

Kirklees Biodiversity Opportunity Zones: Background

Protecting and enhancing biodiversity in Kirklees through Opportunities Mapping, the distribution of Habitats of Principal Importance and their relevance to multi-functional land use.

1 Introduction

1.1 The Council has established priorities and opportunities for biodiversity in specific geographical areas of Kirklees as shown on the Kirklees Biodiversity Opportunity Zones Map (available at www.kirklees.gov.uk/biodiversity). These distinct biodiversity zones have been identified through the overall habitat types which characterise these areas to ensure that any conservation efforts are effectively targeted..

2 Establishing Biodiversity Priorities

Species and habitat priorities:

2.1 For each of the biodiversity opportunity zones, a species/habitat table has been produced. This identifies the species associated with those habitats within any particular zone. These species and habitats should be the focus of all conservation work within each zone unless there is sufficient justification to do otherwise.

Ecological connectivity priorities:

2.2 The relevance of ecological connectivity within and between these zones - and beyond the district - is critical to species survival, especially in adapting to climate change. Three distinct connectivity gradients have been identified:

- North-south or latitudinal gradient;
- East-west or altitudinal gradient;
- Gradient of high to low biodiversity value areas.

The relevance of these gradients within the each zone differs and this is used to determine the nature of the ecological networks found there.

Efficiency of resource use:

2.3 In line with the increasing need to consider multi-functional land use, the potential for integrating biodiversity along with other land uses is also highlighted for the different zones.

3 Biodiversity Opportunities Zones

3.1 The characteristic zones identified on the Biodiversity Opportunities Map are:

- The Uplands
- The Mid-Altitudinal Grasslands
- Valley Slopes
- Floodplain and Riverine Corridors
- Pennine Foothills
- Urban Areas

The characteristics used to define these areas are described below.

The Uplands

- 3.2 This area takes in the European designated and protected sites of the South Pennines and Dark Peak. They are dominated by Upland Heath and Blanket Bog, both UK Habitats of Principal Importance. The sites have been designated for their breeding bird communities and are sensitive to the many pressures exerted upon them. Much of the area is classified as being in unfavourable condition although planned management should change this status to favourable and recovering in the coming years.

Land use relevant to: carbon storage, water resource/flood risk management, stock rearing and recreation/tourism.

Connectivity Issues

- The designation of the uplands along much of the Pennine chain illustrates their importance to nature conservation and the need for a coherent approach to their protection as a unit along a linear north-south axis.
- There is an important interface with the grassland habitats adjacent to the uplands with upland breeding bird communities being dependent upon these areas at some stage during their breeding cycle (see grasslands below).
- Wetlands in the floodplain are of some relevance to the migration of birds breeding in the uplands and wintering elsewhere. There are, however, currently no wetlands of significance in Kirklees, most occurring further east (see floodplain below).

Overarching objectives/opportunities

1. Protect and bring designated areas into favourable condition.
2. Maintain ecological connectivity with other upland areas along the Pennines.
3. Enhance migration routes for upland breeding birds.
4. Bring the adjacent and complementary grasslands into favourable condition.

The Mid-Altitudinal Grasslands

- 3.3 These areas occur primarily in the Valley wards with some representation in the western portion of the Denby Dale ward. The grasslands occur at elevations from around 200 metres upwards. They are characterised by relatively flat land. In the past this would have been managed as pasture and hay meadow (Habitats of Principal Importance) but much now, is agriculturally improved for intensive grazing and silage production. The primary importance of the area is for the remaining semi-natural grasslands and their breeding bird communities. Also, the grasslands within 3km of the upland protected sites are important for the integrity of those sites and the species found there (eg. feeding areas for Golden Plover and Twite which breed in the Uplands).

Land use relevant to: water resource/flood risk management, stock rearing, recreation/tourism, wind-sourced renewables, development of the urban fringe.

Connectivity Issues

- Ecological connectivity in a linear sense is less important in this area as bird species are highly mobile. Notably, the more ecologically valuable grasslands also tend to coincide with the areas of greatest ornithological interest forming core areas of biodiversity value. The focus of connectivity should, therefore, be to build on these existing 'core areas', to ensure greater resilience of species' populations (eg. against predation).

- There is a linear, north-south ecological connectivity along the Pennine fringe.
- There is some relevance in terms of the interface with other zones. Of primary importance are the upland protected sites (see upland section above relating to breeding birds) and that with the woodlands of the valley slopes are also significant – see valley slopes below.

Overarching objectives/opportunities

1. Protect and enhance those areas which are an important component of the habitats upon which upland breeding bird communities are dependent.
2. Restore grasslands and populations of grassland breeding bird communities focusing around the core areas of greatest interest and diversity.
3. Protect and enhance habitats along the interface with adjacent areas (see Valley Slopes below).
4. Ensure that new development does not impinge upon areas of ecological value in these areas.

Valley Slopes

3.4 These slopes – because of their steepness - tend not to have been improved for agriculture or developed. Hence, woodland (including some ancient woodland sites) is a dominant habitat. Even within the urban areas this is the case (hence, the identity of the valley slopes through the urban areas has been retained on the Opportunities Map). Woodland type is that found on acidic soils and varies from Upland Oak Woodland at higher elevations to Lowland Mixed Deciduous Woodland, both UK Habitats of Principal Importance. Whilst the primary habitat can be considered as woodland, it needs to be recognised that this is interspersed with Scrub (local Habitat of Principal Importance), Lowland Acid Grassland and Lowland Heath (both UK Habitats of Principal Importance). As such, a more accurate description of the overarching habitat type is a 'Forest Habitat Network'. This mosaic is very distinctive of the district (giving a sense of place) and serves to support a range of Species of Principal Importance.

Land use relevant to: timber and wood fuel production, sense of place and recreation.

Connectivity Issues

- Linear ecological connectivity is significant for this woodland based mosaic of habitats. This is especially so in the face of climate change where there is likely to be a shift in species distribution from low altitude (east of the district) habitats to higher altitude (west of the district). A number of species associated with such habitats exhibit poor powers of dispersal across habitats unsuited to their needs.
- The interface between this area and the Floodplain and Mid-altitudinal Grasslands is important for a range of species which utilise different habitats (ie. bats, birds and invertebrates for which the woodland edge is a critical habitat – whether the interface is grassland or wetland).

Overarching objectives/opportunities

1. Maintain and enhance the integrity of the ecological network of woodland associated habitats by maintaining a balanced mosaic to retain species diversity and aid species migration.
2. Maintain and enhance the habitats along the interface of this area with the floodplain, grassland and other zones.

Floodplain and Riverine Corridors

- 3.5 There has been significant development in the floodplain within the district, reducing the areas of wildlife habitat, severing its ecological connectivity and impacting upon the natural flow of rivers and streams. This severing also applies to the in-stream habitats where weirs are likely to impact on the sustainability of fish populations by preventing migration. There appears to be little of existing significant biodiversity interest, especially wetland based systems, although it may be the area's value is understated through lack of knowledge. Even so, there is potential and if the ecological integrity of these corridors is to be restored then it will be important to maximise opportunities to create new wetland habitats (hence, the identity of the floodplain through the urban areas has been retained on the map). In particular, there is a number of Species of Principal Importance associated with wetlands and rivers which should benefit from such habitat networks (eg. otter and salmon).

Land use relevant to: flood risk management, water resource management new development/built environment, informal recreation and formal recreation (ie. sport).

Connectivity Issues

- Barriers (essentially weirs) within the rivers are a significant obstacle to the migration of fish, which are returning with the much improved water quality.
- The lack of linear connectivity in suitable wetland and terrestrial habitats is a critical issue for some species such as otter, great-crested newt and other species.
- Similarly, whilst birds are more mobile, the lack of larger wetland bodies along the floodplain limits opportunities for the purposes of breeding, wintering and migration stop offs.
- In contrast, the lack of connectivity can be critical to the survival of some species such as the water vole and white-clawed crayfish where isolation can aid survival of populations.

See also comments in Valley Slopes zone with regard to interface of wetland and woodland habitats and use of these areas by a range of species.

Overarching objectives/opportunities

1. Protect and enhance existing wetland features and the associated habitats.
2. Maximise the opportunities to create new larger wetland habitat mosaics through the planning system (eg. mineral extraction) and other mechanisms.
3. Utilise SuDS and new Public Open Space to create an enhanced ecological network based upon wetland habitats.
4. Use development opportunities to remove barriers to fish passage.
5. Ensure habitat enhancements are targeted to specific species and their differing requirements and ensure they are not detrimental to other species.
6. Maintain and enhance the habitats along the interface of this area with other zones especially the valley slopes.

Pennine Foothills

- 3.6 The Pennine Foothills encompass the wards of Denby Dale, Kirkburton and those of North Kirklees. The zone is characterised by gently rolling countryside with a mix of woodland (some ancient woodland sites), hedgerows and agricultural land – primarily pasture (mostly agriculturally improved) but with some arable cropping. Both Lowland Deciduous Woodland and Hedgerows are UK Habitats of Principal Importance and the latter especially are widely distributed across the non urban areas. Arable Field Margins, another UK Habitat of Principal Importance, is also present.

Land use relevant to: new development/built environment, flood risk management, wood fuel, agriculture, wind-sourced renewables and informal recreation.

Connectivity Issues

- Issues revolve around the connectivity of the lattice network of semi- natural corridors within the farmed landscape. This is especially relevant to woodland edge species and linking woodlands and hedgerows.
- The agricultural land bordering these habitats (field margins) is an especially important component of the hedgerow and woodland habitat mosaic for a range of priority species (ie replicates the woodland edge interface in both cases). However, much of this land is agriculturally improved and hence, of poor quality and, many hedgerows managed inappropriately for biodiversity benefit.

Objectives/opportunities

1. Protect, restore and enhance network of hedgerows.
2. Protect, restore and expand areas of woodland, especially adjacent to ancient woodland sites.
3. Enhance the ecological network of habitats, considering opportunities offered by gardens and Public Open Space in new developments.

Urban Areas

- 3.7 These cover a significant part of the district, especially in North Kirklees and along the main river valleys. Development has obviously greatly impacted upon natural habitats although some significant areas do still exist on the valley slopes. The characteristic habitat type will be dependent upon where the urban area falls within the above zones, which should influence priorities for habitat creation. Whilst it may be more difficult to do this in a meaningful way in built up areas, the existence of a semi-natural urban habitat network (ribbon type network identified on the Opportunities Map) is a fundamental component of urban living which serves to improve quality of life of residents. This is the basis of the Green Network principle.

Land use relevant to: Quality of life issues including amelioration of pollution, regeneration, flood risk management, transportation.

Connectivity Issues

- Ecological connectivity is much fragmented within urban areas.
- There is a need to reinforce existing semi-natural linear corridors, by making new links between isolated semi-natural sites, utilising greenways, green corridors, transport corridors, gardens, parks and other formal landscaped areas.
- There is a need to utilise all above areas to ameliorate the impacts of the urban environment on biodiversity.

Objectives/opportunities

1. Restore the ecological networks and their functionality by creating an urban habitat (ribbon type) network utilising the principles as set out in PPS 9 and the Council's Green Network policies.
2. Exploit opportunities for enhancement through the planning system, including those involving SuDS and floodplain habitats.
3. Exploit other opportunities for enhancement, especially community based mechanisms.
4. Establish the role of formal areas such as gardens and parks and enhance their role in improving the functionality of the ecological network.