Identifying a Cairngorms National Park Nature Network

Supporting document – June 2025

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Introduction

Purpose of a nature network

Scotland is one of the most nature-depleted countries in the world. One of the key drivers for biodiversity loss is land-use change where, over time, habitats have been lost and increasingly fragmented. This fragmentation means that the remaining habitats are often isolated and poorly connected and as a result they are less resilient, often in impoverished condition, and struggle to support healthy populations of the species that normally rely on them. If we are to reverse declines in biodiversity, it is vital to address this by developing robust Nature Networks.

A Nature Network connects nature-rich sites, restoration areas, and other environmental projects through a series of areas of suitable habitat, habitat corridors and stepping-stones. As well as supporting regional and national approaches to protect and restore nature, they provide local benefits to wildlife and people.

Connectivity is an essential part of nature. It is necessary for functioning and healthy ecosystems, key for the survival of animal and plant species, and is crucial to ensuring genetic diversity and adaptation to pressures such as climate change.

To ensure Scotland's nature can thrive, nature-rich areas must be connected through a series of networks linking them all together.

Figure 1 shows a simplified landscape with discrete core areas, important for biodiversity, that are isolated from one another. It shows various ways in which the health of these core areas, and so their positive contribution to biodiversity, can be increased. This can be achieved through two main means; improvement of the broader landscape within which they sit so it is more hospitable towards biodiversity and also, through strategic connections between these core areas for biodiversity. These come in

two main forms, stepping stones of habitat that are important for biodiversity and allow the movement between sites or, corridors between the core areas that directly connect them. Corridors can take the form of linear corridors of similar habitat to those areas they wish to connect or, landscape corridors that are broader areas with a mosaic of different biodiverse habitats.

These strategic corridors or stepping stones form the backbone of Nature Networks. The mantra, 'More, Bigger, Better and Joined Up' (Lawton et al., 2010), is useful to bear in mind when considering developing a Nature Network.

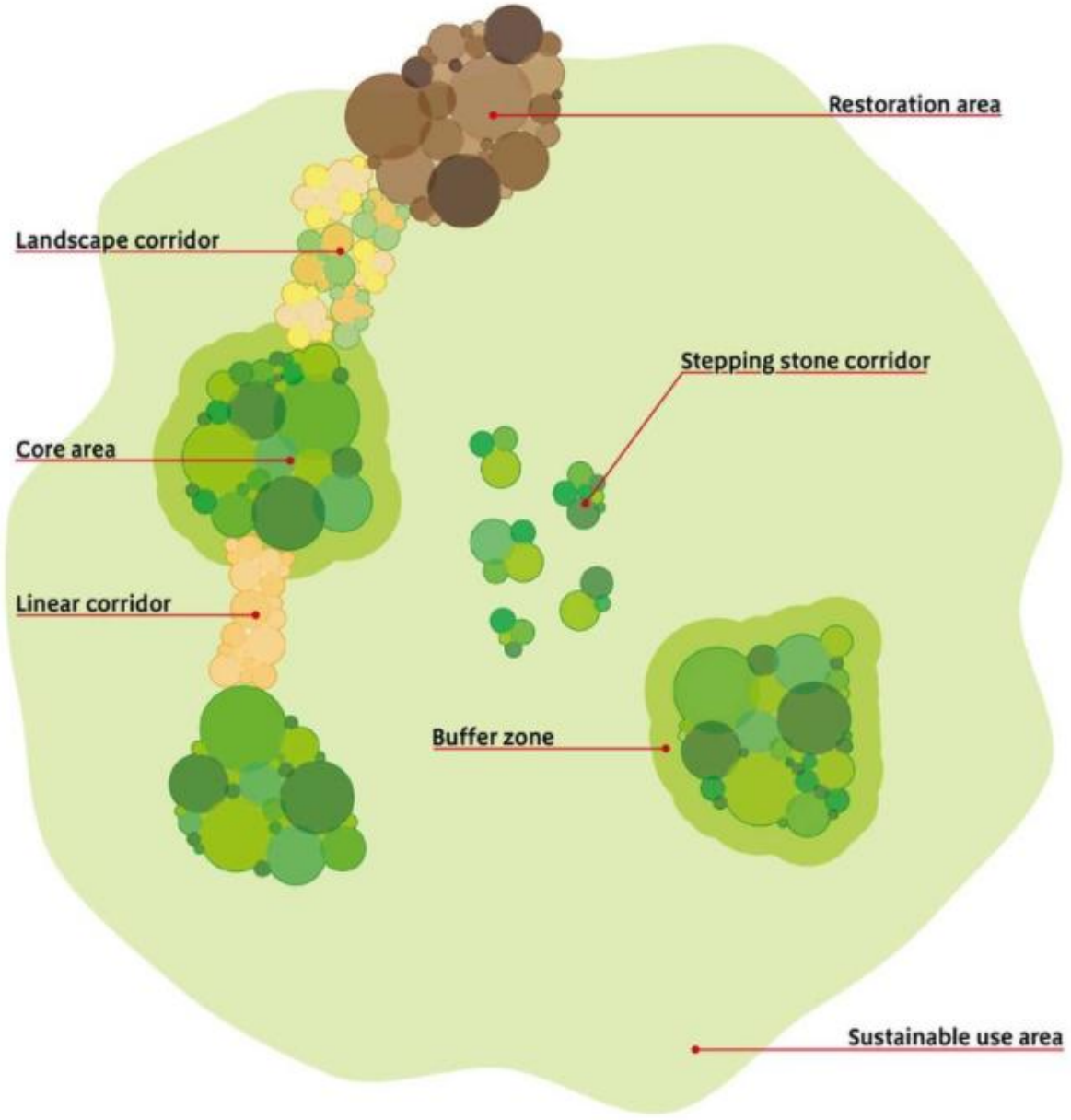

Figure 1 The typical component of a terrestrial ecological network (Source: Lawton et al., 2010).

Statutory and policy context

Nature Networks are a key delivery mechanism of the Scottish Biodiversity Strategy. They also contribute to Scotland's Environmental Strategy and align with international targets in the Global Biodiversity Framework, and efforts such as the European Union's Trans-European Nature Network.

Nature Networks are embedded throughout the fourth National Planning Framework 4 as a key means of ensuring positive effects for biodiversity from development. It states that the spatial strategies of local development plans should better connect nature rich areas by establishing and growing nature networks to help protect and restore the biodiversity, ecosystems and natural processes. The Park Authority is currently preparing its next local development plan, which will need to meet these requirements.

At a local level, alongside the next local development plan, Nature Networks are embedded in local policy and plans including the Cairngorms National Park Partnership Plan and future Cairngorms Nature Action Plan.

The National Park Partnership Plan 2022 – 2027 is the overarching management plan for the Cairngorms National Park. It sets out the vision and over-arching strategy for managing the National Park, as well as identifying outcomes, priorities for action and an overall strategic policy framework. The Partnership Plan's long-term vision, is:

'An outstanding National Park, enjoyed and valued by everyone, where nature and people thrive together.'

This vision is to be delivered through the Partnership Plan's three overarching outcomes to be achieved by 2045, with the outcome for nature aiming to deliver:

'A carbon negative and biodiversity rich National Park with better functioning, better connected and more resilient ecosystems.'

The outcome is supported by a series of long-term objectives and key targets or indicators of progress, including objective A10 Ecological networks:

'Connect habitats and ecosystems across all different types of land use within the National Park to create an ecological network, which will bring wider landscape, biodiversity and people benefits'.

The approach to delivering a Cairngorms Nature Network is consistent with the Partnership Plan's vision, outcomes and objectives. The Cairngorms Nature Network reflects the need for a more mobile, adaptive framework for describing areas for their potential, enabling action to reach a future state rather than necessarily protect a current one. This approach unlocks much potential for restoration in the National Park and reduces the risk that a Nature Network based on designated areas does not match with the National Park Partnership Plan's target for 50% of the National Park managed principally for nature restoration by 2045.

Purpose of this document

The purpose of this document is to explain what data is required to identify a Cairngorms National Park nature network for it to be spatially defined for the purposes of the next Cairngorms National Park local development plan. It supports the local development plan's evidence report, which is the first major stage in the local development plan preparation process. The evidence report will inform the preparation of the proposed plan and the Cairngorms National Park Authority aims to adopt the next local development plan in 2027[1].

The development of the Cairngorms National Park nature network is not part of the local development plan preparation process. It will however be developed concurrently with it and inform its policy and spatial strategy. See 27 for the timescales for preparing the Cairngorms National Park nature network.

The multiple benefits of Nature Networks

While the primary purpose of a Nature Network is ecological connectivity, they also provide a plethora of additional services and benefits to people and nature.

Well-designed nature networks, based on well-functioning ecosystems, store and capture carbon, provide flood mitigation, help pollinators, improve soil health, clean air and water, mitigate high temperatures, all supporting our commitments to mitigate and adapt to climate change. They also provide co-benefits to communities and public health and wellbeing including provision of high quality green and blue spaces for health and recreation, active travel networks and sustainable local food production and deliver multiple additional benefits to society.

[1] Further information on the timescales involved can be found in the Development Plan Scheme 2024: https://cairngorms.co.uk/wp-content/uploads/2024/11/241122DevelopmentPlanScheme2024.pdf

The Nature Networks Framework outlines that by 2030, Nature Networks are seen as a public good, providing ecosystem services such as clean air and water, as well as health and wellbeing benefits, and highlight the importance of Scotland's nature to people and the economy. They act as a vital tool to mainstream biodiversity not only in policy but throughout society and people's connection with nature. Nature Networks deliver the benefits of biodiversity for people to people's doorsteps.

Not only do people benefit from having access to Nature Networks, but they also benefit from participating in the design, delivery and care of local biodiversity and Nature Network plans. The Cairngorms Nature Action Plan provides an excellent opportunity to engage with and be co-created with the communities of the National Park.

Having a voice in the community and feeling a sense of empowerment gives citizens a stronger commitment to their local area, a sense of community, and boost mental health and wellbeing. When done well, community engagement can bring a wide range of additional benefits, including social learning and producing behavioural change. It can build trust in, and improve the reputation of, the conservation sector and deliver improvements to landscapes, habitats and ecosystem services.

A Cairngorms National Park Nature Network

Each planning authority in Scotland (i.e. the 32 local authorities and two national park authorities) is designing their own Nature Network, which is tailored to their own set of circumstances. The template typically employed across most planning authority areas is for the Nature Network to be built around cores of 30x30 sites (i.e. designated sites and Other Effective Area-based Conservation Measures [OECMs]). However, a different approach is justified in the Cairngorms National Park due to over 60% of the National Park being covered by designated sites, including a very large Special Protection Area with a single qualifying species. Figure 2 shows the combined extent of designated sites (Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas, Ramsar sites and National Nature Reserves) in the Cairngorms National Park.

Many sites are large and overlap with, or lie in close proximity to, one another. The occurrence of four riverine Special Areas of Conservation further enhances spatial connectivity between sites spread across the National Park. Additionally, the bulk of the remainder of the National Park, although undesignated, is nevertheless covered with semi-natural habitats, some of which have a high nature value and / or are managed principally for ecosystem restoration.

Given the unique extent and contiguous nature of designations with potentially contrasting and contradicting features, a single Nature Network in the National Park with designations at its core could mask the challenges in identifying and connecting land of high ecological functionality, and where the most opportunity lies. Equally, under current legislation, areas covered by designations often do not directly support delivery of National Park Partnership Plan objectives relating to ecosystem restoration or the areas of the National Park described in the National Park Partnership Plan as being managed principally for ecosystem restoration. The rationale for a different approach is expressed more fully in the Park Authority's responses to formal consultations[2].

As such, the Cairngorms National Park Nature Network takes an ecosystem-by-ecosystem approach, rather than a single map connecting designations (Figure 2) and Other Effective Area-based Conservation Measures. When applied to specific sites, the ecosystem networks can be overlayed to identify complementarity, maximising the opportunities to deliver multiple biodiversity benefits and supporting the prioritisation and targeting of investment and resource.

Consequently, the Nature Network's output is several different maps, each focused on a specific ecosystem type, which combine to present an overall picture.

[2] See following documents for further information:

- https://cairngorms.co.uk/consultation/meeting-our-30-by-30-biodiversity-commitment-on-terrestrial-and-freshwater-sites-consultation-on-legislative-proposals/
- https://cairngorms.co.uk/consultation/strategic-framework-for-biodiversity-consultation/

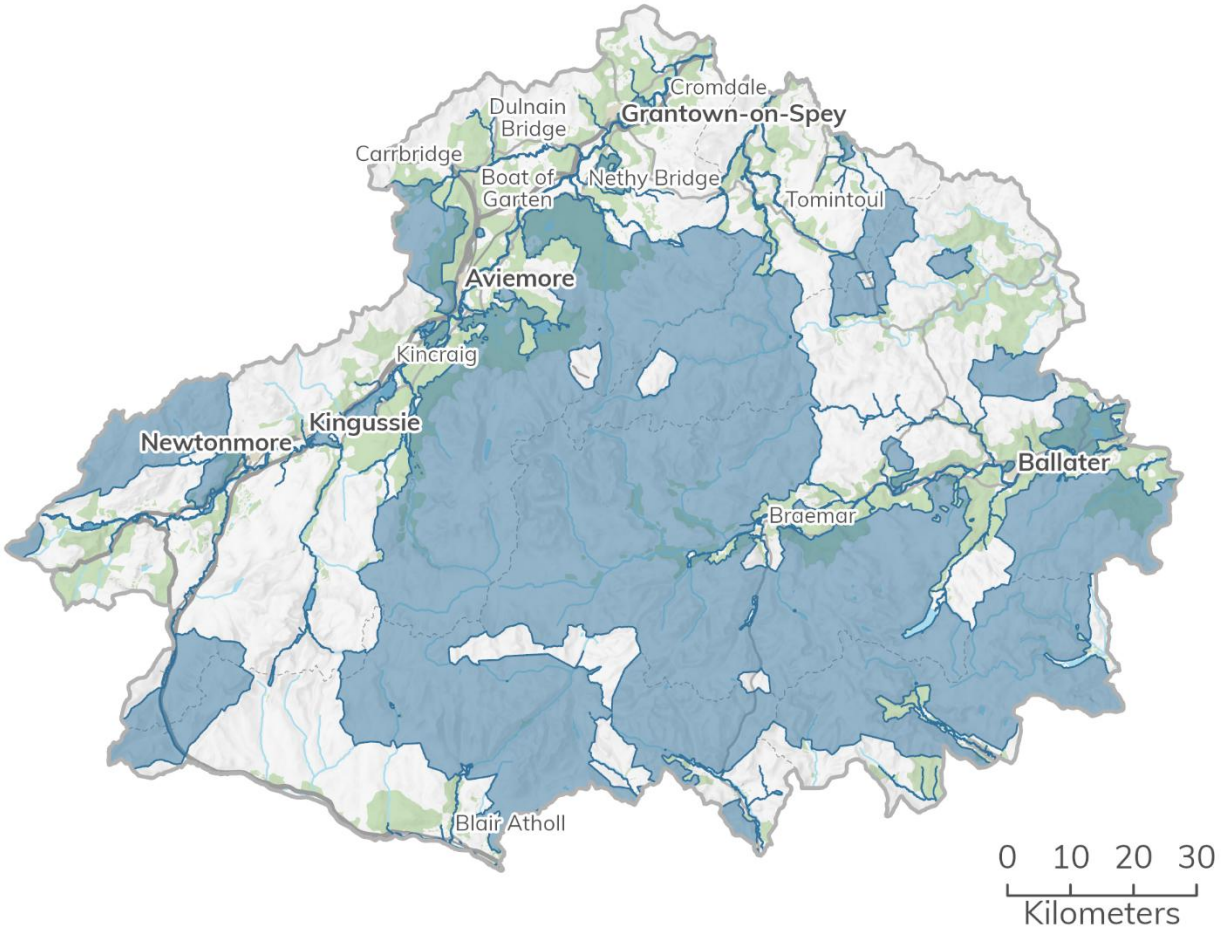

Figure 2 Designated sites (Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas, Ramsar sites and National Nature Reserves) within the Cairngorms National Park. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Contains data © Scottish Forestry and NatureScot 2025.

The Cairngorms National Park Nature Network integrates with the Cairngorms Nature Index, which has been developed as a method of baselining ecosystem health in the National Park and subsequently measuring trends in its condition over time. The Cairngorms Nature Index directly supports activity in the Cairngorms Nature Action Plan, the National Park Partnership Plan and the Scottish Biodiversity Strategy to target resource and support delivery of objectives. The Index is categorised into six broad ecosystem types:

- Woodlands
- Freshwater
- Mires and wetlands
- Managed lowland grasslands

- Managed uplands
- Montane.

Due to the variability of available data for the board ecosystem types, some of the Nature Networks are more well developed than others. For example, the woodland network is shaped by multiple comprehensive data sets and underpinned by the Cairngorms National Park Forest Strategy. Whereas the lowland grassland network is currently based on spatially restricted data. Similarly, the wetlands and mires network will be further updated once the Dee Resilience Strategy is completed and plans developed for other catchments. Data on juniper and mixed scrub could further enhance the managed uplands network.

Woodlands

The woodland network will seek to better connect a core of nature-rich woodlands across the Cairngorms National Park by both creating new woodlands and enhancing existing.

The basis of the woodland network will be formed by an identified hierarchy of current woodland cover that uses nativeness and woodland age as indicators of ecological intactness (Figure 3). In descending order, the hierarchy is:

- **Category 1 (green):** Woodlands that are primarily native and occur on either Ancient Woodland Inventory (AWI) or Caledonian Pinewood Inventory (CPI) sites.
- **Category 2 (amber):** Woodlands that are primarily native but don't coincide with sites on the Ancient Woodland Inventory or Caledonian Pinewood Inventory.
- **Category 3 (red):** Woodlands that are primarily non-native.

Woodland network objective 1: Strengthening connectivity through expansion

The Cairngorms National Park Partnership Plan 2022 – 2027 has a stated aim of expanding woodland across the National Park by 35,000 ha by 2045. At least 80% of this expansion should be native woodland, and at least 10,000 ha of the expansion should be delivered via natural regeneration. In order to help direct where this woodland expansion could be most usefully take place, the Cairngorms National Park Forest Strategy (2018) presents a 'target area' map of preferred and potential areas for woodland creation. The Forest Strategy's Target Area map (Figure 4) identifies areas

for the expansion of both high forest and montane woodland, and takes into consideration known, mapped constraints such as designated sites, peatland, arable farmland, improved grassland, priority wader sites, etc.

Targeting expansion in a woodland nature network will have multiple positive biodiversity and ecosystem benefits. For example, corridors along watercourses will deliver across a range of environmental and socio-economic policy outcomes associated with integrated catchment management.

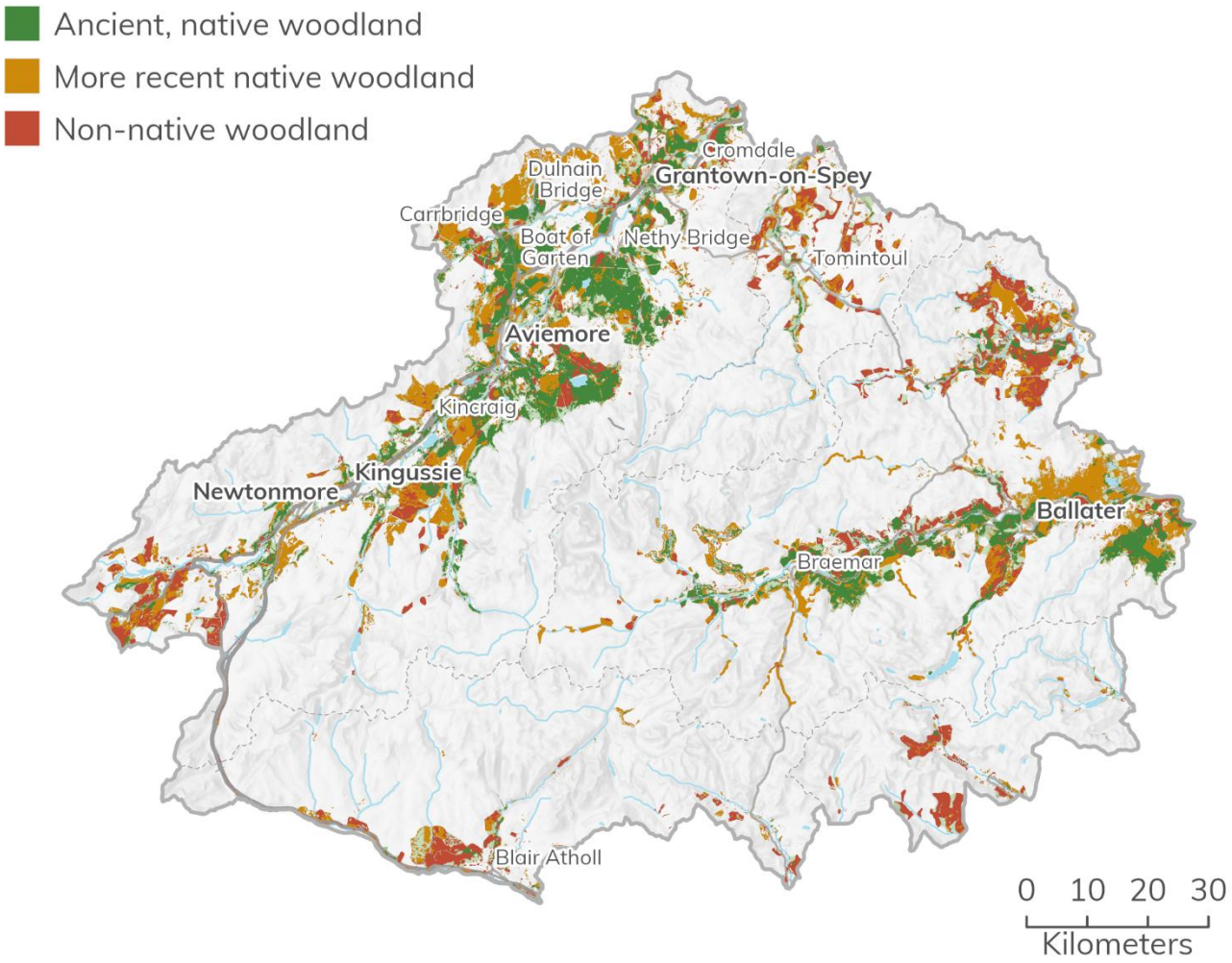

Figure 3 The woodland hierarchy in the Cairngorms National Park. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Contains data © Scottish Forestry and NatureScot 2025.

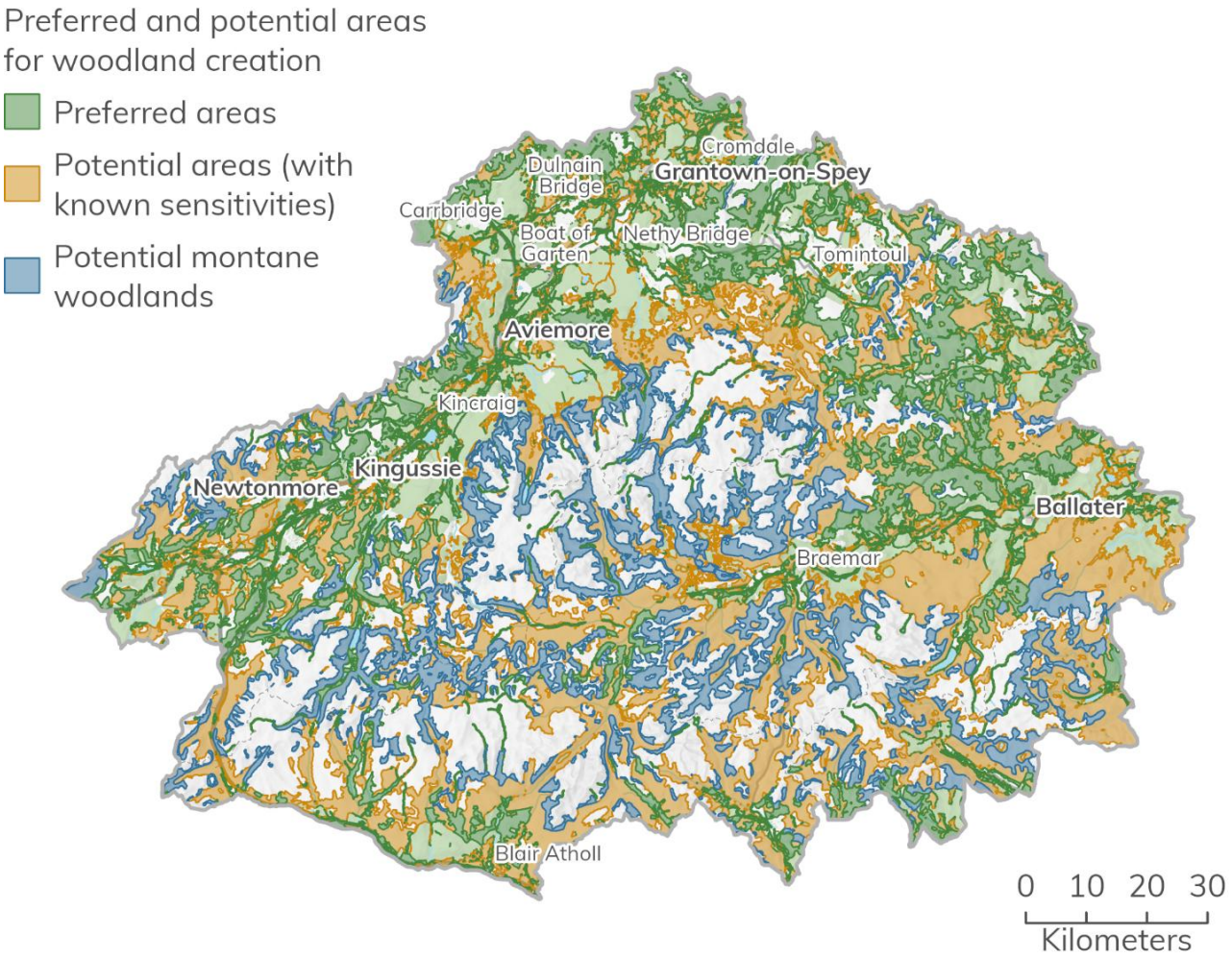

Figure 4 Cairngorms National Park Forest Strategy (2018) Target Area map. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

One of the priorities of a woodland Nature Network in the Cairngorms, as stated in the Partnership Plan and Cairngorms National Park Forest Strategy, is to strengthen woodland connectivity between river catchments. The Nature Network will identify potential links across watersheds, within which stepping stones could sit, that would run below the 600-metre contour, on the basis that woodland creation at lower altitudes would be easier, both in terms of tree establishment and securing Forest Grant Scheme (FGS) funding. However, in some circumstances identified corridors unavoidably run across higher elevations, which provides opportunities for the expansion of montane woodland, another objective of the Partnership Plan.

Corridors will be assessed and scored against five key criteria:

- Woodland patch size.
- Woodland patch quality (i.e. the relative proportion of the patches falling into the three categories of the nature-richness hierarchy).
- The occurrence of a riverine Special Area of Conservation (SAC) that would be buffered by the corridor's implementation.
- Marine Scotland riparian woodland prioritisation scoring.
- Whether the corridor would be south-north aligned to best allow species to migrate northwards in response to climate change.

The network also seeks to better connect woodland habitat within catchments. Although the catchments of the Cairngorms National Park tend, on the whole, to support woodlands that are contiguous or in close proximity to one another, there are nevertheless some significant opportunities to strengthen connectivity within catchments. Intra-catchment corridors will be identified based on an assessment of the occurrence of large gaps (>500 m) between woodland, the likely barrier effect of the anticipated dualling of the A9, and the potential for conversion of non-native plantations to native woodland.

The National Park is nationally significant for the occurrence of aspen woodlands. Inter and intra catchment connectivity assessments will also bear in mind the development of an aspen network. Naturally occurring and planted aspens across the National Park are currently being mapped Interim results indicate a widespread but fragmented aspen resources with limited age structure. Final survey results will inform how the design and implementation of the woodland element of the Nature Network can be optimised for the conservation of aspen and its associated, specialist biodiversity.

Woodland network objective 2: Enhancing ecological quality of existing woodlands

The woodland Nature Network will consider how to make woodlands more nature-rich (i.e. the 'better' in the networks principles). Pathways include:

Turning reds to greens [Plantations on Ancient Woodland Sites (PAWS) restoration].
Turning reds to ambers (encourage use of natives in restock of exotics).
Where amber or green is not achievable, converting 'deep reds' to 'light reds', i.e. moving from North American conifers to non-native, but nevertheless European species.

Plantations on Ancient Woodland Sites are defined by NatureScot as being Ancient Woodland Inventory category 1a and 2a semi-natural Ancient Woodlands (as shown on 18th and 19th century maps) that have since been converted to non-native conifer plantations. The Park Partnership Plan specifies that existing woodlands should be managed for a range of benefits including biodiversity and habitat enhancement, while the Cairngorms National Park Forest Strategy has a specific objective to promote the restoration of Plantations on Ancient Woodland Sites, i.e. their conversion or restocking to native woodland. Consequently, Plantations on Ancient Woodland Site restoration equates to Category 3 areas becoming Category 1 areas in the Network (i.e. turning red areas green). Figure 5 shows Plantations on Ancient Woodland Sites in the National Park.

Aside from Plantations on Ancient Woodland Sites, other Category 3 (red) areas could become Category 2 (amber) by converting to native species, including commercial Scots pine, especially in those parts of the National Park where the proportion of native woodland is relatively low, such as in western Badenoch, Strathavon and Strathdon. In addition to restocking or converting some existing non-native plantations, the proportion of native woodland in such areas could be increased by creating new native woods alongside the plantations.

If amber or green is not a possible or desirable end state, then it may be possible to move from North American conifers, such as Sitka spruce and lodgepole pine, to other non-native, but nevertheless European species, such as European larch and Norway spruce, that are known elsewhere in Europe to support many species that occur in the Cairngorms.

Spatial datasets used in the formulation of the woodland network:

- Native Woodland Survey of Scotland
- Ancient Woodland Inventory
- Caledonian Pinewood Inventory
- Forestry Grant Scheme Woodland Creation Options 2024
- Forestry Grant Scheme New Natural Regeneration Options 2024
- Cairngorms Trees Outside Woodland 2020
- Dee District Salmon Fishery Board Riparian Woodland Planting 2023
- Rural Development Programme (RDC) Woodland Creation Options 2007 – 2013
- Woodland Grant Scheme 3 New Planting 1994 – 2003
- Woodland Grant Scheme 3 New Natural Regeneration 1994 – 2003

- National Forest Inventory 2022
- Scotland River Temperature Monitoring Network (SRTMN) Riparian Woodland Prioritisation Scores
- Special Areas of Conservation
- Native Woodland Model

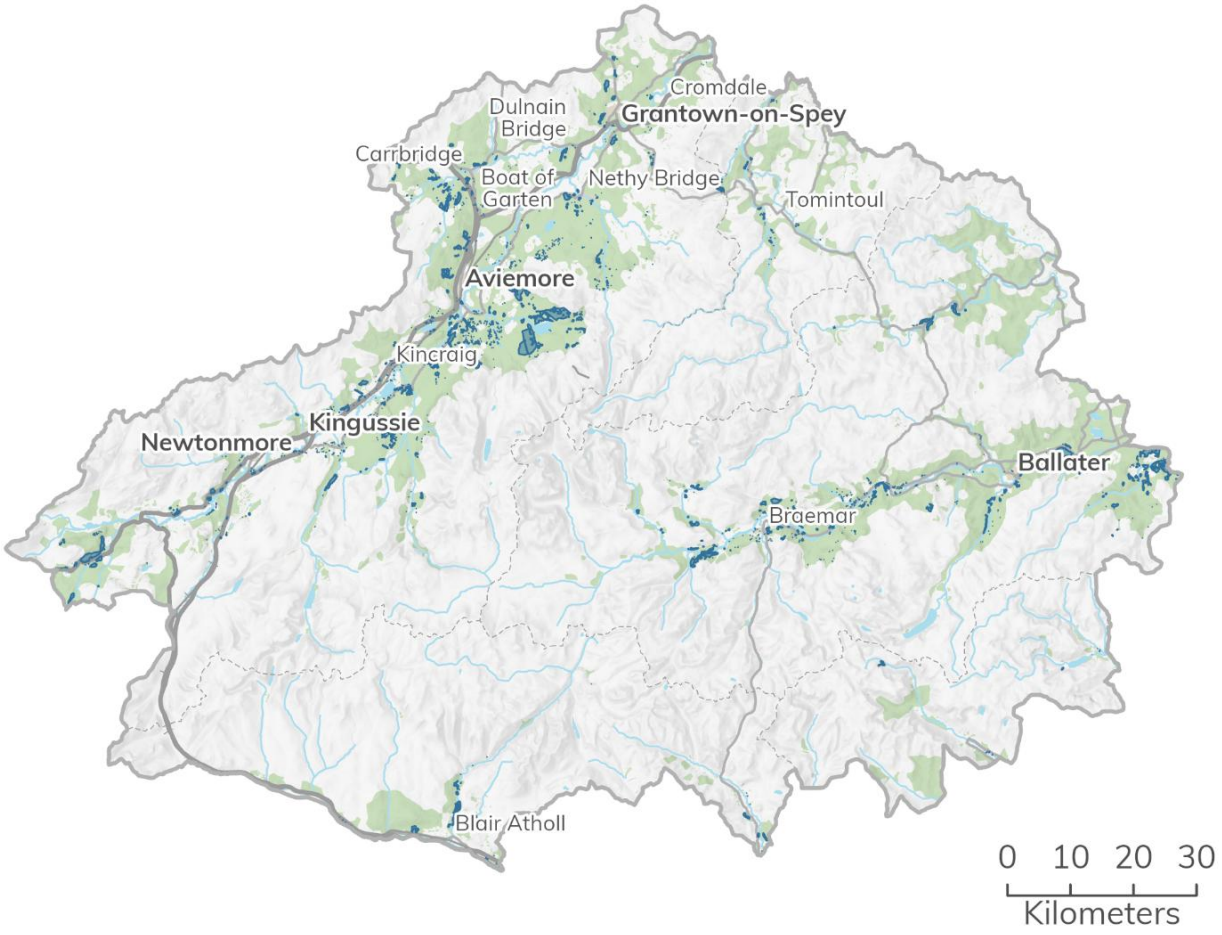

Figure 5 Plantations on Ancient Woodland Sites. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Contains data © Scottish Forestry 2025.

Freshwater (including wetlands and mires)

The freshwater Nature Network will assess both flowing watercourses and more static water bodies such as ponds and lochs. Wetlands and mires network is included in this section of the report as these networks are intrinsically linked and will enhance each other.

The freshwater Nature Network seeks to secure improved ecological quality of watercourses and large water bodies and strengthen connectivity across the network through identifying priority locations for enhancing and creating small waterbodies and ponds. Repair and expansion of wetlands and mires will further enhance the freshwater network at a catchment scale (i.e. 'better', 'more' and 'joined up').

Freshwater network objective 1: Improving ecological quality of watercourses

For watercourses, the Nature Network will focus on enhancing ecological quality, recognising that there are still opportunities for expansion and strengthening connectivity through activities such as re-meandering and re-connection with floodplains which would increase watercourse length and width and could create new mires and wetlands.

Watercourse quality is based on the River Classification Index derived from Water Framework Directive data compiled and updated annually by Scottish Environment Protection Agency. It combines values for 20 biochemical, biological and fluvio-geomorphological characteristics to give an overall status of High, Good, Moderate, Poor or Bad for all sections of major watercourse and tributary in the National Park. The 2023 index is presented in Figure 6 and shows that all five categories of watercourse are encountered within the National Park. The aim is for all watercourses in the National Park to attain Good or High status where possible.

Freshwater network objective 2: Improving ecological quality of large waterbodies

For static water bodies, the objectives of the Nature Network vary according to the scale of the water body. As with watercourses, Scottish Environment Protection Agency produces a classification index for lochs over 0.5 km^2 in extent, giving them a status of High, Good Moderate, Poor or Bad based on a range of ecological and chemical metrics. There are 11 lochs in the National Park with a surface area greater than 0.5 km^2: two of

these have High status; five are Good; two are Moderate; and two are Poor (Figure 6). All but one of the 11 lochs (Loch Kinord) are directly connected to watercourses covered by the River Classification Index. The aim is for all 11 of these large water bodies in the National Park to attain Good or High status where possible.

Freshwater network objective 3: Strengthening connectivity of a waterbody network

For smaller waterbodies, the Nature Network will focus on connectivity and proximity. Waterbodies can support greater biodiversity if they lie close enough together to permit species to colonise from one to the next and form a metapopulation. The northern damselfly, a Cairngorms Nature Priority and Cairngorms Nature Index indicator species whose UK distribution is heavily focused on the Cairngorms National Park, is thought to be able to disperse approximately 1 km from one pond to the next. The Nature Network will use this species as an indicator for waterbody connectivity. All static waterbodies in the National Park, from large lochs over 0.5 km^2 to small ponds of just a few square metres, will be buffered with 500 metre and where buffers overlap they will be merged to form polygons, thus allowing waterbodies within 1 km of one another to be identified. Figure 7 shows 500 metre buffers around waterbodies and allows the identification of unbuffered gaps where pond creation could be targeted to enhance connectivity. These could be further targeted towards sites of so called 'ghost ponds', i.e. ponds shown on old maps that have since been lost, but which have the potential to still support viable seeds, eggs and spores of a wide variety of aquatic biodiversity.

Spatial datasets used to identify freshwater network are:

- Ordnance Survey Mastermap 2024
- Scottish Environment Protection Agency Waterbody Classification 2023

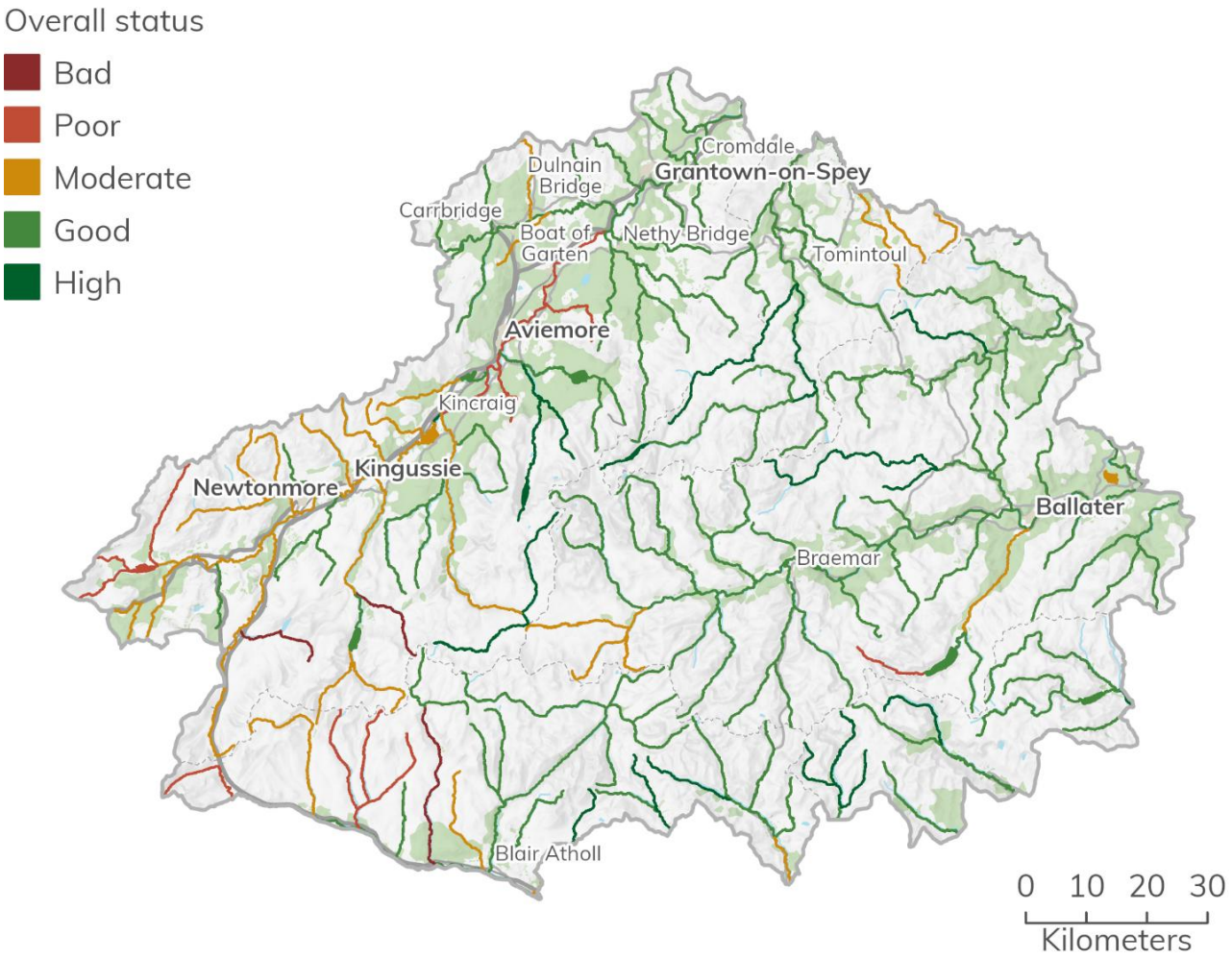

Figure 6 Overall status of surface waterbodies within the Cairngorms National Park in 2023. Contains Ordnance Survey data © Crown copyright and database right 2025. Contains data © Scottish Environment Protection Agency 2025; this Scottish Environment Protection Agency product is licensed under the Open Government Licence 3.0.

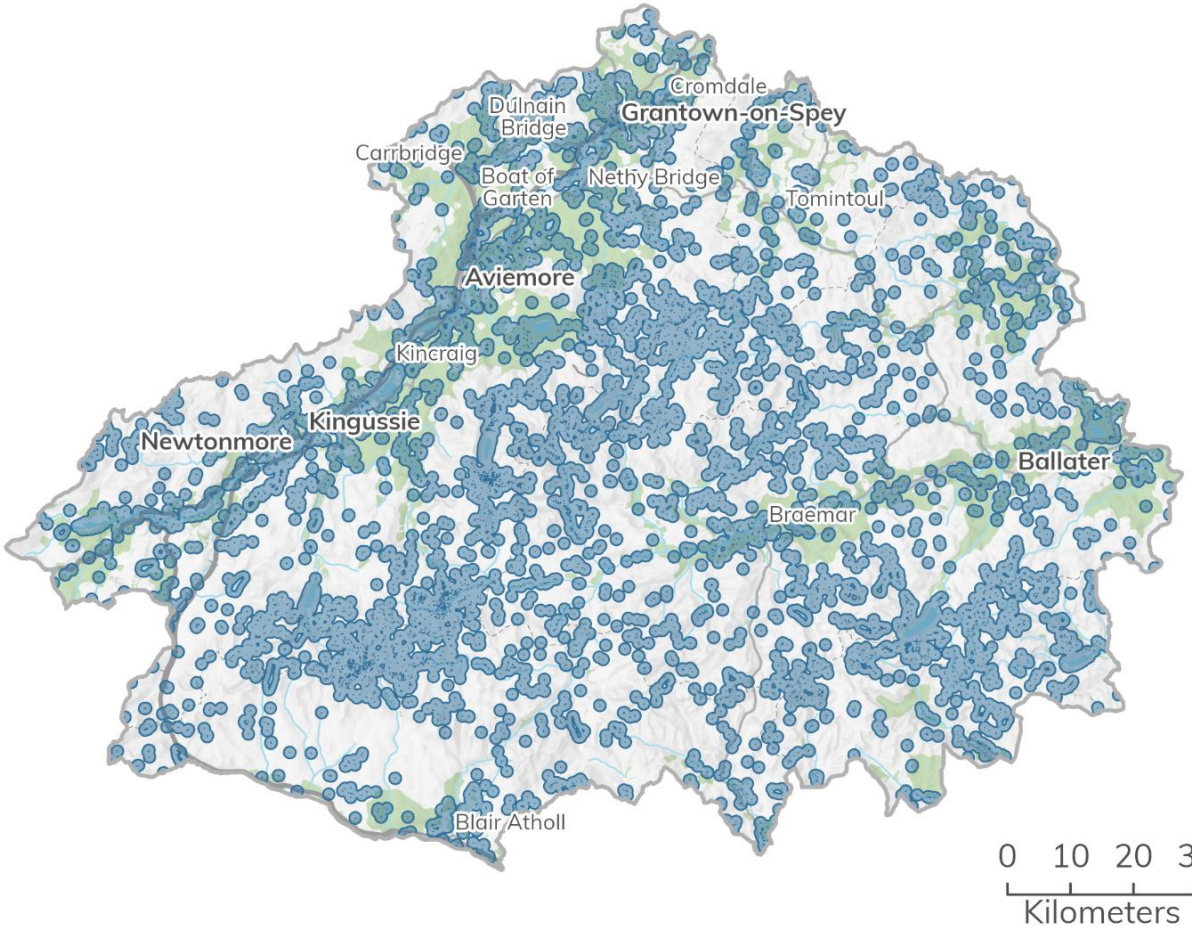

Figure 7 Static waterbodies with 500 m buffers. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

Mires and wetlands objective 1: Restore and expand fen, marsh and swamp habitat where opportunities arise

For more lowland forms of mires and wetland, such as fen, marsh and swamp, the objective of the Nature Network is to repair damaged habitats and create more areas. The current extent of these habitats is shown in Figure 8. As part of efforts to tackle an anticipated increased threat from flooding, and to help halt biodiversity decline, opportunity mapping to identify potential wetland and floodplain restoration areas will take place in the Dee catchment as part of the Dee Resilience Strategy. A similar approach could then be rolled out to elsewhere in the National Park, especially in those areas with a Catchment Management Plan, i.e. the Spey and South Esk catchments. This opportunity mapping will be used to inform the developing Nature Network. The improvement and expansion of wetland habitat, seasonal or otherwise, in lowland areas

could benefit a wide range of species, including curlews and other waders. Work undertaken to strengthen the freshwater network by creating ponds where there are currently gaps is also likely to support the mires and wetlands network as many species are common to both networks. (i.e. the 'better' and 'more' of the networks mantra).

Spatial datasets used to identify the mires & wetlands network are:

- Ordnance Survey Mastermap 2024
- Habitat Map of Scotland

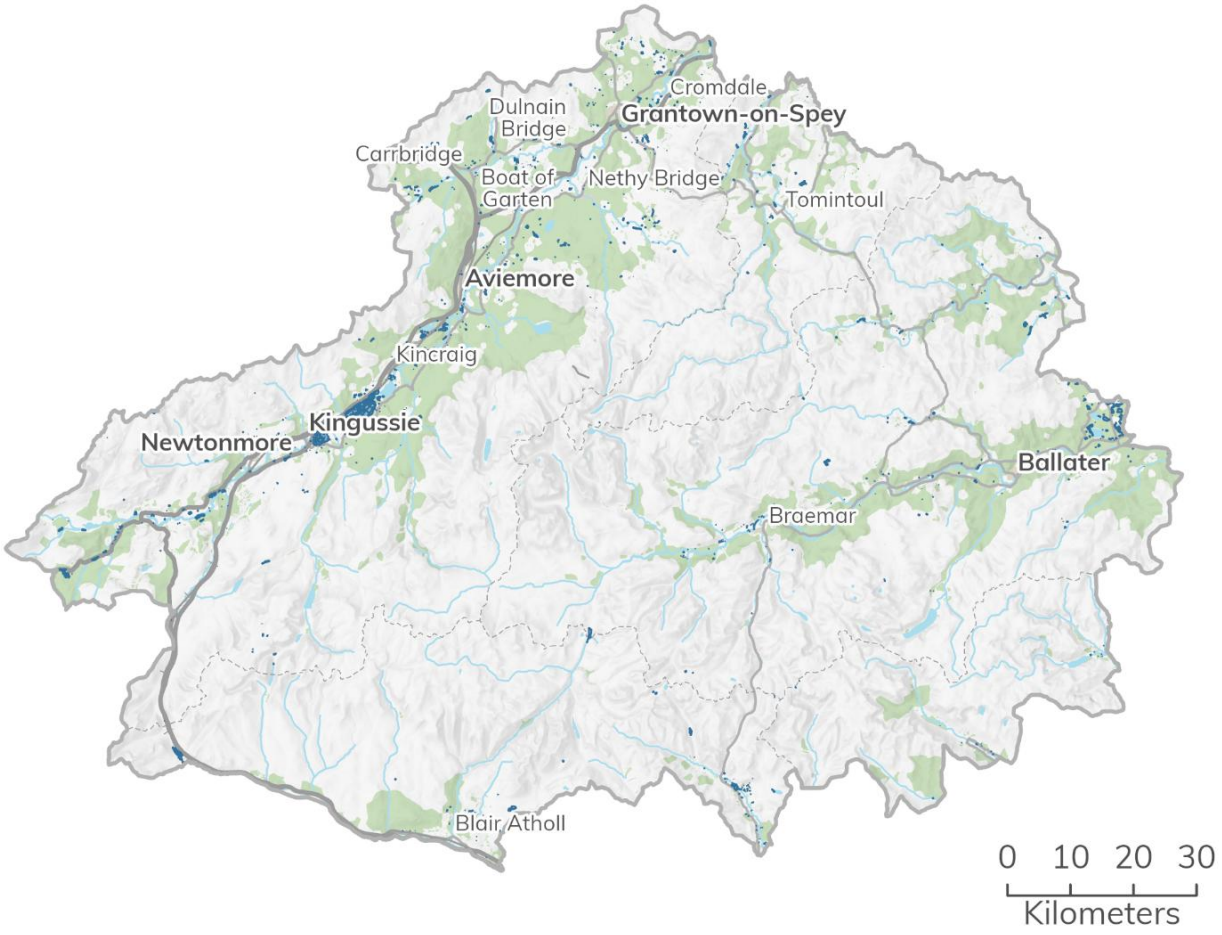

Figure 8 Lowland mires and wetlands in the Cairngorms National Park. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

Lowland managed grassland

The objective of the Lowland Managed Grassland Nature Network is to expand the coverage and improve connectivity of species-rich grassland, both at locations where it currently does not occur and within the fields it partly occupies, i.e. 'more' and 'bigger'. Figure 9 shows the location of species-rich grassland in the surveyed landscapes of the Cairngorms National Park.

The lowland managed grassland Nature Network uses data collected from Badenoch & Strathspey, Glenlivet and Deeside that identifies the distribution of species-rich grassland in in-bye land (agricultural fields). Only fields that had a higher likelihood of supporting species-rich grassland were surveyed, i.e. improved grasslands were not surveyed. This information not only identifies the fields supporting species-rich grassland but also indicates the percentage cover within the fields in question. The surveys also indicate potential threats to species-rich grassland, such as development and scrub or bracken encroachment. This information is being used to secure favourable management of these sites through the National Park's farming work complimentary to the network.

To obtain a fuller picture of the status and condition of species-rich grassland across the National Park and further develop the network, surveys will be conducted in the Perthshire, Angus and Donside parts of the National Park.

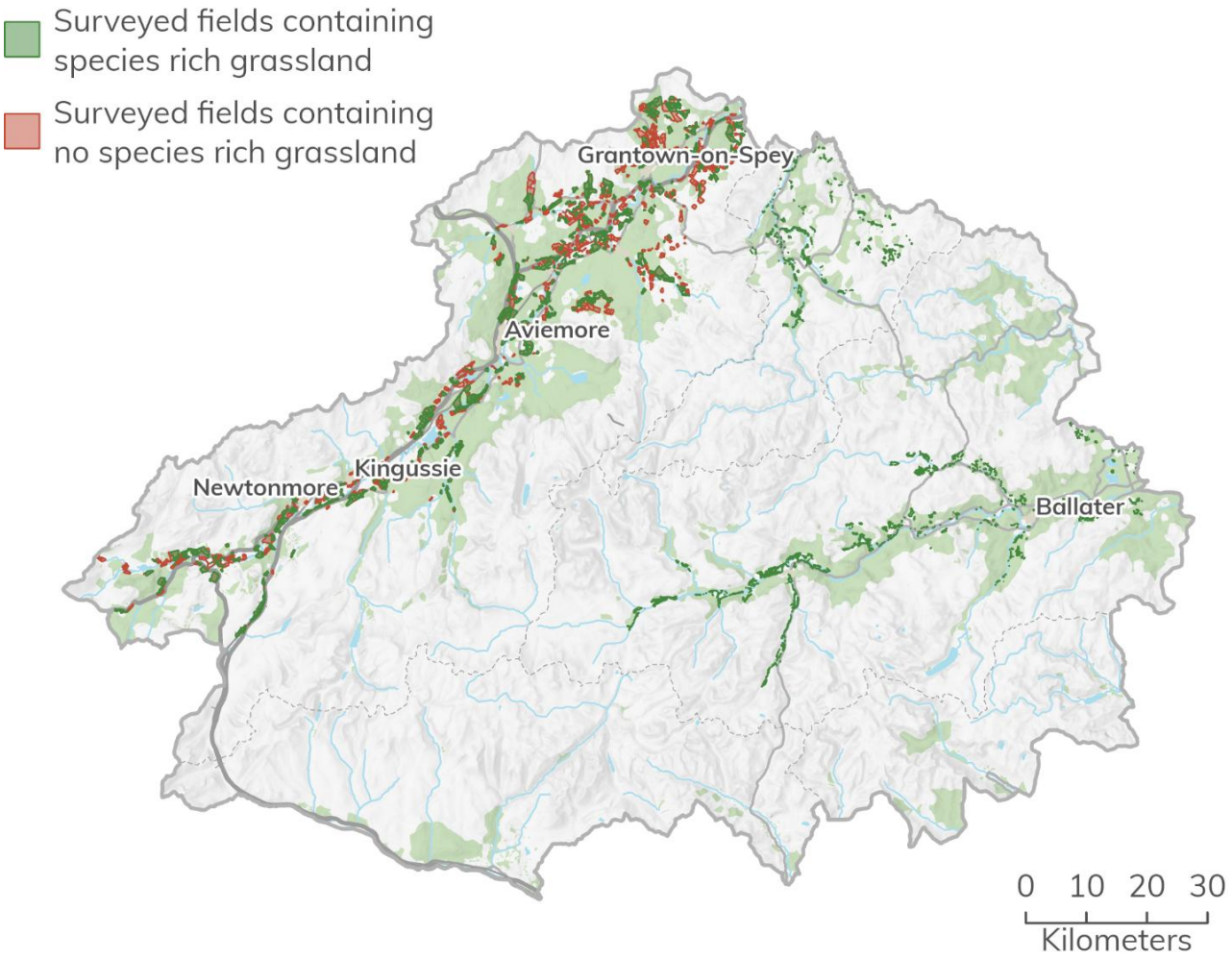

Figure 9 Species-rich grassland in surveyed parts of the Cairngorms National Park. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

Spatial datasets used to identify the Lowland Managed Grassland network are:

- Badenoch and Strathspey Inbye Survey 2006 to 2007.
- Deeside and Strathavon Inbye Survey 2020 to 2022.

Managed upland

This ecosystem comprises a mix of heathland, blanket bog, and semi-natural grasslands, which occurs in the upland areas of the National Park, which are, or have until recently been, managed for sporting and/or pastoral purposes (Figure 10).

Managed uplands are a predominant feature of the National Park and are currently by far the most expansive and best-connected ecosystem in the National Park. The focus of the network is on enhancement to yield the greatest gains for ecosystem services, climate resilience, biodiversity gain and complement wider catchment restoration activities.

The management of uplands is central to National Park Partnership Plan objectives for woodland expansion by natural regeneration, peatland restoration, reducing the negative impacts of red deer and other herbivores and ensuring greater species and structural diversity.

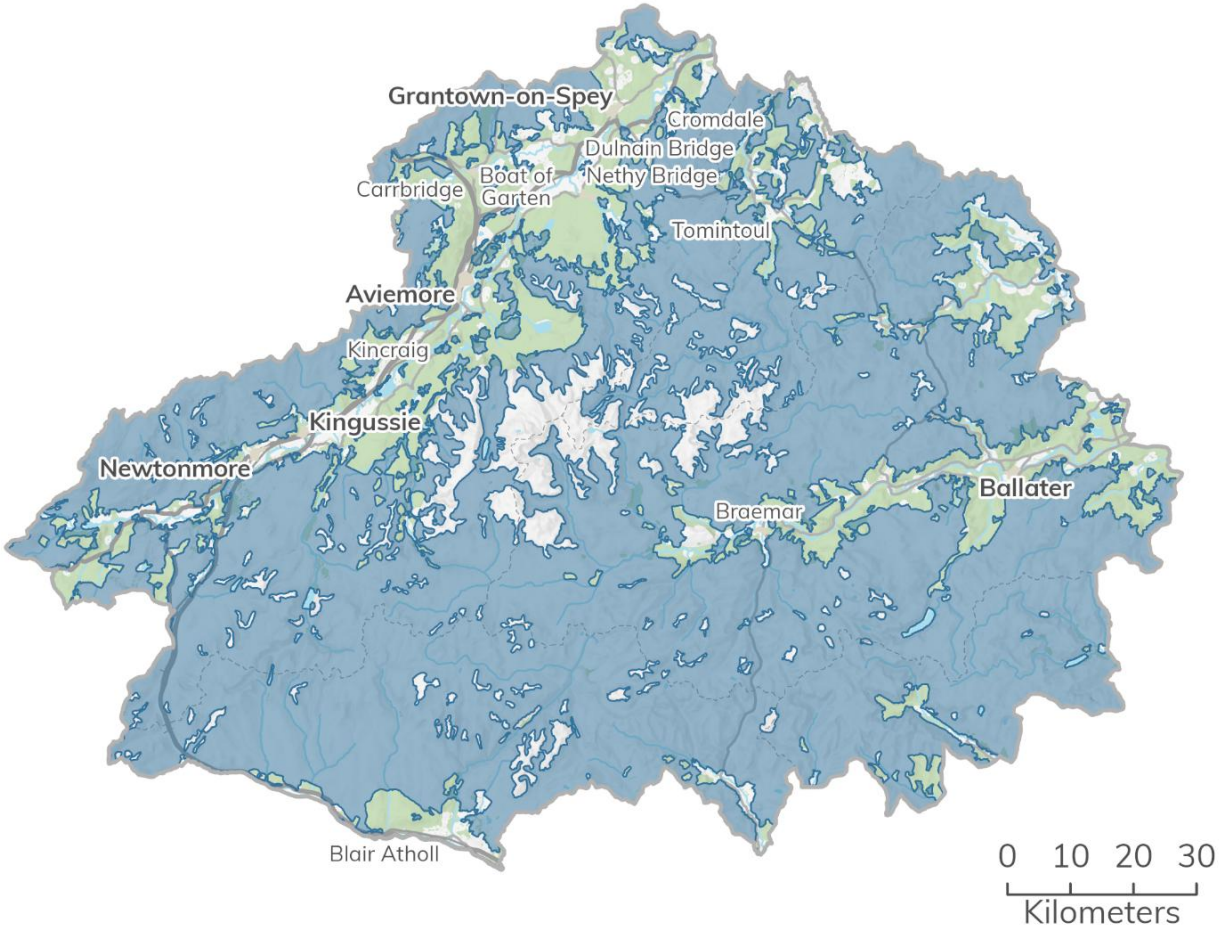

Figure 10 Managed upland ecosystem within the Cairngorms National Park. Data from Corine Land Cover 2018 dataset. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Contains data © European Union, Copernicus Land Monitoring Service 2025, European Environment Agency (EEA).

Managed upland objective 1: Repair eroded and drained blanket bog

The Nature Network will support the targeting of peatland restoration in the National Park to make blanket bog 'better' and restoration activities to create 'more' ecologically functioning habitat.

The Partnership Plan has a target for 38,000 ha of peatland to be under restoration management by 2045, with 80% of all drains restored by 2035 and all erosion features restored by 2050. Areas of eroded and drained blanket bog across the National Park have been mapped using aerial photography (Figure 11) and work is ongoing to restore these areas. It is anticipated that the rewetting of drained peatlands and the creation of small pools will create improved and better-connected habitat for a wide range of invertebrates and amphibians. The increased productivity of invertebrates could benefit a range of insectivorous birds, such as waders and grouse.

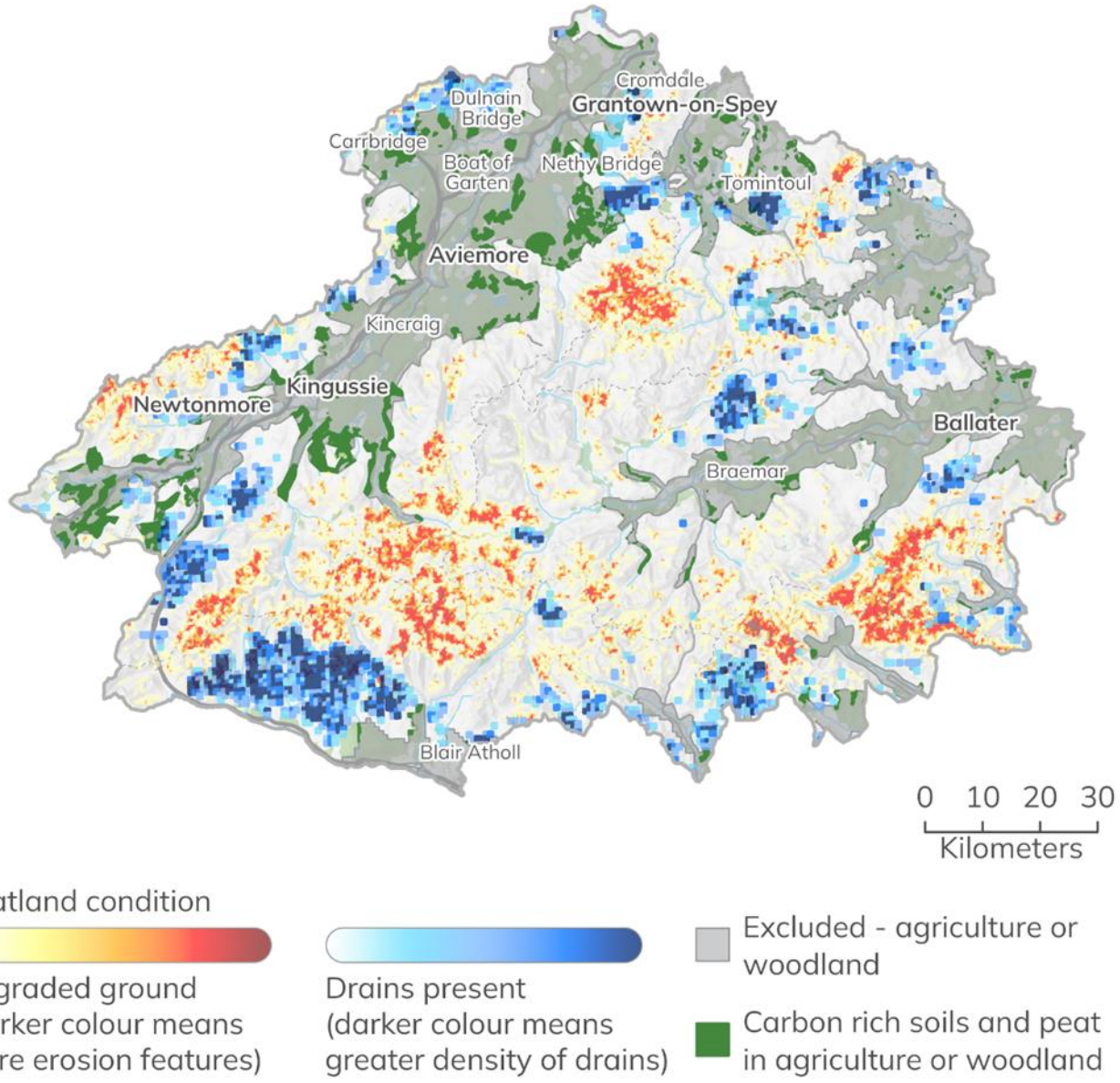

Figure 11 Condition of peatland within the Cairngorms National Park. Indicating areas where restoration activity can be undertaken to improve the Managed Upland network. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

Spatial datasets used to identify the Blanket Bog network within Managed Uplands:

- Cairngorms National Park peatland condition.

Managed Upland objective 2: Increasing structural and species diversity

The Partnership Plan contains an objective for moorland to support greater species and structural diversity, with more pockets and strips of trees and shrubs on moorland edges, steep slopes, in gullies and around woodland remnants. The Park Authority will investigate with NatureScot the potential for forthcoming estate muirburn plans to be used to support the development of a managed upland nature network and subsequent delivery of this Partnership Plan objective.

We currently do not have information on the distribution or the extent of mosaics of juniper and willow scrub across the National Park. Satellite imagery and analysis is improving and it is anticipated that this data will be available in the future as part of the National LiDAR programme and a series of National Park drone surveys. These will form the basis of this Nature Network objective.

Managed Upland objective 3: Reducing the impact of red deer and other herbivores

Deer are important species in the National Park, providing income, employment and enjoyment. However, there is a need to reduce deer numbers where they are having a significant, negative impact on existing and potential areas of peatland, woodland and scrub.

Recent densities of open range red deer across five Deer Management Group areas in the Park vary from fewer than 5 per km^2 up to 20 per km^2 (Figure 12). The Partnership Plan target is for average open range red deer densities in each deer management group area to be a maximum of 5 to 8 per km^2 by 2030. The Nature Network will apply data gathered from Deer Management Groups and NatureScot counts to identify where the impacts of deer may inhibit recovery of the managed upland nature network.

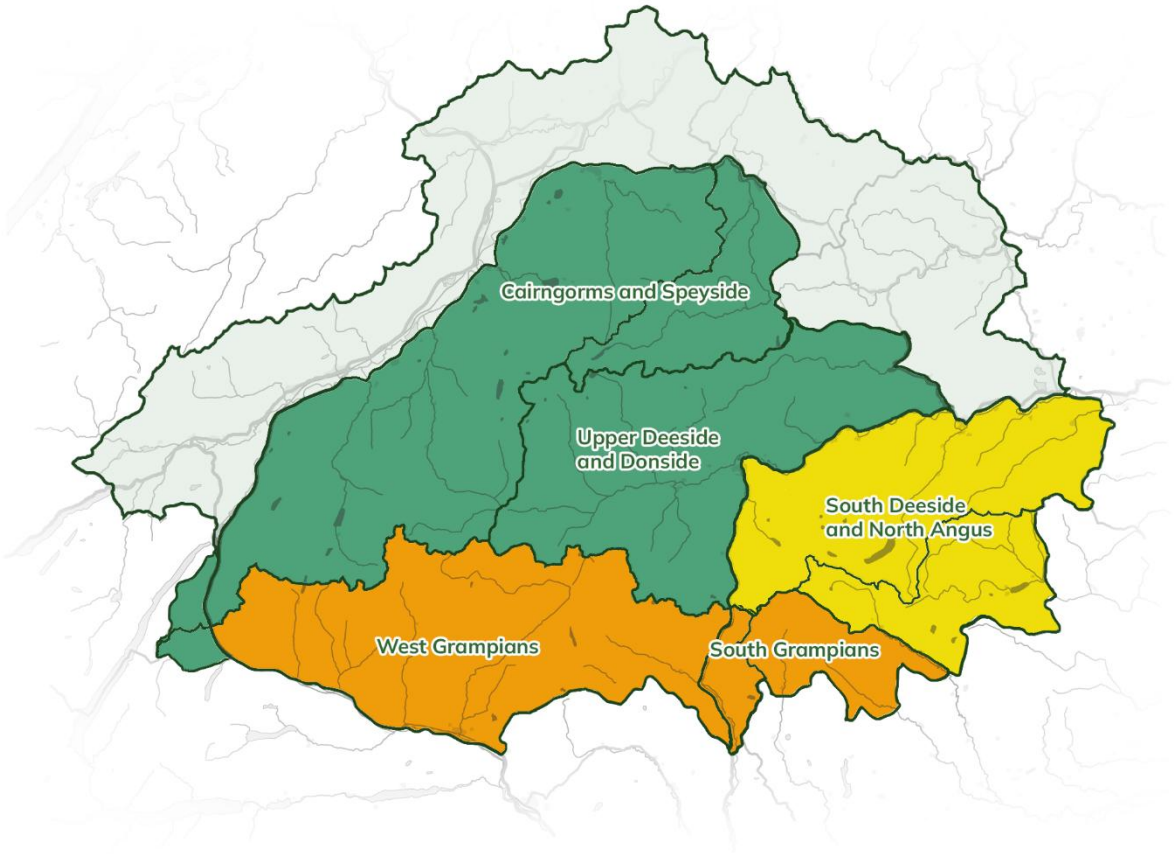

Figure 12 Open range red deer densities by deer management group as shown in the National Park Partnership Plan.

- Cairngorms and Speyside: <5 deer per km^2 (2016 data).
- Upper Deeside and Donside: 6-7 deer per km^2 (2016 data).
- South Deeside and North Angus: 10 deer per km^2 (2022 data).
- West Grampians: 20 deer per km$_2$ (2022 data).
- South Grampians: 16 deer per km^2 (2022 data).

Montane

The montane ecosystem occurs at the National Park's highest altitudes (Figure 13) and is made up of a variety of habitat types, including bare rock, alpine and subalpine heaths and grasslands. Aside from deer pressures, which are considered as part of the Managed Upland Nature Network that surrounds montane areas, the threats facing this ecosystem, such as climate change and recreational pressures, as well as the solutions

to tackle them, lie out with the scope of this Nature Network. Montane woodland is incorporated into the woodland network.

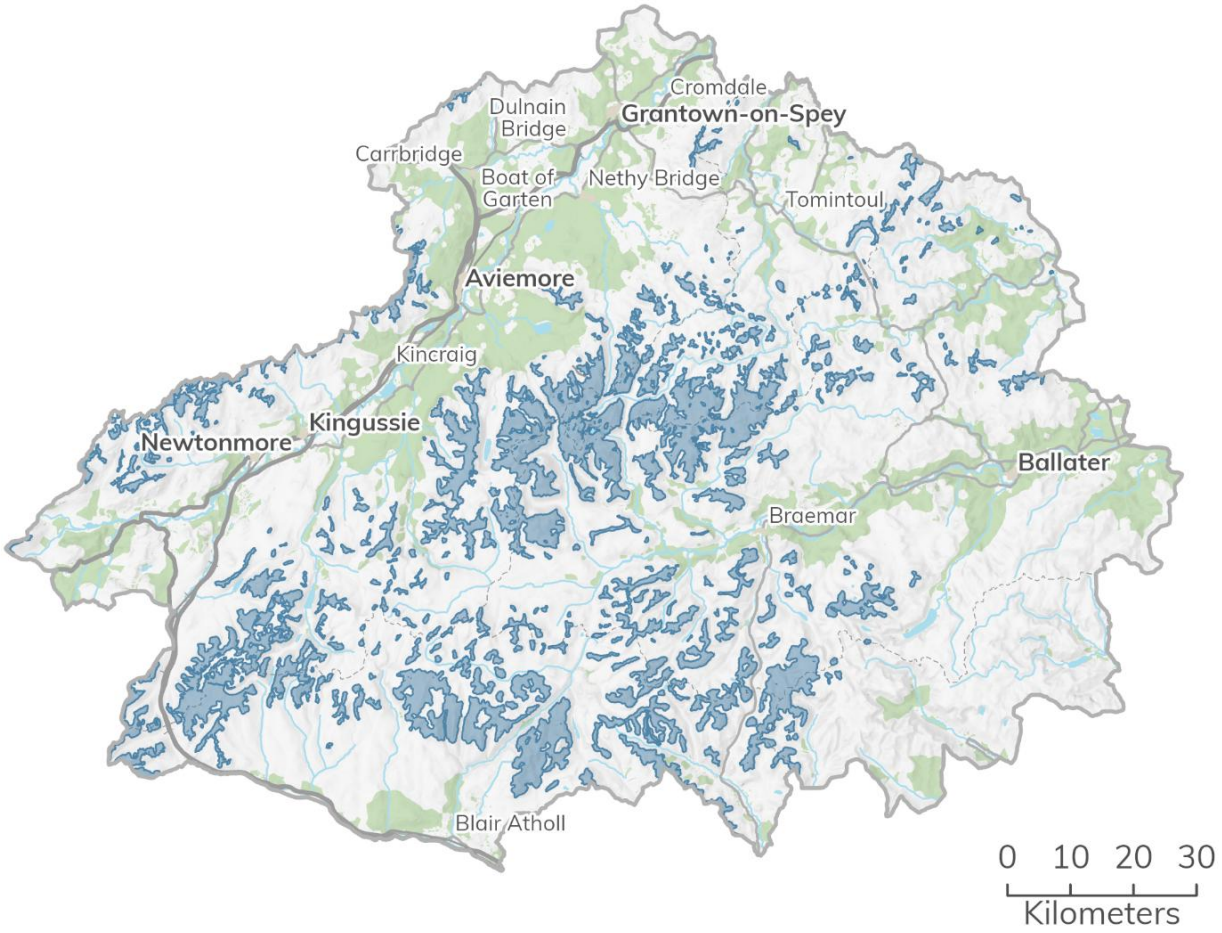

Figure 13 Montane habitats found in the Cairngorms National Park as identified by the European Nature Information System (EUNIS). Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2025. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Data © NatureScot 2025.

Connecting people with nature

While the primary purpose of the Cairngorms National Park Nature Network is ecological connectivity, it has the potential to better connect people with nature. As part of the local development plan preparation process, the Park Authority will carry out a blue and green infrastructure audit which will help identify these opportunities. Information relevant to the audit may include:

- Core paths, rights of way and other active travel infrastructure
- Local authority open space audits and strategies
- Play sufficiency assessments
- Ordnance Survey Mastermap Greenspace Layer
- The information outlined in this document.

This audit will be subject to public engagement as part of the evidence report engagement process.

Cross-boundary implications

The Nature Network will complement those of the local authorities bordering the National Park, i.e. Aberdeenshire, Angus, Highland, Moray and Perth and Kinross. Dialogue is ongoing with all local authorities through the development process.

Consultation

The Cairngorms National Park Authority will engage with the following representative groups on the draft Cairngorms National Park Nature Network:

- Cairngorms Nature Strategy Group
- Cairngorms Upland Advisory Group
- Cairngorms Agricultural Advisory Group

The Cairngorms Nature Action Plan is currently being developed with the Cairngorms Nature Strategy group and stakeholder groups. Nature Network will be embedded within this plan and will go out to public consultation. Timescales for the identification of the Nature Network align with preparation of the proposed local development plan and it will be possible to identify and take account of the network within its spatial strategy.

Links to evidence

- Cairngorms National Park Forest Strategy 2018
  https://cairngorms.co.uk/wp-content/uploads/2019/03/CairngormsNationalParkForestStrategy2019Final.pdf

- Cairngorms National Park Partnership Plan 2022 – 2027
  https://cairngorms.co.uk/wp-content/uploads/2022/09/Cairngorms-National-Park-Partnership-Plan-full-version-FINAL.pdf

- Lawton et al. (2010) Making space for nature: a review of England's wildlife sites and ecological network
  https://webarchive.nationalarchives.gov.uk/ukgwa/20130402151656/http:/archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

- National Planning Framework 4
  https://www.dpea.scotland.gov.uk/LibraryDocument.aspx?id=2094