the map) = **No mapped existing habitats** present (**high priority for habitat creation**). These include all areas of the county where there are no mapped existing ecologically important habitats present and where the mathematical models predict the highest potential contribution to the restoration of ecological networks.
- **3b** (yellow on the map) = **No mapped existing habitats** present (**medium priority for habitat creation**). These include all areas of the county where there are no mapped existing ecologically important habitats present and where the mathematical models predict medium potential contribution to the restoration of ecological networks.
- **3c** (cream on the map) = **No mapped existing habitats** present (**lower priority for habitat creation**). These include all areas of the county where there are no mapped existing ecologically important habitats present and where the mathematical models predict lower potential contribution to the restoration of ecological networks.

5.2 Existing Habitat Type

This column specifies the type of habitat already present, if applicable. S41 NERC Act habitats (e.g. chalk grassland) are included, as well as habitats not currently qualifying under S41 NERC Act (e.g. bracken or poor semi-improved grassland). Where no recognisable habitat of ecological significance is mapped, these are recorded in the table as 'none'. This would include for example agricultural land, amenity grassland and buildings.

5.3 Action required

This column specifies the types of action recommended for a given location. Possible entries are:

- **Maintain and enhance**. This is where there is existing S41 NERC Act habitat present (value of 1 in the first column of the table). Such patches need to be avoided by the development footprint and need to be maintained and enhanced through ongoing positive conservation management.
- **Restore**. This is where there is existing habitat not currently qualifying under S41 NERC Act (value of 2 in the first column of the table). These habitats are in a poor or degraded condition and have potential to become good examples of S41 NERC Act habitat with some

targeted habitat restoration work. It is normally easier, more cost-effective and lower risk to restore these patches than to create new ones where no habitat currently exists.

- **Create**. This is where there are no mapped existing habitats present (values of 3a, 3b or 3c in the first column of the table). New habitats will need to be created if these areas are to contribute to ecological networks.

5.4 Target habitat type

This column specifies the types of habitat recommended by the computer models for each location. Where there is existing S41 NERC Act habitat present, the target habitat type always remains the same. In all other cases, different target S41 NERC Act habitats are identified. Where the computer models recognise more than one potential habitat type, all relevant types are shown as possible recommendations. In these instances, it is important to have regard to all relevant habitat networks. In some cases it may be appropriate to focus on just one of the recommended habitat types (e.g. chalk grassland in the chalk core focus area); in others it may be more appropriate to build in all relevant habitat types in a complementary way.

It is particularly advised that projects are further informed by expert ecological advice where more than one habitat creation option is recommended.

Where no specific target habitat types are listed, any appropriate habitats from Appendix 3 may be considered. In reality, choices will likely be limited by the site's soil and hydrology conditions. Again, an ecologist will be able to help.
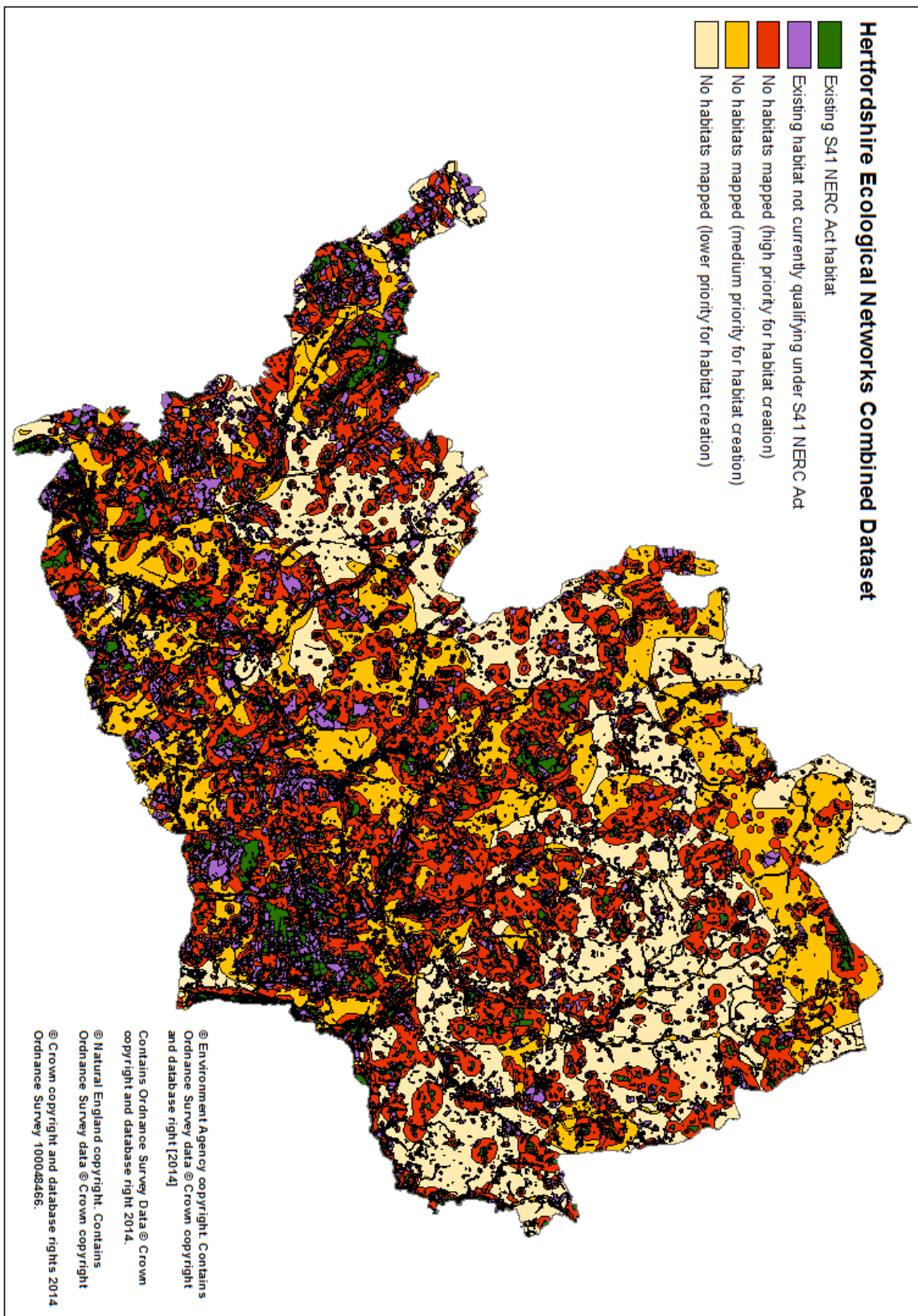
5.5 Coinciding habitat network(s)

Five different groups of habitats were modelled separately. Please refer to the main report on Hertfordshire's Ecological Networks for details of how these were defined. These were woodland, chalk grassland, neutral grassland, acid open habitats and wetland. Relevant groups of habitats are listed in this column wherever the computer models predicted an existing or high potential contribution to their respective networks. This relates to values of 1, 2, and 3a in the first column. Values of 3b or 3c in the first column are not predicted by the computer models to be of high potential contribution to any habitat network.

5.6 Coinciding core focus area(s)

Three different core focus areas were modelled separately. Please refer to the main report on Hertfordshire's Ecological Networks for details of how these were defined. These were chalk (chalk grassland focus), acid (oak-hornbeam woodland, acid grassland, heathland, wood pasture and parkland) and wetland (mixed wetland habitats). The chalk and acid core focus areas were based on computer models using specialist plant data and the wetland core focus areas are effectively the river floodplains. This column affects the target habitat type recommendations for rows in the table

with a value of 3b in the first column. These are strategic areas, distinctive and different from areas around them, within which there are significant opportunities for landscape-scale conservation effort. They identify areas where chalk, acid and wetland habitat creation projects should be focused outside of the modelled habitat network areas.

Appendix 1. Map component of the dataset (whole county overview)

Hertfordshire Ecological Networks Combined Dataset

- Existing S41 NERC Act habitat
- Existing habitat not currently qualifying under S41 NERC Act
- No habitats mapped (high priority for habitat creation)
- No habitats mapped (medium priority for habitat creation)
- No habitats mapped (lower priority for habitat creation)

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Appendix 2. Table component of the dataset (sample)

Existing Habitat Status Category	Existing Habitat Status Description	Existing Habitat Type	Action Required	Target Habitat Type	Coinciding Habitat Network(s)	Coinciding Core Focus Area(s)
1	Existing S41 NERC Act habitat	Broadleaved woodland - semi-natural	Maintain and enhance	Broadleaved woodland - semi-natural	B-l woodland	Wetland
1	Existing S41 NERC Act habitat	Dry heath/acid grassland	Maintain and enhance	Dry heath/acid grassland	Acidic open/B-l woodland	Acid
2	Existing habitat not currently qualifying under S41 NERC Act	Bracken - scattered	Restore	Acidic open	Acidic open/B-l woodland	Chalk/Acid
2	Existing habitat not currently qualifying under S41 NERC Act	Neutral grassland - semi-improved	Restore	Chalk grassland/Neutral grassland	B-l woodland	Chalk
3a	No habitats mapped (high priority for habitat creation)	None	Create	Chalk grassland	Chalk grassland	None
3a	No habitats mapped (high priority for habitat creation)	None	Create	Wetland	Wetland	None
3b	No habitats mapped (medium priority for habitat creation)	None	Create	Acidic open	None	Acidic
3b	No habitats mapped (medium priority for habitat creation)	None	Create	Acidic open/Wetland	None	Acidic/Wetland
3c	No habitats mapped (lower priority for habitat creation)	None	Create	Any appropriate S41 NERC Act habitat	None	None

Appendix 3. Table of NERC Act habitats mapped

NERC Act Habitat	Mapped as	Modelled as
Mapped		
Aquifer-fed naturally fluctuating water bodies	Freshwater	Wetland
Eutrophic standing waters	Freshwater	Wetland
Mesotrophic lakes	Freshwater	Wetland
Oligotrophic and dystrophic lakes	Freshwater	Wetland
Ponds	Freshwater	Wetland
Lowland calcareous grassland	Lowland calcareous grassland	Chalk grassland
Lowland dry acid grassland	Lowland dry acid grassland	Acidic open habitats
Lowland meadows	Lowland meadows	Neutral grassland
Purple moor-grass and rush pastures	Marshy grassland	Wetland
Lowland heathland	Lowland heathland	Acidic open habitats
Coastal and floodplain grazing marsh	Neutral or marshy grassland, depending on context	Neutral grassland or Wetland, depending on context
Lowland fen	Lowland fen	Wetland
Reedbeds	Swamp/fen (reedbed comment included)	Wetland
Lowland beech and yew woodland	Broadleaved woodland	Woodland
Lowland mixed deciduous woodland	Broadleaved woodland	Woodland
Wet woodland	Broadleaved woodland	Both Wetland and Woodland
Wood-pasture and parkland	Wood-pasture and parkland (where didn't fit other habitat type)	Woodland
Not mapped		
Arable field margins	Not included	Not included
Hedgerows	Not included	Not included
Open mosaics on previously developed land	Not included	Not included
Rivers	Not included	Not included
Traditional orchards	Not included	Not included

NB There are also a number of NERC Act habitats that don't occur in Hertfordshire, such as upland or coastal habitats. These are not listed here.

6 References

[i] Hertfordshire's Ecological Networks: a Report on the Current Situation and Priorities for Restoration
http://www.hertswildlifetrust.org.uk/sites/default/files/files/Mapping%20project%20report%20-%20Final.pdf

[ii] National Planning Policy Framework (NPPF) http://planningguidance.planningportal.gov.uk/blog/policy/

[iii] Natural Environment White Paper
http://www.publications.parliament.uk/pa/cm201213/cmselect/cmenvfru/492/492.pdf

[iv] How to Build a Living Landscape
http://www.hertswildlifetrust.org.uk/sites/default/files/hmwt_living_landscapes_web_v2.pdf

[v] Planning for Biodiversity and the Natural Environment in Hertfordshire – Guiding Principles
http://www.hertswildlifetrust.org.uk/sites/default/files/files/LNPs%20guiding%20principles%20for%20LPAs%20final%20paper%2020%2002%2014.pdf