
CHAPTER 10

Natural Environment

Comhairle Contae Mhaigh Eo
Mayo County Council

CHAPTER 10 NATURAL ENVIRONMENT

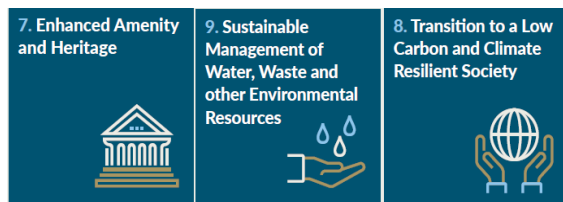
10.1 Strategic Aim

The strategic aim of this chapter is to continue to protect and enhance the county's natural heritage and biodiversity and ensure that networks of green and blue infrastructure are identified, created, protected and enhanced to provide a wide range of environmental, social and economic benefits to communities; To also improve the knowledge and understanding of the county's landscape and coast, and enhance the overall characteristics, qualities and diversity of landscape character, its sense of place and local distinctiveness in recognition of the amenity potential of the county.

Related UN Sustainable Development Goals



Related NPF National Strategic Outcomes



Related RSES Regional Growth Ambitions



10.2 Introduction

This chapter has been guided by the above strategic aim, sustainable development goals and national strategic objectives to create sustainable communities in County Mayo. The chapter has also considered the key legislative and policy documents set out in Appendix III, including the NPF and RSES for the Northern and Western region.

10.3 National and Regional Planning Position

The NPF and RSES recognises that communities in Ireland benefit from the goods and services that the natural environment provides, including food, renewable energy, water purification, flood mitigation and places for recreation, education, creative thinking, health and wellbeing. They also recognise the importance of biodiversity and how the planning system should be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation. The NPF and RSES acknowledges the wealth of the natural and cultural assets within our landscape, which supports our quality of life, provides for a healthy and resilient economy and helps us adapt to and mitigate climate change. The NPF and RSES both aim to protect and value our important and vulnerable habitats, landscapes, natural heritage and green spaces, including their interrelationships.

The NPF requires the integration of planning for green infrastructure and ecosystem services into all statutory land use plans. Additionally, the RSES seeks to unify the region around an environmental, growth management, economic and infrastructural strategy that is efficient, sustainable and inclusive, which builds on protecting and enhancing our natural capital. The environment and our health and wellbeing are inextricably linked, and we need to look beyond simply protecting people from threats in their environment to considering how the environment can deliver a much wider range of social, economic and environmental benefits whilst ensuring no net contribution to biodiversity loss.

10.4 Mayo Context

The natural environment encompasses everything that is not human made. Land, air, water, plants and animals all comprise the natural environment. It provides us with natural resources, such as food, fuel and raw materials for the production of goods and the creation of the various components of the built environment. The natural environment also plays a fundamental role in creating sustainable communities. It can help us adapt and mitigate climate change and improve people's health and quality of life. Loss of or damage to ecosystems reduces the capacity of natural ecosystems to capture and store carbon to combat climate change. Mayo County Council plays an important role in the protection of the county's natural heritage and the conservation and enhancement of the natural environment. A wide range of economic and social benefits and services result from the protection of environmental quality and biodiversity.

Mayo has a rich biodiversity and range of ecosystems, including its geology, extensive peatlands, wetland landscapes, rivers, woodlands, grasslands, eskers, trees and hedgerows. Protecting and enhancing our biodiversity and ecosystems is vital not only for our health, well-being, tourism,

attractiveness of place, and quality of life of our communities today, it is also critically important in the future, in adapting to and mitigating climate change.

10.4.1 Biodiversity

The biodiversity of County Mayo includes our native plant and animal species and the places (habitats and ecosystems) where they live. Our landscape has been shaped by our geographical position on the west coast of the country, our varied geology, and the influence of the people who have settled here. These elements determine the range of native plants, animals, habitats and ecosystems that make up the unique biodiversity of the county.

Biodiversity is threatened globally by the ever-increasing demands of people for space, fuel, food and other resources. Loss or damage to sites and places of biodiversity value, caused by changes in land- use practices, pressures for development, disturbance of places used by wild animals and birds for sheltering, feeding or breeding and pollution of watercourses, all affect the extent and quality of our natural environment. The protection of our biodiversity matters for ethical, environmental and economic reasons. Healthy functioning ecosystems clean our water, purify our air, maintain our soils, provide us with food, medicines and fuel, whilst regulating our climate. A healthy environment provides places for recreational and spiritual enjoyment for the inhabitants of the county and for those who visit Mayo. It also provides attractive spaces for people to live, work and to do business.

Climate change is damaging biodiversity and ecosystems, reducing their capacity to capture and store carbon. The impact of climate change often exacerbates other pressures on biodiversity and ecosystems such as pollution, over-exploitation, invasive species, habitat fragmentation, degradation and loss. Protecting and enhancing our biodiversity and ecosystems is vital not only for our health, well-being, tourism, attractiveness of place and quality of life of our communities today, it is also critically important in combating climate change. Healthy, resilient ecosystems have a greater potential to mitigate and adapt to climate change and therefore to limit global warming. Trees and plants remove carbon dioxide from the atmosphere, regulate air temperatures and catch rainfall. Wetlands act as significant carbon sinks, store large volumes of water and slow down its flow. It is therefore important to reduce biodiversity loss and maintain diverse, functioning and interconnecting ecosystems across the wider terrestrial, freshwater and marine environment, in order to climate proof our natural environment. Mayo County Council have a responsibility and legal obligation to safeguard biodiversity and ecosystems.

10.4.2 Designated sites, Protected Species and Habitats

The *Natura 2000 Network of European Sites* includes the ecological sites designated or proposed for designation across Ireland and Europe under the Habitats and Birds Directives, including Special Areas of Conservations (SACs) and Special Protection Areas (SPAs). These are protected under law and through the planning system. The SACs are proposed or designated for protection because they support habitats and/or populations of plant and animal species that have been identified as rare or threatened at a European level. There are 53 SACs in County Mayo. The SPAs provide for the protection of sites used (for breeding, roosting or feeding) by species of birds that are rare, or vulnerable or in danger of extinction. It also provides for the protection of areas that are particularly

important for migratory birds, where they congregate in significant numbers. These are usually wetlands and include many coastal estuarine sites. There are 19 SPAs in County Mayo. The Natura 2000 network of sites is also crucial in providing the space natural species need to adapt to climate change. The range of ecosystem services provided by Natura 2000 and other relevant national and regional protected areas and networks is often not recognised, however, they meet a wide variety of human needs such as clean water, air, recreation, flood protection.

Natural Heritage Areas (NHAs) are designated due to their national conservation value and/or geological/geomorphological heritage. They seek to protect habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. Proposed Natural Heritage Areas were published on a non-statutory basis in 1995, because of their important for wildlife and habitats, but have not been statutorily proposed or designated. These are sites that are of national importance and support a range of habitats, plant and animal species and in some cases, geological features. There are 15 NHAs in County Mayo. The Plan provides protection for these sites.

10.4.3 Non-Designated Sites

There are many sites throughout the county that host important plant and animal species or their habitats (including Annex I habitats, Annex I birds and Annex II and IV species) which are not designated as a SPA, a (c)SAC or a (p)NHA but their ecological value is of high importance. Wildlife heritage and biodiversity is not confined to statutorily designated sites and is found throughout the countryside and within our towns and villages. The promotion of biodiversity has become increasingly important over recent years. Of particular importance is the protection of wildlife corridors and steppingstones, including those covered by Article 10 of the Habitats Directive, which provide for the easy movement of wildlife, which is essential to allow them to commute from one area to another for breeding, hibernation, in search of food etc. They are also essential for the migration, dispersal and genetic exchange of wild species.

All bat species and their breeding and resting places (roosts) are legally protected in Ireland under the Wildlife Acts 1976-2000. Bats are also protected as 'strictly protected species under Annex IV (Habitats Directive) species of flora and fauna, which also protects their key habitats (i.e. breeding sites and resting places), wherever they occur. It is particularly critical that wildlife corridors, tree lines and hedgerows within the area of Lesser Horseshoe Bat roosts are retained to allow for the free movement of these bats and other species within and through the surrounding area. It is the policy of Mayo County Council that necessary steps be taken, as a matter of urgency, to secure the safety of the 740 lesser horseshoe bats currently resident in Moorehall.

The County has a wealth of biodiversity; however, modern day development and infrastructure requirements have led to fragmentation of habitats and commuting corridors, which have had a negative impact on biodiversity. Road networks, large industrial, retail and residential development have contributed to fragmentation of habitats, loss of species and a weakening of the green infrastructure network. It is important to ensure that existing habitats are maintained by incorporating natural features such as trees, hedgerows, woodlands and watercourses into

development proposals to prevent biodiversity loss and contribute to a sense of place, where possible.

Biodiversity, Designated and Non-Designated Sites Policies

NEP 1	To support the protection, conservation and enhancement of the natural heritage and biodiversity of County Mayo, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas Ramsar Sites, Nature Reserves and Wild Fowl Sanctuaries (and other designated sites including any future designations).
NEP 2	To protect and enhance the county's natural heritage and biodiversity by supporting the implementation of the National Biodiversity Action Plan 2017-2021, the National Pollination Plan 2015-2020 and County Mayo Biodiversity Plan 2015- 2020 and any future editions, in partnership with relevant stakeholders, subject to available resources.
NEP 3	To protect and enhance the county's natural heritage and biodiversity through supporting the implementation, in partnership with the County Mayo Heritage Forum, relevant stakeholders and the community, of the objectives and associated actions in the County Mayo Heritage Plan and future editions thereof, which relate to the remit and functions of Mayo County Council.
NEP 4	To conserve and enhance the county's biodiversity and ecological connectivity, identified areas of local biodiversity importance (Local Biodiversity Areas) in the towns and villages in Mayo.
NEP 5	To promote and support increased public participation in biodiversity conservation by supporting and encouraging community-led initiatives.
NEP 6	To support the maintenance of geological and geomorphological heritage values of County Geological Sites and through consultation with the Geological Survey of Ireland and seek to promote access to such sites, where possible.
NEP 7	To encourage the effective management of native and semi-natural woodlands, groups of trees and individual trees in the discharge of development management functions.

Biodiversity, Designated and Non-Designated Sites Objectives

NEO 1	To review the County Mayo Heritage Plan and County Mayo Biodiversity Plan, as appropriate.
--------------	--

NEO 2	To create a Wetlands Database for County Mayo of known and potential wetland sites in the county and to develop a corresponding GIS dataset as an important tool for future biodiversity and natural heritage conservation planning in Mayo.
NEO 3	To ensure the unique ecological, scenic, recreational and environmental character of the Wild Nephin Ballycroy National Park is protected and enhanced and developed appropriately.
NEO 4	To protect and enhance biodiversity and ecological connectivity in County Mayo, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network.
NEO 5	To actively increase awareness of the importance of the natural heritage of the county and to promote education, knowledge and pride in our natural heritage.
NEO 6	To protect surface waters, aquatic and wetland habitats and freshwater and water-dependent species through the implementation of all appropriate and relevant Directives and transposed legislation and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.
NEO 7	To seek the protection of the riparian zones of watercourses throughout the county, recognising the benefits they provide in relation to flood risk management, their protection of the ecological integrity of watercourse systems and the role they play in the enhancement of the county's natural heritage and biodiversity
NEO 8	To maintain, protect and where possible enhance the natural heritage and biodiversity of bogs, fens and turloughs, where appropriate, in County Mayo.
NEO 9	Recognise the importance, in terms of their natural heritage and biodiversity, of woodlands, tree lines, hedgerows, stonewalls, watercourses and associated riparian vegetation and the role they play in supporting bat populations and where possible developments will be encouraged to retain such features
NEO 10	To install nest boxes in all new and existing Municipal buildings, as appropriate, and in consultation with Birdwatch Ireland, Swift Conservation Ireland.
NEO 11	To ensure that the impact of development within or adjacent to national designated sites, Natural Heritage Areas, Ramsar Sites and Nature Reserves likely to result in significant adverse effects on the designated site is assessed by requiring the submission of an Ecological Impact Assessment report (EcIA), Environmental Report (ER), an Environmental Impact Assessment Report (EIAR), if deemed necessary, and/or a Natura Impact Assessment (NIS), if deemed necessary, prepared by a suitably

	qualified professional, which should accompany planning applications.
NEO 12	To support the Joyce Country and Western Lakes Geopark's aim of establishing a new UNESCO Global Geopark in the South Mayo and North Connemara area of County Galway.
NEO 13	To ensure the protection of trees or groups of trees protected under Tree Preservation Orders, as well as recognise the value and encourage the retention and management of other trees and woodlands, which make a valuable contribution to the character of the landscape, ecological corridors, green infrastructure, a settlement or its setting.
NEO 14	To protect and enhance the ecological network throughout the county to improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive.
NEO 15	To create a database of the Local Biodiversity Areas and ecological networks (including green infrastructure) and develop a corresponding Geological Survey of Ireland dataset as an important tool for future biodiversity and natural heritage conservation planning in Mayo.

10.4.5 Invasive Species

Invasive species are species that have been introduced (either accidentally or intentionally) by humans, to areas outside their normal habitat range. Invasive species represents the second biggest threat to biodiversity globally. Once such species become established, they can spread quickly and the economic and environmental costs of controlling and eradicating them can be considerable. Some of the most well-known invasive species include Grey Squirrel, Rhododendron, Giant Hogweed and Japanese Knotweed to name but a few. Japanese Knotweed in particular can grow through concrete and tarmac and therefore can cause substantial damage to the built environment. Preventing the introduction and spread of invasive species is even more important with respect to European Designated sites.

Invasive Species Policy

NEP 8	To support measures for the prevention and/or eradication of invasive species as appropriate within the county.
--------------	---

Invasive Species Objective

NEO 16	To ensure that where the presence of invasive species is identified at the site of any proposed development or where the proposed activity has an elevated risk of resulting in the presence of these species, details of how these species will be appropriately managed and controlled will be required.
---------------	--

10.4.6 Peatlands

Peatland is a wetland terrain dominated by living peat-forming plants. Fens and bogs are both types of peatlands; the bogs are situated higher than the surrounding landscapes and obtain their water from rainfall, while fens are located on slopes, flats, or depressions and their water derives from rainfall and surface water. Peatlands account for approximately 38% of land cover in Mayo. In their natural, wet, state peatlands provide vital ecosystem services. They also regulate water flows, helping to minimise the risk of flooding. Large amounts of carbon, fixed from the atmosphere into plant tissues through photosynthesis are locked away in peat soils, representing a valuable global carbon store. Peatlands are highly significant to global efforts to combat climate change, as well as wider sustainable development goals. The protection and restoration of peatlands is vital in the transition towards a low-carbon and circular economy.

A lack of awareness of the benefits of peatlands means that they have been severely overexploited and damaged as a result of actions, including drainage, agricultural conversion, burning for fuel, among others. Peatland drainage has released huge amounts of greenhouse gases from the carbon stored within peat soils and has reduced the quality of drinking water due to pollution from dissolved compounds. Damage to peatlands also results in biodiversity loss. The National Peatlands Strategy provides a long-term framework within which, all peatlands in the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations. Mayo County Council will develop and implement a Peatland Management Strategy for County Mayo over the lifetime of the Plan, as part of Climate Ready Mayo, Climate Adaption Strategy.

Peatland Policies

NEP 9

To enhance the county's natural heritage and biodiversity through supporting the protection and restoration of peatlands in County Mayo, where appropriate, in order to transition towards a low-carbon and circular economy.

NEP 10

To recognise the role of peatlands as carbon sinks to combat climate change and ensure that peatland areas, including those designated or proposed for designation (pNHA, NHA or SAC), are conserved for their ecological, climate regulation, archaeological, cultural and educational significance.

Peatland Objectives

NEO 18	As part of the implementation of Climate Ready Mayo, Climate Adaption Strategy, to develop and implement a Peatland Management Strategy for County Mayo that will: (a) To identify damaged Peatlands in the county and those at risk from climate change and becoming carbon emitters. (b) To initiate conservation and management of Mayo's peatlands, particularly those sites nominated for designation as Special Areas of Conservation and Natural Heritage Areas, to preserve the habitat and their unique ecosystems, managing flood risk and other environmental benefits.
NEO 19	To actively increase public awareness of the importance of peatlands as carbon sinks to combat climate change.

10.4.7 Green Infrastructure

Green Infrastructure is the network of green spaces, habitats and ecosystems within a defined geographic area, which can range in size from an entire country to a neighbourhood. Green Infrastructure encompasses wild, semi natural and developed environments, from upland bog and wetlands to urban parks and canals. Green infrastructure provides a wide range of invaluable ecosystem services and human quality of life benefits including:

- Biodiversity management and enhancement.
- Water management including drainage and flood attenuation, filtration and pollution control.
- Recreation and tourism.
- Visual amenity and sense of place.
- Sustainable mobility.
- Food, timber and other primary production.
- Regulation of micro-climates (green lung) and potentially, climate change adaptation.

Green infrastructure, along with blue (water) infrastructure, provides economic, educational, ecological and social benefits through natural solutions and helps us to understand the advantages that nature can offer to society. It is vital to allow for nature, biodiversity and natural systems to grow and there is need to plan for its protection and creation within the county.

The Green Infrastructure network supports native plant and animal species and provides corridors for their movement. It maintains natural ecological processes and biodiversity, sustains air and water quality and provides vital amenity and recreational spaces for communities, thereby contributing to the health and quality of life of residents and visitors to the county. The Council's approach to Green infrastructure is one that seeks to conserve and enhance biodiversity and geological heritage and to promote the sustainable management of the landscape and coast.

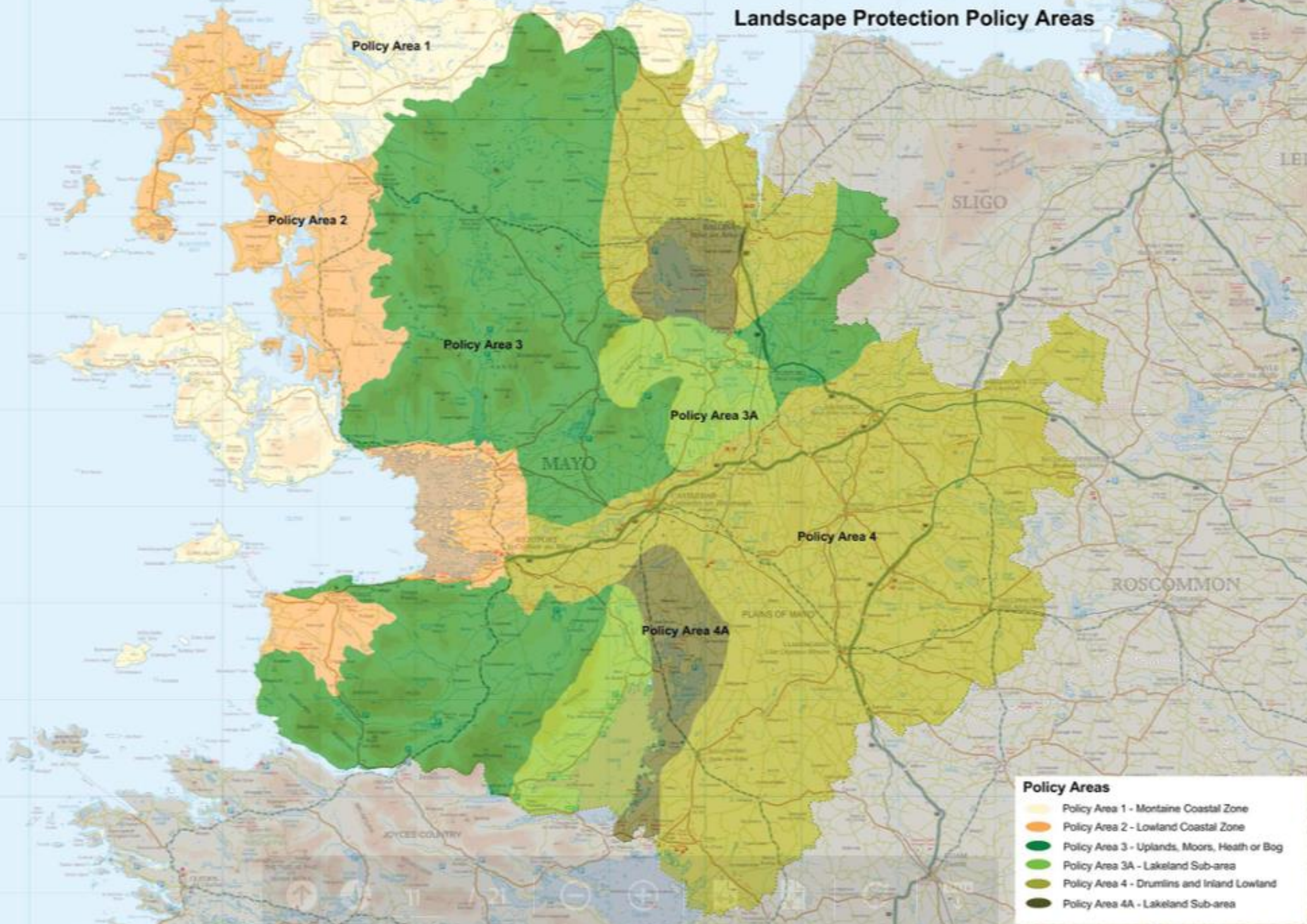
Green and Blue Infrastructure Policies

NEP 11	To recognise the economic, social, environmental and physical value of green infrastructure.
NEP 12	To seek to protect and expand the green infrastructure network within the county, where possible, and to encourage green infrastructure to be spatially connected to facilitate the extension or establishment of ecological corridors.
NEP 13	To promote and enhance green and blue infrastructure and seek to integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting and enhancing natural heritage and improving ecological corridors.

Green and Blue Infrastructure Objectives

































NEO 20	To prepare a Green and Blue Infrastructure Strategy for the County over the plan period, which will be incorporated into local area plans and non-statutory plans.
NEO 21	To identify green and blue infrastructure and sustainable design that supports biodiversity and natural systems to adapt to climate change, contribute to climate adaptation in the built and natural environment and provide co benefits.
NEO 22	To ensure the design and construction of new developments creates low carbon, walkable neighbourhoods and workplaces, while providing for high quality green infrastructure based on green space principles (see BEO 22 of Chapter 9), where appropriate.
NEO 23	To protect open spaces, with multifunctional green and blue infrastructure in developments, with connections to the wider network of open spaces and habitats.
NEO 24	To protect and enhance the county's floodplains and wetlands as 'green infrastructure' which provides space for storage and conveyance of floodwater, enabling flood risk to be more effectively managed and reducing the need to provide flood defences in the future, subject to normal planning and environmental criteria.

Mayo Landscape Appraisal Landscape Protection Policy Areas






Map 10.1 - Landscape Policy Areas

Development Impact - Landscape Sensitivity Matrix

	Wind farms	Power lines	Quarrying/ Extraction	Forestry	Commun- ication Masts	Industrial/ Commercial	Rural Dwellings	Road Projects
Policy Area 1								
Policy Area 2								
Policy Area 3								
Policy Area 4								

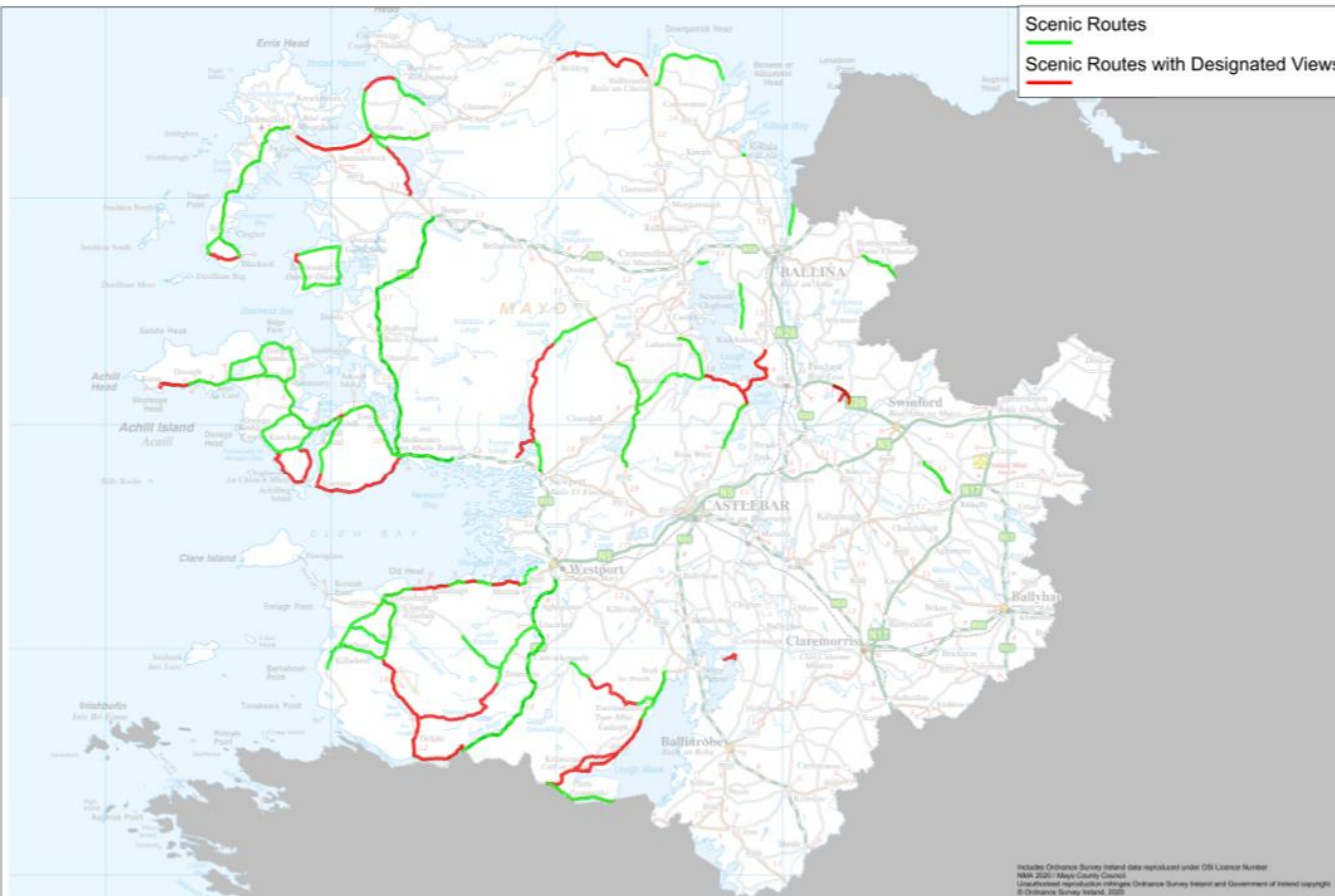
Key

-  = High potential to create adverse impacts on the existing landscape character. Having regard to the intrinsic physical and visual characteristics of the landscape area, it is unlikely that such impacts can be reduced to a widely acceptable level.
-  = Medium potential to create adverse impacts on the existing landscape character. Such developments are likely to be clearly discernible and distinctive, however with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level.
-  = Low potential to create adverse impacts on the existing landscape character. Such development is likely to be widely conceived as normal and appropriate unless siting and design are poor.

ig

Figure 10.1 - Landscape Sensitivity Matrix

Scenic Routes
 Scenic Routes with Designated Views



Includes Ordnance Survey Ireland data reproduced under OS Licence Number
 NMA 2020 / Mayo County Council
 Unauthorised reproduction infringes Ordnance Survey Ireland and Government of Ireland copyright
 © Ordnance Survey Ireland, 2020

Map 10.2 - Scenic Routes and Views

10.4.8 Landscape

Mayo has a varied and unique landscape. It includes a diversity of landscape types, ranging from rolling hills and lakes to peatlands, grasslands, woodlands, eskers and wetlands. The range of different landscapes found in Mayo each have varying visual and amenity values, topography, exposure and contain a variety of habitats. Each landscape type also has varying capacity to absorb development relative to its overall sensitivity. The landscape in County Mayo contains views and prospects worthy of protection.

All aspects of our natural, built, and cultural heritage come together in the landscapes we experience every day. The coastal and countryside landscapes of County Mayo are a key green and blue infrastructural asset, not only for their intrinsic value as places of natural beauty but also because of their importance in terms of recreation, tourism and other uses. It is recognised that our landscape contains key assets in sustaining a high quality of life for the residents of the county and an important sustainable tourism resource. The protection and management of the county's natural environment is a shared responsibility. Derived from our landscape are several amenities such as walkways, cycle ways, bathing areas, boating areas, fishing rivers and lakes, etc. and many of our valuable assets, such as Croagh Patrick, Westport House, Ballycroy National Park, Turlough House, Ballintubber Abbey, Céide Fields, Knock Shrine, Mayo Dark Skies, Great Western Greenway, Moy River, Tochar Phadraig, Atlantic Drive, Blue Flag Beaches and Islands.

The Landscape Appraisal for County Mayo identifies and describes the landscape character of each part of the County (Landscape Character Areas) and Scenic Routes and Views). The county is divided into six policy areas (see Map 10.1), relating to landscape protection and capacity to absorb development. The Landscape Appraisal includes a Landscape Sensitivity Matrix (see Map 10.2) that provides a general indication of the likelihood of success of planning applications for each development type, in each policy area. The Landscape Appraisal for County Mayo will be reviewed over the lifetime of the Plan following publication of the statutory guidelines for Planning Authorities on local Landscape Character Assessments, as detailed in the National Landscape Strategy 2015-2025. In addition, Map 10.2 illustrates the scenic routes and scenic routes with designated views for County Mayo. Mayo County Council seeks to safeguard these routes from inappropriate development, which would detract from the enjoyment of Mayo's outstanding landscape.

Landscape Policy

NEP 14

To protect, enhance and contribute to the physical, visual and scenic character of County Mayo and to preserve its unique landscape character.

Landscape Objectives

NEO 25

To consider applications for development, along Mayo's Scenic routes, that can demonstrate a clear need to locate in the area concerned, whilst ensuring that it:

- Does not impinge in any significant way on the character, integrity and distinctiveness of the area.
- Meets high standards in siting and design.
- Contributes to and enhances local landscape character.
- Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.

Rural housing applications along Scenic Routes must comply with the requirements set out in Objective RHO 3 (Chapter 3).

NEO 26

To consider applications for development, within Mayo's Coastal Areas and Lakeshores and within areas along scenic routes with designated scenic views, that can demonstrate a long-standing social link to the area concerned, whilst ensuring that it:

- Does not impinge in any significant way on the character, integrity and distinctiveness of the area.
- Cannot be considered at an alternative location.
- Meets high standards in siting and design.
- Contributes to and enhances local landscape character.
- Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.

Rural housing applications along Coastal Areas and Lakeshores must comply with the requirements set out in Objective RHO 4 (Chapter 3).

NEO 27

To ensure all development proposals are consistent with the Landscape Appraisal of County Mayo and the associated Landscape Sensitivity Matrix and future editions thereof.

NEO 28

To review the Landscape Appraisal for Mayo and update this plan, as appropriate, following publication of the statutory guidelines for Planning Authorities on Local Landscape Character Assessments, as detailed in the National Landscape Strategy 2015-2025 and ensure consistency with the provisions of RPO 4.16 and RPO 5.2(b) of the RSES, 2020-2032.

NEO 29

Require a Landscape/Visual Impact Assessment to accompany significant proposals, located within or adjacent to sensitive landscapes, where appropriate.

10.4.9 Coastal Zone

County Mayo has an extensive and varied coastline, which is one of the most valuable and sensitive natural resources in the county. Stretching over 1,150km or approximately 21% of the total coastline of the State, Mayo has the longest coastline in Ireland. The county's coastal areas are home to a range of habitats and ecosystem services, whilst also having significant aesthetic, leisure and economic value. Mayo's coastal ecosystems are highly productive containing high biological diversity, rich fishery resources and significant seabed minerals. The majority of Mayo's coastal waters are ecologically protected and form part of the Natura 2000 network of European Sites. Coastal areas also form attractive and traditional settlement forms and are home to many communities in the county.

Coastal areas are also among the most vulnerable areas to climate change and natural hazards. The impact of climate change on Mayo's coastline is already evident, and further increases in relative sea levels, indicate that coastal areas will be increasingly susceptible to permanent inundation and erosion. These impacts are far reaching and are already changing the lives and livelihoods of coastal communities. In order to effectively adapt to climate change in coastal areas in Mayo, a high level of understanding of the coastal system is required, supported by effective monitoring of vulnerable locations, identifying where and when remedial action is necessary. An integrated coastal management approach is also warranted, to enhance the protection of coastal resources, whilst increasing the efficiency of their uses. This will contribute to the sustainable development of coastal zones by the application of an approach that respects the limits of natural resources and ecosystems, known as the 'ecosystem-based approach'.

The National Marine Planning Framework will provide for an integrated marine planning system for more sustainable, effective management of marine activities, such as nature protection, aquaculture, fisheries, agriculture, industry, offshore wind energy, shipping, tourism, development of infrastructure and mitigation and adaptation to climate change. In Ireland, the forthcoming National Marine Planning Framework provides for an integrated marine planning system for more sustainable, effective management of marine activities.

Coastal Zone Policies

NEP 15	To protect the character, visual, recreational, ecological and amenity value of the coast and provisions for public access, while recognising the needs of coastal communities to live, work and interact with the coast.
NEP 16	To maintain and enhance our natural coastal defences to increase resilience to climate change.

Coastal Zone Objectives

NEO 30	To ensure that the county's natural coastal defences, such as beaches, sand dunes, coastal wetlands and estuaries are not compromised by inappropriate works or development.
---------------	--

NEO 31	To ensure that any conservation works on coastal dune systems shall be carried out in accordance with best practice, subject to ecological impact assessment and Appropriate Assessment, as appropriate
NEO 32	To investigate how the county's natural coastal defences can be enhanced to increase the climate resilience of our coastal communities.
NEO 33	To ensure any new development within areas liable to coastal flooding are assessed and developed in accordance with the Flood Risk Management Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government and Office of Public Works, 2009) (as updated).
NEO 34	To protect the coastal zone through the protection, enhancement and maintenance of the current status of the designated Blue Flag beaches and Green Coasts and seek to increase the number of beaches and coasts holding this status in the future
NEO 35	As part of the implementation of Climate Ready Mayo, Climate Adaption Strategy, develop in consultation with key stakeholders, an Integrated Coastal Zone Management Plan for County Mayo to preserve, enhance and develop protected habitats of coastal ecosystems, dunes and wetlands, as well as protect critical infrastructure and assets from damaging storm surges.
NEO 36	Ensure new developments take account of future risk from coastal erosion/storm surges and sea level rise, including the identification and restriction of development in coastal erosion zones where appropriate, and ecosystem-based adaptation actions to manage climate risk and build resilience to climate change.

10.4.10 Water Quality

Water quality is a key issue that affects us all and its protection is the responsibility of all sections of society. Ensuring that our local natural water bodies are clean and well protected is critically important to our health and wellbeing. A healthy catchment provides high quality drinking water and supports local livelihoods such as agriculture, food production, tourism and water based recreational activities (walking, swimming, angling and water sports). It also sustains and supports water-dependent ecosystems (plants, animals, fish and insects) that depend on clean, healthy waters to survive.

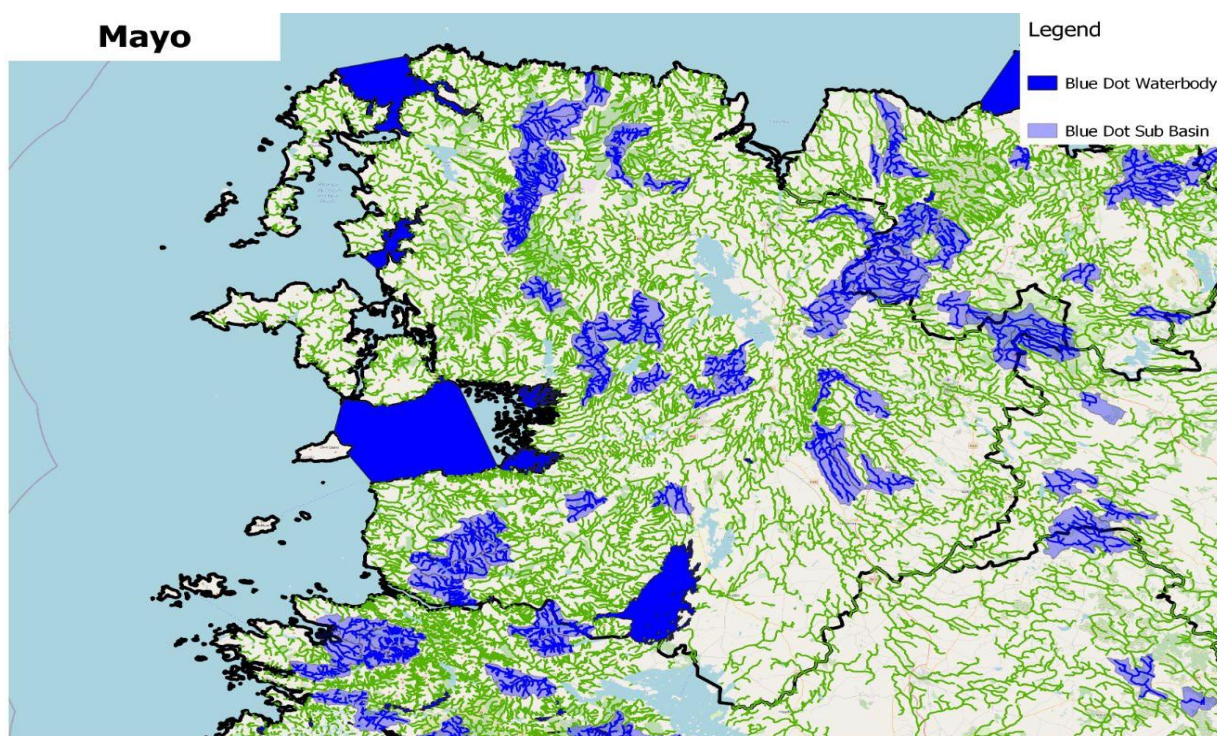
The quality of all waters in County Mayo, including surface waters (rivers and lakes), estuarine and coastal waters and groundwater, represents an important ecological, recreational, economic, public health and aesthetic resource for the county. The quality of water can be easily damaged and is difficult to restore, leading to often widespread and long-term effects. Mayo County Council has responsibility for the protection of all waters in the county. The Council has an important role to play in the protection, maintenance and improvement of water quality through the planning and management of future development.

10.4.10.1 Water Framework Directive

The EU Water Framework Directive (WFD) is an important piece of environmental legislation, which aims to improve our water quality. It applies to rivers, lakes, groundwater, estuaries and coastal waters. The WFD requires the preparation of River Basin Management Plans by Member States across three river basin planning cycles (2009-2015, 2016-2021 and 2022-2027) during which management measures must be implemented, to achieve good ecological status in all waters. Achieving good water quality, through the programme of measures, will also contribute to protecting human health by improving the quality of drinking water sources and bathing waters. The WFD is linked to several other EU directives in numerous ways. These include directives relating to the protection of biodiversity (Birds and Habitats Directives), directives related to specific uses of waters (drinking water, bathing waters and urban wastewater directives) and to directives concerned with the regulation of activities undertaken in the environment (Industrial Emissions and Environmental Impact Assessment directives). The Nitrates Directive forms an integral part of the WFD and is one of the key instruments in the protection of waters against agricultural pressures.

10.4.10.2 Blue Dot Catchments Programme

The 'Blue Dot Catchments Programme' is a key action under the River Basin Management Plan for Ireland 2018-2021. The aim of the 'Blue Dot' programme is to protect and restore high ecological status to a network of river and lake catchments. Map 10.3 below illustrates the Blue Dot high-status waterbodies and sub-basins in County Mayo. The Council will take a precautionary approach to development which impacts on water quality, and particularly High-Status waters, in keeping with the protection objective of the WFD.



Map 10.3: Blue Dot High-Status Waterbodies and Sub-basins in County Mayo

10.4.10.3 Drinking Water Protected Areas

The WFD requires the identification of Drinking Water Protected Areas. These are reservoirs, lakes, rivers and the groundwater bodies from which water is abstracted to provide water for people to drink. The Council will seek to protect both ground and surface water resources and will work with Irish Water to develop and implement Drinking Water Safety Plans to protect sources of public water supply and their contributing catchment. Mayo County Council will also work with the National Federation of Group Water Schemes in respect of Source Protection Plans for Group Water Schemes to protect these sources.

Groundwater Protection Scheme and Source Protection Zones

The Geological Survey of Ireland has completed a Groundwater Protection Scheme for County Mayo. The overall aim of this scheme is to preserve the quality of groundwater, particularly for drinking purposes, for the benefit of present and future generations. A key component of the Groundwater Protection Scheme is Source Protection Zones (SPZs), which are delineated around groundwater sources to provide protection, by placing tighter controls on activities within those areas. SPZs are derived by integrating source protection areas (areas surrounding individual groundwater sources) and vulnerability categories.

The Council will take a precautionary approach to development in Source Protection Zones. Development proposals which pose a potential risk to groundwater within these zones will be required to demonstrate that no reasonable alternative site is available, and that groundwater quality will be protected to the satisfaction of the Council.

Water Quality Policies	
NEP 17	To promote public awareness of water quality issues and the measures required to protect surface water, coastal and transitional waters and groundwater bodies from inappropriate and damaging development.
NEP 18	To co-operate with the EPA and other authorities in the continued implementation of the EU Water Framework Directive.
NEP 19	To protect existing groundwater sources and aquifers in the county and to manage development in a manner consistent with the protection of these resources.
NEP 20	To meet our targets to achieve 'good status' in all water bodies in compliance with the Water Framework Directive and to cooperate with the implementation of the National River Basin Management Plan 2018-2021, and subsequent plans.
NEP 21	To manage, protect and enhance surface water and ground water quality to meet the requirements of the Water Framework Directive.
NEP 22	To encourage the use of catchment-sensitive farming practices, in order to meet Water Framework Directive targets and comply with the River Basin Management Plan.

NEP 23	To promote the construction of Anaerobic Digesters at appropriate location in Mayo with a view to improving water quality while at the same time making a significant contribution to National Renewable Energy targets.
---------------	--

Water Quality Objectives

NEO 37	To ensure that the Water Framework Directive, the River Basin Management Plan and any subsequent Water Management Plans are fully considered throughout the planning process.
---------------	---

NEO 38	To ensure, through the implementation of the River Basin Management Plan(s) and the associated Programmes of Measures and any other associated legislation or revised plans, with all relevant stakeholders, the protection and improvement of all drinking waters, surface water, coastal and transitional waters and ground waters throughout the county.
---------------	---

NEO 39	To manage in a sustainable manner, the existing groundwater sources and aquifers in the county and manage development in a manner consistent with the sustainable management of these resources, in conformity with the EU Environmental Objectives (Groundwater) Regulations 2010 and the second cycle National River Basin Management Plan 2018-2021, and any subsequent plans and the Groundwater Protection Scheme.
---------------	---

NEO 40	To protect groundwater sources through the implementation of the Groundwater Protection Scheme and Source Protection Zones. Development proposals within these zones which have the potential to pose a risk to groundwater will be required to demonstrate that no reasonable alternative site is available, and that groundwater quality will be protected to the satisfaction of the Council.
---------------	--

NEO 41	To protect both ground and surface water resources and to work with Irish Water to develop and implement Drinking Water Safety Plans, to protect sources of public water supply and their contributing catchment, and to work with the National Federation of Group Water Schemes, in respect of Source Protection Plans for Group Water Schemes to protect these sources.
---------------	--

NEO 42	To comply with the Blue Dot Catchments Programme and protect and restore high status water bodies in County Mayo and ensure all proposed development which may have an impact on a high-status water quality site will require site specific assessment to determine localised pressures and demonstrate suitable mitigation measures, in order to protect these sites.
---------------	---

NEO 43

To protect through its regulatory controls and in conjunction with the Local Authority Waters Programme, water bodies with 'high ecological status', to restore water bodies that have fallen below 'high ecological status', to maintain water bodies at 'Good Status' and to mitigate threats to water bodies identified as 'At Risk' i.e. 'Moderate and Poor Status'.

10.4.11 Air Quality, Noise and Light Emissions

Ireland benefits from prevailing weather patterns which typically brings relatively clean, south-westerly Atlantic air over the country. Under certain conditions, typical weather patterns can be disrupted and pollutant emissions can build up in the air. These conditions can occur at any time of the year, but the impact on air quality can be particularly severe during winter, when the combination of cold still weather, increased emissions associated with a higher heating demand, particularly from solid fuels, can lead to high concentrations of pollutants with a consequent increased risk to human health. Poor air quality is a major health risk for vulnerable people and also impacts the environment, affecting the quality of fresh water, soil, and ecosystems. Air pollution can also damage materials and buildings and some air pollutants behave like greenhouse gases that cause climate change. Therefore, good air quality is a benefit for human health, the built and natural environment and to combat climate change.

Noise pollution can occur in various locations, such as building sites, heavily trafficked roads, industrial sites, etc, all of which can have significant impacts on the environment and on the quality of life of individuals, residential areas and communities in the vicinity.

It is recognised that adequate lighting is necessary to ensure a safe and secure environment, however, both urban and rural settings are affected by light pollution. Light spillage from inadequately designed lighting is increasingly recognised as a potential nuisance to nearby properties and a threat to wildlife and their habitats, particularly in relation to European sites. It can also be a waste of energy and can reduce the visibility of the night sky, which would be detrimental to the enjoyment and sustainability of the Mayo International Dark Sky Park, located in the Wild Nephin Ballycroy National Park. The Plan encourages the use of Dark Sky Friendly lighting for all new lighting and lighting upgrades.

Air Quality, Noise and Light Emissions Policies

NEP 24

To support and facilitate the implementation of the Air Quality Regulations.

NEP 25

To promote the implementation of the Noise Directive 2002/49/EC and associated Environmental Noise Regulations 2006, as amended.

Air Quality, Noise and Light Emissions Objectives

NEO 44	Promote the achievement of best ambient air quality, compatible with sustainable development, in accordance with the EU Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) and by ensuring that all air emissions associated with new developments are within Environmental Quality Standards as set out in the Air Quality Standards Regulations 2011 (SI No. 180 of 2011) (or any updated/superseding documents).
NEO 45	To raise awareness of artificial light pollution and identify where lighting improvements or adjustments can be made to reduce its impact, where appropriate.
NEO 46	To protect the Mayo Dark Sky Park at Wild Nephin Ballycroy National Park and any adjoining sites that form part of the designated network, from adverse levels of artificial light pollution and encourage the use of Dark Sky Friendly lighting for all new lighting and lighting upgrades.