SNH Information Note

Integrated Habitat Networks

New Tools for Development Planning

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Purpose of the Information Note

This document is intended to help planning authorities integrate the concept of habitat networks into development plan-making. There are links to useful information and some new tools to help planners at different stages of the development plan process.

Introduction - Habitat Networks and Integrated Habitat Networks

A habitat network specifically focuses on the connectivity of a single habitat (such as 'heathland' in general or the more specific 'Caledonian pinewood') or a single species, such as red squirrels.

An integrated habitat network (IHN) focuses on more than one habitat, e.g. in Central Scotland Green Network (CSGN) area Broadleaved Woodland, Wetland (fen marsh swamp elements), Neutral Grassland, Heathland and Acid Grassland have been mapped.

In terms of delivering on the Scottish Government’s aspirations for development planning Scottish Planning Policy (SPP paragraph 126) states:

"A strategic approach to natural heritage in which wildlife sites, landscape features and other areas of open space are linked together in an integrated habitat network can make an important contribution to the maintenance and enhancement of local biodiversity. Planning authorities should seek to prevent further fragmentation or isolation of habitats and identify opportunities to restore links which have been broken."

Planning for IHNs is one way that local authorities can further the conservation of biodiversity. However, IHNs can also deliver a wide range of benefits for people and they can play a key role, as part of a green infrastructure approach, in making places with distinct identities where people want to live, work and play.

Mapping Networks

Habitat networks across the whole of Scotland began to be mapped about a decade ago. Network-mapping involves a detailed desk study using digital data within a geographic information system (GIS) to identify Habitat Networks. Good maps (subdivided at regional
level) are now available for forest habitat networks and open ground habitat networks at [http://www.forestry.gov.uk/fr/INFD-69PF6U](http://www.forestry.gov.uk/fr/INFD-69PF6U).

Mapping the connectivity of a habitat network can provide a 'stock-take' of the natural assets in a particular locality or region, and identify (and prioritise) areas for action. These could be areas where the network could be expanded or managed better, or where connectivity could be increased. Habitat connectivity is important because it enables species to move from one suitable area of habitat to another and makes species and habitats more resilient to change. Put simply, networks of connected habitats provide more benefits for people and nature than similar areas of disconnected, habitats. There are a number of tools now available that can help us identify IHNs and plan for their management and use.

**Central Scotland Green Network (CSGN) and IHN Study**

CSGN is designated as a National Development under the National Planning Framework 2 and delivering an Integrated Habitat Network (IHN) is a Central Scotland Green Network ambition. The CSGN continues to be represented as a candidate National Development in the National Planning Framework 3 Main issues Report.

The CSGN IHN study was commissioned by the CSGN Support Unit on behalf of Scottish Natural Heritage, Forestry Commission Scotland and CSGN Partnership Board, and undertaken by Forest Research. Detailed analysis was undertaken by Forest Research using a landscape ecology model from the BEETLE (Biological and Environmental Evaluation Tools for Landscape Ecology) suite of tools. Maps of habitat networks were generated based on the dispersal distance and habitat requirements of generic focal species (see glossary) for each habitat type, considering dispersal distances over differing landcover types and habitat requirements.

The data covers not only the 19 CSGN local authority areas but also Loch Lomond and The Trossachs National Park, Scottish Borders, all of Fife and Arran (North Ayrshire). The data is now available to external users via downloadable GIS files on SNHi [Natural Spaces](http://www.naturalspaces.org.uk) and through a [web browser](http://www.snh.org.uk) on SNH website. The full dataset is held by SNH, Forest Research, Forestry Commission Scotland, and CSGN Support Unit.
The 2011 study mapped the following habitats:
- Broadleaved and Yew Woodland
- Wetland
- Neutral Grassland

Using the same 2011 baseline data and methodology SNH mapped two additional habitats
- Heathland
- Acid grassland

SNH will be investigating mapping IHN layers for the whole of Scotland using similar methodology to Forest Research's and we will make this new information accessible to Planning Authorities as it becomes available.

**IHN – Use in Development Plans and other Useful Documents**

We recognise that IHN information is only one part of the evidence-base that planners may draw on in planning for green networks that deliver benefits for people and nature. The following links explain more about how the maps are generated and how to interpret and use them.

- [An Essential Guide to Habitat Networks](#) and [Guidance on interpretation of Habitat Networks](#) give an introduction to habitat networks and are as such essential background.

- For CSGN data coverage areas [CSGN IHN Key messages](#) and the associated [Annex](#) explain how to interpret the maps and data and give more detail on what the maps can be used for, what the maps represent and how the maps can be interpreted. Although written for the CSGN area the ‘key messages’ are relevant to all Scotland. [CSGN IHN Key Messages](#)

- [IHN data use in masterplanning](#) – case studies follows a similar format to our Green Network Planning Case Studies and highlights examples where IHN has been used as part of the evidence base in the masterplanning process.
For more detailed guidance, ‘Habitat networks and spatial ecology for strategic and local development planners’ provides further information on putting networks into practice and gives information on how networks can help deliver many of the targets set by European and national governments.

SNH Land Use User Tool

The Land Use User Tool has been delayed in its development. When completed and in use, the tool is intended to help land-use planners and managers consider how habitat networks could be affected by development proposals and identify opportunities for enhancing networks or integrating them into new development. It will demonstrate how changing the layout or design of developments may affect functional habitat networks in the area. For example, a user will be able to view and draw shapes on the on-screen map (e.g., new woodland planting or new housing development) and the tool will analyse the impact on existing networks.

This easy to use online tool won’t require any specialist GIS knowledge or software. It can be used in master-planning at a local level or for wider strategic land-use planning such as local development plans and associated SEAs. It is aimed at planners in the public and private sector and land managers but can be used by anyone interested in land-use planning and land management. The tool will complement recent Scottish Government guidance on Green Infrastructure Design and Placemaking

The first phase of release will cover the CSGN Area and is expected to be online late 2013.

Please follow the link below for all detailed guidance available on the SNH website:
**Glossary**

**Integrated Habitat Network** - the term used for studies that combine networks of more than one habitat. This could include, for example, networks of woodlands, grasslands, wetlands and so on.

**Green Infrastructure** - Includes the 'green' and 'blue' (water environment) features of the natural and built environments that can provide benefits without being connected. Green features include parks, woodlands, trees, play spaces, allotments, community growing spaces, playing fields, swales, hedges, verges and gardens. Blue features include rivers, lochs, wetlands, canals, other water courses, ponds, coastal and marine areas including beaches, porous paving and sustainable urban drainage systems.

**Green Network** - Connected areas of green infrastructure and open space that together form an integrated and multi-functional network.

**Generic focal species** - A generic focal species is an invented or 'conceptual' organism that is used to represent the particular attributes of a group of species. For example, a generic focal species could be referred to as a 'limited dispersal ancient woodland specialist'. Obviously, there's no real plant or animal with that name, but its characteristics serve to represent all species that require ancient woodlands to survive and have limited dispersal abilities.