



# Northwest Five Year Forest Plan 2021-2025

## Foreword

I have great pleasure in publishing Coillte’s Northwest Five Year Forest Plan for our forests. The purpose is to set out plans for the forest and non-forest business that will take place in the BAU (Business Area Unit) during the plan period. In practicing sustainable forest management Coillte’s aim is to develop its forests in a way that is environmentally, socially and economically sustainable. A key part of our business is sharing our plans with our neighbours, communities and stakeholders and endeavouring to incorporate their views where possible.

The topics covered in the five year forest plan include:

### **Commercial Forest Planning:**

- Tree Planting
- Timber Harvesting
- Timber Sales
- Forest Roads and Access
- Licenses and Lettings
- Recreation
- Land Acquisition and Property Sales
- Non Forest Business such as Renewable Energy

### **Forest Planning for public benefits and public use:**

- Community facilities and benefits
- Recreational and tourism infrastructure and partnerships
- Access to our forests
- Environmental enhancement measures such as biodiversity and nature conservation

### **Forest Planning for sustainable use of resources:**

- Sustainable Forest Management
- Long Term Retention of Trees
- low impact silvicultural systems
- water quality
- forest design
- use of chemicals

Colm O’Dwyer

BAU Manager

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<sup>1</sup> Growing, cultivating and felling trees

## Statement of Compliance with Principles of Sustainable Forestry Management

The Coillte estate is a rich, high quality environmental resource, with the potential to interact with people, landscape, water and biodiversity. As such, Coillte recognises and seeks to minimise any potential adverse impacts of our business on the environment through responsible environmental management.

As part of our commitment to the stewardship of our forests, we seek and welcome comments and suggestions from stakeholders with regard to environmental issues. Through this partnership approach we also encourage co-operation from our stakeholders.

As a prerequisite to all our operations, Coillte is committed to the protection of the environment from all of our operations and activities associated with our forestry, property sales and energy businesses.

Our objectives are to:

1. Implement an organisation-wide system for managing environmental issues. The Director of Stewardship, Risk and Advocacy has responsibility for managing the implementation of our environmental management system (EMS).
2. Manage our business in full compliance with all applicable laws, directives and regulations, as well as voluntary external accredited schemes to which we subscribe e.g. the Forest Stewardship Council<sup>®2</sup> (FSC<sup>®</sup>) and the Programme for the Endorsement of Forest Certification (PEFC<sup>™</sup>).
3. Prevent negative environmental impacts through a system of operational controls that include communication, written instructions and appropriate training
4. Continually improving environmental performance by setting and reviewing objectives & targets related to significant environmental risks and putting into effect programmes to reduce those risks.
5. Communicate, as appropriate, to Coillte staff and stakeholders, contractors and their employees and the communities within which we operate.

Colm O'Dwyer  
BAU Manager

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<sup>2</sup> FSC licence code FSC- C005714

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## **1. Coillte and Five Year Forest Plans**

### **1.1 Coillte**

Coillte is Ireland's leading forestry company and largest supplier of timber in Ireland with operations in timber panel production, renewable energy and land management. Our core purpose is to manage our forests sustainably and enable a vibrant forestry sector in Ireland. As the largest landowner in Ireland we enable the development of renewable energy projects on our lands in order to address climate change.

#### **History**

Coillte was established under the Forestry Act of 1988 as a private limited company registered under and subject to the Companies Acts 1963-86. All of the shares in the company are held by the Minister for Agriculture, Food and the Marine and the Minister for Public Expenditure and Reform on behalf of the Irish State. The Board of Directors is appointed by the Minister for Agriculture. Coillte commenced trading in 1989 when it acquired ownership and management of the Irish State's forests.

#### **Coillte Today**

The company is a forestry and forest products business, with interests in renewable energy. The company has three operating divisions - Coillte Forest, who manage all aspects of the forestry business, a Land Solutions business and Medite Smartply, a leading manufacturer of sustainable timber construction panels.

The company employs approximately 800 people across Ireland and the UK. Our business supports and enables a vibrant forestry sector in Ireland which is estimated to provide over 12,000 jobs, mostly in rural Ireland.

The Forest Service (Department of Agriculture, Food and the Marine) is the forest authority in Ireland and regulates the forest industry. The Forest Service is responsible for ensuring the development of forestry within Ireland in a manner and to a scale that maximises its contribution to national socio-economic well-being on a sustainable basis that is compatible with the protection of the environment.

#### **Nature Conservation and Biodiversity**

The Coillte estate consists of a varied tapestry of different habitats, ranging from conifer forests and mixed or broadleaved forests, to open bogs and heathlands, to lakes and rivers. Independent ecologists have identified the areas on our estate with the best value for biodiversity. These are then mapped and managed by Coillte as biodiversity areas. Currently, 90,000 hectares of our lands (about 20% of the estate), in more than 2,300 sites, are mapped as biodiversity areas where nature conservation and biodiversity enhancement are the primary management objective. We work with and respect nature across all of our forest lands, identifying, mapping and protecting important features of biodiversity. A list of important wildlife and their habitats and species in this BAU can be found in Appendix II of this five year forest plan (insert link to Appendix II)

#### **Outdoor Recreation**

Coillte operate an open forest policy and welcome all visitors to our lands according to the 'Leave no Trace' principals. As Ireland's leading provider of outdoor recreation we have more than 260 forest recreation sites for you to enjoy. For more information on how to get out and enjoy the outdoors and for details of all our recreation sites see <http://www.coillte.ie/our-forests/explore/>

### **1.2 Renewable Energy**

Coillte is committed to the development of renewable energy in Ireland, as we move towards a sustainable future with enhanced energy security. As the largest provider of high quality sites to the renewable energy sector, Coillte is making a significant contribution to Ireland's 2030 target of achieving 70% of its electricity consumption from renewable sources. Coillte is fully aligned with government and EU policy in terms of the role we play in relation to renewable energy development in Ireland.

Ireland's dependence on imported fossil fuel has left energy consumers vulnerable in terms of energy security, energy price volatility and exposure to carbon taxes. Reducing Ireland's reliance on fossil fuel imports, reducing our greenhouse gas emissions and improving domestic fuel security are key pillars for developing a green economy.

Coillte has already made a significant contribution towards the development of renewable energy in Ireland over the last 20 years. Over the course of the five year forest plan period and beyond, Coillte has a very important role to play, both as a developer and a land owner, in helping Ireland reach its 2030 renewable energy targets and in helping reduce Ireland's carbon emissions. Coillte proposes to do this through facilitating the development of multiple renewable energy technologies. In terms of developing our renewable energy resources we are committed to:

- Open and transparent public participation and consultation in renewable energy projects with stakeholders and local communities.
- Best in class Environmental Impact Assessment and Appropriate Assessment that enhances and preserves local ecology and the habitats therein.
- Complying with all relevant environmental legislation, health and safety legislation, regulations and other requirements as they arise.
- Minimising the impact of wind farm development on the surrounding landscape and surrounding forestry in so far as that is possible through careful siting and design.
- Considering the impact on recreational users, and also the opportunity there may be when developing a wind farm to develop enhanced recreational facilities.
- Mitigating against the risk of pollution and conducting our business in an environmentally friendly way.

### **1.2.1 Public Participation and Consultation for renewable energy projects**

Coillte supports proper planning and sustainable development and fully recognises that the development of renewable energy projects must afford appropriate protection to the social, environmental and economic pillars of sustainability. We are committed to ensuring that people are aware of our plans and policies and that we present all of our information in a clear and understandable manner.

Coillte's policy is to consult widely with national and local stakeholders in all stages of the wind farm development from pre-planning, development and operational phases. In addition, all projects developed by Coillte provide a Community Benefit mechanism as part of the project.

While not currently a statutory requirement of the Irish planning system, Coillte insists that, in all instances where wind turbines are proposed on the Coillte estate, the relevant host community is consulted about that proposal prior to any Planning Application being lodged with the relevant Planning Authority. As part of Coillte's commitment to the responsible stewardship of its forests, it seeks and welcomes comments and suggestions from stakeholders about how it manages its forests in the most responsible way for the benefit of society and future generations.

### **1.2.2 Wind Energy**

Coillte's lands possess some of the best onshore wind regimes in Ireland due, inter alia, to its altitude, aspect and location. It is also often particularly suitable for wind farm development due to its remoteness, accessibility, distance from dwellings and visibility relative to areas with high scenic amenity.

Coillte is aware that wind energy is a proven technology and according to the Irish Wind Energy Association (IWEA), it provided 24% of our Irish electricity demand in 2015. As outlined in the White Paper 'Ireland's Transition to a Low Carbon Energy Future 2015-2030', Coillte too recognises

that “onshore wind will continue to make a significant contribution”<sup>3</sup> to meeting Ireland’s energy needs.

Due to the fact that there are many myths concerning wind energy developments, Coillte has developed a Frequently Asked Questions document on this subject matter. Should you require further information regarding Coillte’s involvement in the wind energy industry, please do not hesitate to contact us at **info@coillte.ie**

### **1.2.3 Biomass**

The key guiding principle for Coillte’s vision is that Ireland’s biomass is a limited and valuable indigenous resource and should be harnessed in a way that maximises value throughout the supply chain. Coillte does so by providing competitive, long term and secure biomass fuel supply contracts for its woodchip clients and also assists in the evaluation of both the technical and commercial viability of projects for large scale industrial energy users. Coillte continues to play a key leadership role in delivering sustainable biomass energy solutions to the Irish biomass industry through its regional processing hub supply model. We operate a number of regional biomass fuel supply hubs throughout the country. Coillte provide full chain of custody from forest to boiler (“stump to steam”) and all wood chip is produced strictly in accordance with quality specifications set out in I.S. CEN/TS 14961: 2005, with a significant emphasis on optimisation of wood flow to minimise haulage distances for all transportation required. Coillte processing hub now support a range of supply chain jobs and underpins significant annual energy and carbon savings for its clients. Should you require any further details regarding Coillte’s involvement in the biomass industry, please do not hesitate to contact us at **biomass@coillte.ie**.

### **1.2.4 Other Renewable Technologies**

In addition to playing a leadership role in wind energy and biomass production, Coillte is currently engaged in a process to assess the potential opportunities for solar energy on the Coillte estate. Coillte is also assessing recent technology developments in the area of energy storage. Furthermore, the potential for hydro energy may also be considered on the estate along with any other emerging technologies. Work is underway to understand these technologies and their potential application for Coillte, either being integrated into our existing energy projects or developed as standalone projects in the future.

## **1.3 Coillte’s Resource Management Approach**

During 2011 and 2012 a major project was undertaken within Coillte Forest to review fundamentally our approach to managing our forest resource. The underlying objective of this work is to use optimisation techniques to ensure we are maximising the return from the land resource in a balanced and sustainable manner. In 2013 this project moved into implementation phase and, after a successful pilot programme, has now been adopted as the primary planning tool for Coillte forest. The schedule itself is built through running a management model. It is important that the model reflects the costs and benefits of all possible actions, the crop and site types and the circumstances under which each action is allowed, and the relevant management objectives and constraints operating at a strategic and local level.

As the model was developed and refined each BAU was consulted on the model as it applies to their area. The outputs of the management model may span multiple years or decades and in this format, will be used as a strategic resource management tool. A major benefit of the approach to Coillte is the speed with which a new national activity schedule is generated which reflects, for example, the impact of storm or a significant shift in markets. In extreme cases a stand may have its scheduled fell year shifted as frequently as every quarter, as the model is re-run to incorporate emerging information on demand or crop parameters.

This is why forest management principles, objectives and constraints are reflected into the model and form the basis the BAU plan. Once these principles are agreed, each model run during the

<sup>3</sup><http://www.dcenr.gov.ie/energy/SiteCollectionDocuments/Energy-Initiatives/Energy%20White%20Paper%20-%20Dec%202015.pdf>

lifetime of the BAU Five Year Forest Plan will comply with the principles, as will the ensuing harvest schedule. The harvest activity levels are available to view on our Webmap , these draft activity levels are based on an initial run. Where changes occur due to public feedback or from other influences e.g. environmental or policy, which cause an increase of over 20% in activity within a property these areas will be published on Coillte’s website as having changed significantly since initial publication.

#### **1.4 Benefits of Coillte to the public**

As the largest provider of timber and timber products in Ireland Coillte enables a vibrant forest sector employing around 12,000 people, mostly in rural Ireland. In addition to these benefits to the economy in terms of sustainable forest products and energy production, Coillte’s forests provide a range of social, environmental, recreational, health and tourism benefits to the State and its people.

Coillte operate an open forest policy and welcome over 18 million visitors to our lands each year. We provide over 260 forest recreation sites, twelve forest parks, six dedicated mountain bike trails and more than 3,000 km of walking trails on our lands. We are members of Leave No Trace Ireland and work closely with them to promote responsible use of the outdoors. Coillte also manage over 20% of our forest estate exclusively for nature conservation and biodiversity protection. Our forests are multi-use and commercial timber management and recreation are not exclusive of each other and can and do exist side by side on the Coillte Estate. Habitat restoration projects such as Coillte’s EU funded LIFE Projects, and recreation partnerships like the Dublin Mountains Partnership are showcase projects that demonstrate best practice in natural resource management.

##### **1.4.1 Trees, Carbon and Climate Change**

In addition to being important resources for construction and for energy production our forests are also important natural systems for capturing and storing carbon from the atmosphere. Carbon dioxide is perhaps the main gas responsible for climate change and trees are key to the battle against it.

As they grow, trees remove carbon dioxide gas from the air. They convert this carbon into wood while at the same time releasing pure oxygen back into the atmosphere. This is incredibly valuable, ensuring forests, with thousands of trees are both an effective carbon store and carbon sink.

The quicker a forest grows, the more carbon it removes from the atmosphere. Conifers grow at a faster rate than other trees, which is why they are perfect for carbon sequestration. Our fastest growing conifers have an average growth rate of 18 cubic metres per year compared to an average of 4 cubic metres for slower growing broadleaf tree.

If managed appropriately, commercial forests can have an advantage over natural forests in terms of removing and storing carbon.

Maturing trees in a natural forest can lose as much carbon to the atmosphere through decay as they absorb through growth. A managed forest however will continue to absorb carbon over multiple generations, as trees are harvested at maturity and replaced with new young trees. This maintains a rapid rate of carbon sequestration.

The timber products made from forest wood also lock carbon away, which means that using timber products for construction in place of more conventional materials such as bricks, concrete and steel also leads to further net reduction of carbon emissions.

In summary, well managed plantation forests have a triple benefit in combating climate change:

- 1) Tree absorb carbon from the atmosphere.
- 2) This carbon is then stored in timber products after harvesting.
- 3) Timber products can substitute carbon heavy products like concrete and steel.

And finally, trees are always replanted after harvesting to restart the cycle of absorption again.

Coillte consult with local communities in a number of ways, for example through planning consultation process, through direct liaison via annual BAU consultation meetings, through our online portal and directly through operational consultation. Coillte endeavour at all times to accommodate the requirements of stakeholders where possible.

#### 1.4.2 Coillte Nature

Coillte Nature is the not-for-profit branch of Coillte that is dedicated to the restoration, regeneration and rehabilitation of nature across Ireland. Our mission is to deliver real impact on the climate and biodiversity crises through innovative projects-of-scale across four strategic themes:

- Reforesting our landscapes by planting new native woodlands on un-forested land
- Restoring important biodiversity areas by investing in major habitat improvements
- Regenerating urban forests for the benefit of people and nature
- Rehabilitating ecosystem services by bringing sensitive or degraded lands into better health

For more information, see [www.coillte.ie/coillte-nature/](http://www.coillte.ie/coillte-nature/)

### 1.5 Meeting external challenges and constraints

Coillte and all of its forests, lands and operations are subject to a number of key external factors. Typically these arise as policies or legislation relating to forestry which drive change and can have a major influence on our future. Understanding and anticipating these factors is vital in order to manage change proactively rather than responding to it reactively and Coillte work proactively with our key statutory and non-statutory regulators. The following table outlines some of the principal challenges and commitments. The five year forest plans will each contribute to meeting these challenges and constraints.

#### 1.5.1 Statutory and non-Statutory regulation and certification of forestry

	Response
<p><b>National Forestry Programme 2014-2020</b>            "To develop an internationally competitive and sustainable forest sector that provides a full range of economic, environmental and social benefits to society and which accords with the Forest Europe definition of sustainable forest management ."</p>	<p>In response to the National Forestry Programme:            Coillte will set and meet targets for the national timber supply.            Coillte will seek to increase the recreational value of some of its forests.            Coillte will continue to manage 20% of all its forests exclusively for nature conservation and biodiversity</p>
<p><b>National Biodiversity Plan</b>            Ireland is a signatory to the 1992 Convention on Biological Diversity and is committed to biodiversity protection and enhancement measures in the National Biodiversity Plan.</p>	<p>Coillte is making a meaningful contribution to the National Biodiversity Action Plan through the designation of 20% of its forest estate overall for nature conservation and biodiversity management.            Coillte initiated a partnership with the National Biodiversity Data Centre based in Waterford which currently holds more than 85,000 records of different species of animals and plants from Coillte lands.</p>

<p><b>EC Habitats Directive and EC Birds Directive (92/43/EEC)</b> as transposed into Irish law under the S.I. No. 477 of 2011 EUROPEAN COMMUNITIES (BIRDS AND NATURAL HABITATS) REGULATIONS 2011.</p> <p>The EU Directive on the conservation of natural habitats and of wild fauna and flora provides for the protection of habitats and their species, and where necessary their restoration to favourable conservation status.</p>	<p>Coillte is committed to achieving or maintaining favourable condition of all of the Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHA) on its lands.</p> <p>All forest operations which potentially could impact on such sites are assessed under the criteria outlined as required by the Regulations.</p>
<p><b>Water Framework Directive (2000/60/EC)</b></p> <p>The EU Water Framework Directive establishes a framework for the protection of rivers, lakes, coastal and ground waters by requiring States to achieve good ecological status for all waters, ensuring that status does not deteriorate in any waters. The summary timetable and work programme for the production of the second cycle of River Basin Management Plans (RBMPs) 2015-2021 was published in July 2015. In addition a Significant Water Management Issues (SWMI) report will be published and will be open to public consultation until December 2015. This will feed into the draft River Basin Management Plans for 2015-2021 to be published in December 2016. The RBMPs will be open to further public consultation with a view to publish an updated and final version in December 2017.</p>	<p>National Surface and Drinking Water Regulations have been enacted since 2007 to give legal status to the criteria and standards to be used for classifying surface waters in accordance with the ecological objectives approach of the Water Framework Directive. The classification of waters is a key step in the river basin management planning process and is central to the setting of objectives and the development of programmes of measures. Waters classified as ‘high’ or ‘good’ must not be allowed deteriorate. Waters classified as less than good must be restored to at least good status within a prescribed timeframe. The environmental targets or goals and the programmes of measures (POMs) to be included in river basin management plans must therefore reflect these requirements.</p> <p>Coillte has been proactive with the regulatory agencies, such as the Forest Service, Inland Fisheries Ireland, Local Authorities, EPA and NPWS, in deriving POMs to be implemented by the forest sector in avoiding and/or minimising the potential impact of forest activities on water quality. A central tenet of the POMs is the adherence to the Forest Service Code of Best Forest Practice and Guidelines, including all relevant regulations and requirements, and the Forest Standards for Ireland (National, FSC and PEFC). Furthermore, compliance will be assessed by way of independent audits by the Forest Service, the FSC and PEFC.</p>
<p><b>Sustainable Forest Management (SFM)</b></p> <p>SFM is the forestry sector’s response to sustainable development. Balancing the economic, environmental and social elements is now the accepted way by which forest management is conducted. Forest certification ensures best forest practice is implemented and provides stakeholders with an opportunity to contribute to the management of forests. Compliance with forest certification standards is assessed annually by independent auditors.</p>	<p>Coillte is fully committed to a policy of sustainable management of all of its forests and forest lands. Coillte applied for FSC certification of its forests in 2000 and were awarded an FSC certificate in 2001. Coillte applied for PEFC certification of its forests in 2013 and were awarded a PEFC certificate in 2014. These external forest management certification schemes endorse Coillte’s policy of sustainable forest management, balancing the social, economic and environmental aspects of forest management.</p>

### 1.5.2 Pests and Diseases

Coillte also respond to external factors that have a significant impact on its forests. One example is the disease *Phytophthora Ramorum* also known as sudden oak death which has been detected in a number of BAUs. Another is *Chalara fraxina* which is a serious fungal disease of ash trees. This has caused widespread damage to ash populations in continental Europe and was recently detected in a number of privately owned forests.

Coillte liaise closely with Forest Service with regard to this significant potential threat to our Ash woodlands and will respond immediately to any mitigation measures proposed.

In addition, Coillte carry out forest health surveys of its estate and assist in the monitoring of nationally important forest pests such as *Ips typographus*, the eight-toothed bark beetle, where appropriate.

### **1.5.3 Societal Expectations**

A number of changes in modern society also impact Coillte's management and planning for its forest estate and these include:

- A greater awareness of environmental issues amongst the public leading to a demand for higher standards of environmental protection.
- Coillte has responded to an increased appreciation of landscape and of the place of forests in the landscape by new policies and practices in relation to forest design and by new approaches to felling decisions, in particular looking at alternatives to extensive clear felling where possible.
- A higher demand for access, recreational and tourism facilities in forests and in the types of recreation demanded – Coillte practices an open forest policy where all of its forests are open for walking, and has increased its provision of special trails including improved provision of waymarked ways and looped walks, mountain bike trails and nature trails. Coillte frequently enters into partnerships with local communities, local development and tourism groups, county councils, and with development bodies such as Fáilte Ireland, Waterways Ireland and the Fisheries Boards to achieve such provision.

### **1.5.4 Illegal Dumping**

Due to the vast and rural nature of the Coillte forest estate, illegal dumping has become a major issue for Coillte with sites close to urban centres being particularly prone to this criminal activity. Illegal dumping in our forests is not just an unpleasant eyesore, it is an environmental hazard and causes serious problems to habitats, species, and human health. It can pollute rivers and drinking water sources, damage biodiversity and is a threat to both the people who live in the area and recreational users. In addition, it poses a health and safety risk to those staff and contractors who are tasked to remove this illegally dumped litter.

In order to deter illegal dumping Coillte install CCTV cameras and signage in illegal dumping hotspots and investigate all reports of dumping on our forest lands. When evidence is found at dumping sites, litter wardens issue fines and pursue prosecutions. Coillte also work closely with local authorities to seek prosecutions against those who are responsible for illegal dumping.

Coillte also participate in a number of community and local authority initiatives. Coillte would ask the public to be vigilant and report any suspected cases of illegal dumping to the authorities.

### **1.5.5 Forest Fires**

Forest fires can have a number of serious impacts for Coillte. These include financial losses as well as having an impact on the wider forest industry by disrupting timber supplies from Coillte to the saw mills. There are significant re-establishment cost following a forest fire. There is also potential health and safety risk to emergency personnel, staff and contractors involved in fire control and to members of the public. In addition, environmental impacts include damage to recreation facilities and endangered species.

It is Coillte's policy to minimise areas damaged by fire with effective prevention and fire control measures. Forest fires can occur through the year but the risk is greatest during dry spells from March to June when ground vegetation is dormant and dry. Fire Plans are developed for all forest properties including a map showing access routes and assembly points for fire-fighting personnel, equipment and potential sources of water. As part of Coillte's health and safety programme all Coillte personnel and selected volunteers involved in fire-fighting duties must attend a one day Coillte fire training course. The one day course aims to equip everyone with the skills and knowledge required to carry out forest fighting duties in a safe and effective manner. On completion of training they will receive a certificate and a fire grab bag containing personal supplies relevant to firefighting. BAU Team Leaders have the authority to avail of helicopter services based on input from Operations Managers, and in consultation with National Estates Risk Manager, if necessary. Helicopters will be equipped with bambi buckets. A helicopter could be considered for a number of uses:

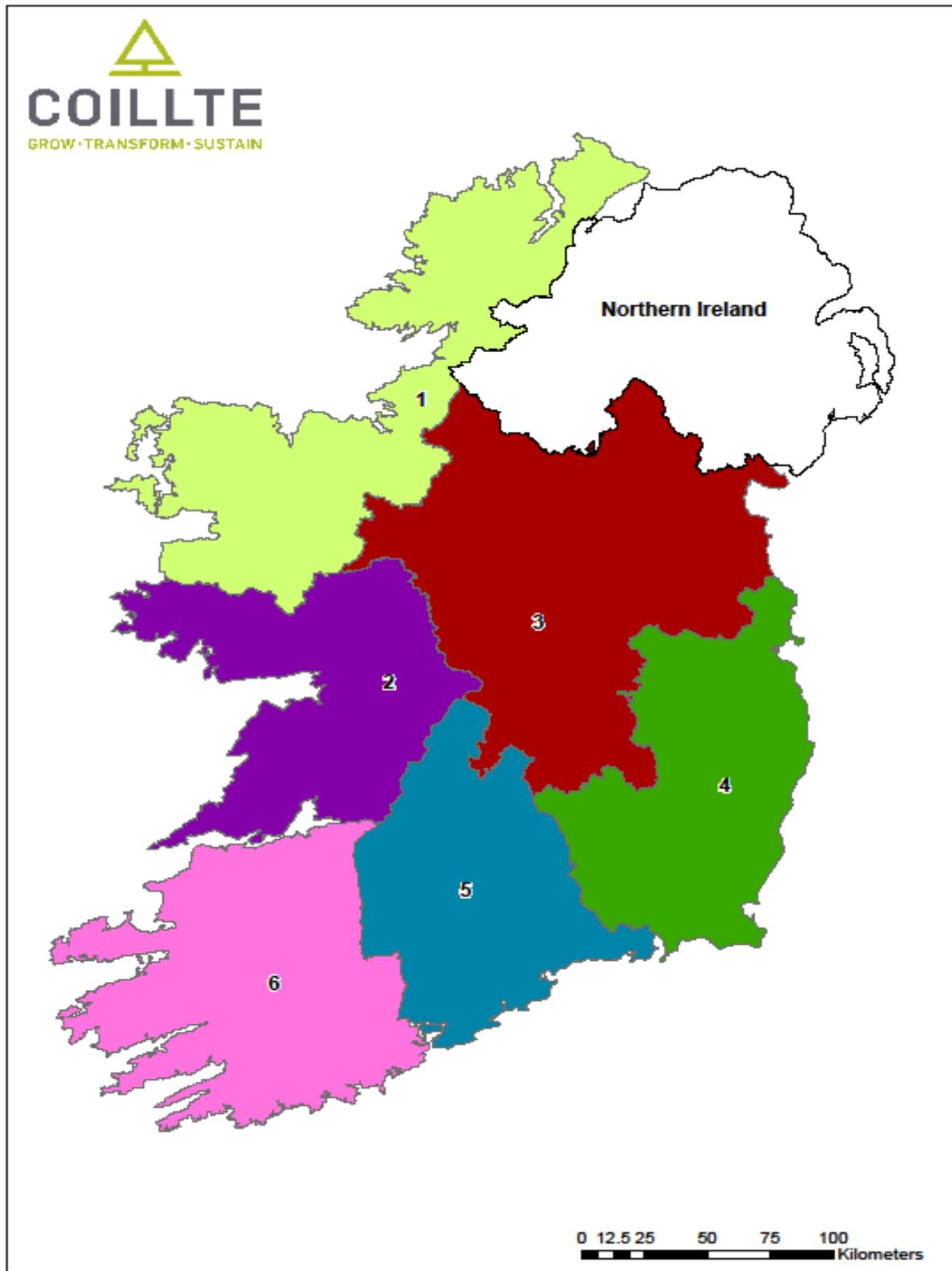
- Surveillance of fire
- Transportation of staff and equipment
- Fire fighting

Coillte would ask for vigilance from the public in relation to Forest fires and act if required by

1. Reporting directly to the emergency services any sightings of a fire
2. Reporting any suspicious activity in relation to fire or any knowledge of attempts to light a fire
3. Not lighting campfires or charcoal barbecue sets on Coillte property.

### 1.6 Coillte BAUs

Coillte's estate is divided into 6 Business Area Units (BAUs)



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Coillte has developed plans for each of these BAUs, called Five Year Forest Plans which describe Coillte's forests and other assets in the area, and set out a vision for their management. The last planning cycle was for 2016-2020. This plan refers to the incoming planning cycle 2021-2025.

Coillte also convenes annual consultation meetings\* for each of its BAUs. Plans are discussed with stakeholders to help Coillte to understand social, recreational and environmental issues as well as opportunities and concerns in each BAU.

\*Due to health crisis in 2020, BAU consultation meetings could not be held. This will be reviewed in 2021 in line with government health advice

## 1.7 Summary on the Various Levels of Coillte

### Forest Management Planning

The **BAU Five Year Plan** sets out the economic, social and environmental strategies and priorities for the long and medium term in the BAU and gives a clear direction for the management of the forests at local level for the next 5 years. The plans are developed in consultation with a wide range of stakeholders both internal and external to the company. Input from external stakeholders (individuals, communities, NGOs and statutory bodies) are sought during the consultation process, feedback is considered and where feasible, is incorporated into the plans. The Forest Management Unit (FMU) planning requirement, for Forest Certification, is achieved through the BAU Five Year Plan process.

**Activity Pack** is built when site-level planning is initiated for activity within each Harvest Unit and describes how the plan is going to be implemented for the operation managers, workers and contractors. Social and environmental impacts, including consultation, are assessed through the environmental impact appraisal process and mitigation measures are written in each site management plan.

All levels of planning feed into the annual **BAU Operating Business Plan and Work Plan**. These plans focus on the tasks/targets to be achieved during the year and outline the necessary resources (financial and personnel) required.

The BAU is the Forest Management Unit and is built from smaller spatial entities the largest of these being the Forest Unit. Key activity levels within each Forest Unit are further broken down in [Appendix V](#). Further to the appendix, a Webmap is available to view areas with proposed Clearfells and areas which have the potential to be thinned in the review period. [Click here](#) to access the Webmap.

## 2. Northwest BAU

### 2.1 The Northwest BAU

All BAU's play important roles in achieving Coillte targets and objectives. The North West BAU has 36 Forests encompassing all of Co. Donegal, 4 Forests in North Co. Leitrim, 12 forests in Co. Sligo and 34 forest in Co. Mayo.

It is a large BAU covering 1.2 million hectares of Ireland. Within this area, Coillte owns 99,719 hectares (7.94%) of which is mainly comprised of moorland, marsh, lakes and open space.

Main population centres in the area include Letterkenny, Ballybofey, Sligo, Manorhamilton, Ballina, Castlebar and Westport.

Part of the BAU falls into the Border region and has attracted significant attention in the National Development Plan due to economic and structural disadvantage.

It is a place of forests, rivers and lakes, with a coastline that varies from long sandy beaches to high limestone ridges.

The varied rural landscape and natural assets of the Border Region make it an ideal location for outdoor pursuits, including fishing, water sports and walking.

The climate for forestry operations is challenging, with high rainfall and some very wet ground conditions. The area normally experiences relatively mild winters and it has many days of wind.

Coillte will continue to work in collaboration with County Councils and other development agencies to contribute to the development of projects that have the potential to deliver strategic benefit to the area e.g. job creation, recreation, culture and heritage.

### 2.2 Forests and forest products in the Northwest BAU

A map of Coillte's Forests in the Northwest BAU can be viewed in [Appendix VI](#).

During the 2016 to 2020 period the BAU produced approximately 1.7 million m<sup>3</sup> of timber. This timber was primarily sold to Balcas(Fermanagh), ECC and Murrays(Galway). Smaller Mills include Drenagh(Derry), Boyd Bedding Products(Tyrone), McLoughlins, McCool's and Doherty's Stake Mills(Donegal), John McHales Sawmill(Sligo), Crowes of Mohill(Leitrim) and McHugh Sawmills(Cavan).

Coillte's production supports 3 major sawmills; Balcas, ECC and Murrays, plus a number of smaller sawmills and local stake mills. It is also a major source of wood fibre for Coillte's CPP (Coillte Panel Product) mills namely Medite in Clonmel, Co Tipperary and SmartPly in Waterford.

The North West BAU also has a vibrant Firewood market within the BAU and also in Northern Ireland.

Coillte is building on an existing Energy wood market in Donegal and Sligo/Leitrim.

#### Forest Products

##### Private Timber

Coillte is the largest producer and consumer of pulpwood in Ireland. Coillte's strategy is to supplement its own supply through the purchase of private timber, through various channels. For further information please check the Coillte website at [www.coillte.ie](http://www.coillte.ie)

##### Farm Partnerships

This scheme is where Coillte and a farmer form a joint venture by agreement whereby Coillte plants and manages the plantation for the life of the crop; ownership of the land remains with the farmer. Currently we have 33 farm partnerships within the BAU. This number is not expected to increase in the lifetime of this plan, as we are no longer engaged in this area. We will continue to support our existing partners.

### 2.3 Community, recreation and tourism facilities in the Northwest BAU

Coillte has a long association with the communities, clubs and individuals who use the extensive forest network. The development of recreational facilities and activities in line with Coillte's Recreation policy are some of the many ways Coillte can contribute towards the "public good" value of the estate. This can be achieved through partnerships, permits and ongoing relationships that respects the sustainable use of our forests for future generations. The Northwest BAU recreational activities compliment the lakes and mountains within its boundaries and contributes to the social and economic life of Donegal, Mayo, Sligo and North Leitrim.

Ongoing regular consultation with the local communities provides a basis for further assessment of expanded recreational needs as well as regular assessment of usage of existing facilities.

A number of recreational facilities are the result of a joint initiative between Coillte, local authorities and local communities. The BAU works closely with Donegal, Sligo, Leitrim and Mayo County Councils. Recent examples of this collaborative effort are developments such as:

- Mountain Bike Trail, Coolaney, Co. Sligo
- Gortarowey, Carney and Knocknarea, Co Sligo
- Belleek, Knockranny and Tourmakeady, Co. Mayo.
- Clooney Woods, Drumboe and Ards forest park Co Donegal.

The BAU has a high recreational usage with a number of National Way-marked Ways traversing Coillte property within the BAU. These include sections of the Sligo way, Co Sligo. Bealach na Gaeltachta, Sli Dun na nGall, The Bluestacks Way and The Pilgrim's Path, in County Donegal. The Bangor way, Foxford way and Western way in Co. Mayo, The Miners way, Co. Leitrim.

Coillte has also developed a number of looped trails in conjunction with local communities and Fáilte Ireland under their National Looped Walks Programme. The most popular are: Ards forest park, Drumboe wood in Co Donegal, and Deerpark in Co Sligo. The following trail developments in the BAU have been supported by the Forest Service under the Neighbourhood Scheme:

- Dooney Rock, Slishwood and Hazelwood in Co. Sligo.
- Clooneywood in Co. Donegal.
- Knockranny and Tourmakeady Co. Mayo.

There is a highly utilised forest amenity park located at Ards in North Donegal.

Many Coillte forests in this BAU are expansive and offer multiple activities such as walking, hiking, multi access and cycling on new bike trails, fishing, picnicking, watching wildlife, canoeing, field archaeology or simple enjoyment of the outdoors. A number of submissions were made from a variety of local organisations as part of the consultation on the BAU Strategic Plan 2021-2025. The BAU team are keen to meet with these organisations and consider all submissions for the development of recreational areas across the BAU. All submissions will need to be carefully assessed to determine the potential usage of any such area and the availability of funding (internally or externally) for the development of any infrastructure.

This BAU has 58 designated areas for recreational activity, and some of these are detailed on the Coillte website <http://www.coillte.ie/our-forests/explore/>

A full list of woodlands designated for recreation in the BAU are available in [Appendix III](#).

### 2.4 Cultural and archaeological heritage in the BAU

Coillte is aware of some 274 (monuments) archaeological sites and sites of cultural significance in its landholdings in the Northwest BAU. These monuments include megalithic tombs of different kinds, cashels and other enclosures and crannogs. A summary of archaeological sites in the BAU is provided in [Appendix I](#).

With support and advice from the NPWS, the National Monuments Service and National Inventory

of Architectural Heritage, Department of Arts, Heritage & the Gaeltacht. Coillte has developed a Code of Practice in order to protect this archaeological and cultural heritage.

Many land acquisitions contain farmsteads and features representing rural life in the 19<sup>th</sup> and early 20<sup>th</sup> century such as vernacular built heritage, traditional field boundaries, dry- stone walls, gate houses, cultural landscape features and historic farming patterns. These are identified and protected within forest management practices and identified when proposals for sales are being developed. They are evaluated in terms of their social, heritage and historical value and a plan implemented for their preservation.

The BAU will continue to support sites of cultural and literary heritage such as that of O'Donnell's Castle in Lough Eske and the Derryveigh Famine Eviction site in Donegal. Also Moore Hall, Towerhill and Belleek Demesne in Co. Mayo.

Coillte will identify, protect and record all new items of heritage which are discovered on its lands.

## 2.5 Biodiversity and high conservation value forests (HCVF) within the Northwest BAU

Habitats and features of biodiversity value on the Coillte estate are protected during forest operations. The table below shows that approx. 22,841 ha of Coillte land in the Northwest BAU is protected during operations or enhanced to increase its biodiversity value. This equates to approximately 23% of all Coillte land in the BAU.

Areas protected or managed for biodiversity are spread across the BAU area and vary widely, both in terms of their size and in terms of the habitat type present.

Broadly, there are three main types of site protected for biodiversity: Biodiversity Areas, Biodiversity Features and Riparian Buffers. Biodiversity Features and Riparian Buffers can occur anywhere on the estate, including within Biodiversity Areas, so there is some overlap between these three categories

Bio Ref	Description	Area (ha)
Biodiversity Areas	Habitats that have particular value for nature or biodiversity.	16,535
Biodiversity Features	Small features (usually <2ha) that add biodiversity value to the forest stand, protected during forest operations	1,980
Riparian Buffer Strips	Strips of land that adjoin streams, rivers and lakes, and are managed for their protection.	5,880

(\*Overlap occurs between categories)

### Biodiversity Areas

Biodiversity areas are essentially habitats of nature conservation value that occur on the Coillte estate. They vary widely in terms of the habitat type present and in terms of their ecological value. Coillte began the process of identifying and mapping habitats of nature conservation value on the estate in 2000. During 2001-2005, freelance ecologists were commissioned to complete this work.

During 2014 and 2015, Coillte developed a procedure called BioClass, which is used for classifying biodiversity areas according to their habitat type and overall ecological value. The BioClass procedure is based on national research on biodiversity in Irish forests. Freelance ecologists were once again commissioned to review all biodiversity areas across the estate and apply the BioClass procedure. The benefits of BioClass are that the biodiversity information is summarised and provided to Coillte staff in a more accessible manner.

Approximately half of Coillte's biodiversity areas are forest habitats: native forests, broadleaves forests, mixed conifer-broadleaves and conifer forests.

And half are open habitats: mostly bogs and heaths, with some specialised habitats such as limestone pavement and coastal habitats.

Some biodiversity areas have very high ecological value and are significant at national or international level, while others are of moderate value and are significant at a more local level. Each year, the sites of highest biodiversity value are targeted for monitoring and management activities. These sites are identified on a rolling programme each year.

### **Biodiversity Features**

Biodiversity features are small features that have value for biodiversity. They occur across the whole estate and are protected wherever they occur.

The types of biodiversity features that occur on Coillte sites include: small pockets of open habitat within the forest (usually heath, bog or small wetland); small stands of scrub (broadleaved scrub or open stands of poorly-grown conifers); locations of particular species of flora and fauna; veteran trees or deadwood.

Coillte staff and contractors continue to find, record and protect biodiversity features on operations sites.

### **Riparian Buffer Strips**

Riparian buffer strips are portions of Coillte sites that run alongside watercourses (rivers, streams or lakes). In all forest operations, the standard width of buffer strips is 10-15m. This width may be increased on certain site types. The creation and management of riparian buffer strips is described in guidance documents produced by the Forest Service of the Department of Agriculture, Food and the Marine.

The purpose of buffer strips is to protect watercourses from any damage that may arise during forest operations. Conifer trees that were planted in riparian buffer strips in the long-distant past (when forestry policy was very different to today) are removed and the strip is either left open to revegetate naturally. Sometimes, clumps of native broadleaves are manually planted in the buffer strip.

Over time, the buffer strips develop into open habitat or scrub alongside the watercourse or lake, and have considerable wildlife value. As with the biodiversity features, the area of riparian buffers increases over time, as more are mapped on operations sites and converted to open habitat and/or scrub.

### **HCVF**

Coillte's certification process requires that we identify areas of high conservation value forests (HCVF) across the forest estate. High conservation value forests (HCVF) are areas, not necessarily under forest, that are nationally important for nature conservation and have recognised conservation values associated with them. Two high conservation values have been identified for Coillte forest lands, namely:

1. Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values;
2. forest areas that are in or contain rare, threatened or endangered ecosystems.

In Ireland, HCVF is defined as sites that have a statutory designation for nature conservation, either nationally under the Wildlife Act as Natural Heritage Areas (NHA) or under European Law (Habitats Directive) as Special Areas of Conservation (SAC) or Special Protection Areas for birds (SPA).

HCVF areas may be quite large, such as Special Protection Areas in the west of Ireland for hen harrier conservation, or they may be quite small such as an old house within a forest which hosts an important roosting site for bats. They may also occur on non-forested lands such as the Atlantic blanket bogs in the west and the raised bogs of the Midlands.

All management operations in HCVF areas are designed to maintain and/or enhance the designated conservation value and operations are further managed using the precautionary principle. The table below shows statutory designated areas and HCVF in the Northwest BAU. Areas shown are in hectares (Ha).

Designation	Area (ha on Coillte lands)
HCVF	6,389
NHA* – Natural Heritage Area	1,137
SAC* - Special Area of Conservation	4,811
SPA* – Special Protection Area	559
Nature Reserve	10
pNHA	3,867

Coillte recognises that woodland sites have the potential to be high conservation value forests. These are Old Woodland Sites (OWS) with the best semi-natural characteristics, or that support nationally important populations of rare, threatened or endangered species. Coillte policy is to access and survey all OWS in advance of clear felling or high impact operations. Any site identified as having a 'high score' is brought to the attention of the company's ecologists and their advice acted upon.

The Northwest BAU achievements in relation to nature conservation include the following:

- 1086ha of peatland has been restored over 10 sites –
  - Croaghonagh and Carrick Barr Co. Donegal.
  - Owenirragh, Corravokeen, Shanvolahan, Glencullin, Derry, Eskeragh and Bellaveeney Co. Mayo.
  - Sessuegilroy Co Sligo.
- LIFE Project – 24 ha Alluvial Woodland, Hazelwood, Co. Sligo
- Millennium Project – Cullentra, Co. Sligo 57.8 ha
- 1,995 ha is being managed as OWS to retain their semi-natural characteristics.

We continue to work closely with our stakeholders such as NPWS to review potential life projects.

## 2.6 Species and habitats in the Northwest BAU

The BAU includes some non-forest habitats of special value for nature conservation. These include peatland/fen, heath, exposed rock, grassland/marsh, freshwater/swamp and coastal habitats. The bogs of West Mayo are renowned for their wilderness, flora and fauna.

A number of rare bird species are present at sites within the BAU. These include the Merlin, Peregrine Falcon, Hen Harrier, Golden Plover, Red Grouse, Red-throated diver, the Chough, the Ring Ouzel and the Golden Eagle. The Golden Eagle Restoration Project has been going on for approximately 8 years. They were introduced into Glenveigh National Park.

The following rare species of plants are present in the BAU. The Globe Flower, Irish Lady's Tresses, Yellow Birds nest, Round leaved Wintergreen, Less Tway Blade, Narrow buckler-fern, Lemon-scented fern and the broad leaved helleborine. Amongst invertebrates are the white-clawed crayfish and the Fresh Water Pearl Mussel in Co. Donegal and Co. Mayo.

Notable mammals in the area include the red squirrel, lesser horseshoe bat, pine marten and badger.

Insects include the Marsh Fritillary, which is Ireland's only legally protected insect. Colonies occur

within Ards Forest Park in an area where coastal heath adjoins the woodland. The area is rich in "Devil's-bit scabious" which is the larval food plant, and the woodland provides the necessary shelter. It also occurs in an area adjoining the Knader wood and in other locations, including Lough Sallagh/Cashelnavean."

Detailed tables have been provided in [Appendix II](#) showing examples of our approach to the management of areas designated for biodiversity under each of the more important habitat types identified during the ecological surveys and also showing notable species of flora and fauna. The forest management plans for each forest contain details on the entire list of biodiversity areas involved.

## 2.7 Invasive species

Within the BAU there are a number of species that are not native to Ireland and which are capable of having a negative effect on native biodiversity. Most notable from a Coillte point of view are Rhododendron and Japanese Knotweed which are significant issue on our properties.

In line with international best practice, when controlling invasive species (including Rhododendron), the BAUs resources are focused on priority sites based on:

1. The site's uniqueness (e.g. whether or not they are Priority habitats, as per EU Habitats directive),
2. Whether the presence of Rhododendron is likely to facilitate the spread of the exotic disease *Phytophthora ramorum*
3. The site's intrinsic ecological/biodiversity value (e.g. are they High Conservation Value Forests or Old Woodland Sites)
4. The social value of the forest (e.g. the extent to which the forest is used as a recreational facility/proximity to urban population).

## 2.8 Water quality and protection in the Northwest BAU

In terms of water, the BAU has many lakes including Lough Eske, Lough Finn, Lough Derg and Gartan in the Donegal area and Lough Gill, Lough Melvin, Lough Easkey, Lough Talt, Lough Gara and Glencar Loughs in the Sligo/Leitrim. The western part of the BAU is dominated by the "Great Western Lakes" Conn, Cullen, Mask and Cara in Co. Mayo. The BAU is covered by Inland Fisheries Ireland and the and The Loughs Agency. The main river catchments in the Donegal area are the Finn, Leannan, Swilly, Gweebarra, Owenea and the Eske. In Sligo/Leitrim area of the BAU the main rivers are the Shannon, Unshin, Owenboy, Owengarve, Bonet, and Diffreen. In Mayo the main rivers are Moy, Erriff, Newport, Deel, Owenboy and Owengarve. Important salmonoid catchments including the Errif, Moy, Finn, Lennan, Owenea have been designated as SACs. The rivers and lakes of the BAU support important salmon/trout fisheries and supports the local tourism industry which is important to the local economy.

Six of the catchments are designated SACs for the protection of the fresh water pearl mussel (*Margaritifera, margaritifera*):

- i. Leannan/Glaskeelan
- ii. Clady
- iii. Eske
- iv. Owencarrow
- v. Owenea
- vi. Bundorragha
- vii. Newport

The Bundorragha and Leannan/Glaskeelan sub-catchment are in the top 8 FWPM catchments in Ireland.

Coillte abides by all Forest Service Guidelines, Regulations and Requirements in regard to protecting water quality, and in particular the Forest Service Guidelines on Water Quality, which detail sound and practical measures for handling forest operations in proximity to waterways. As the largest landowner in counties Kerry, Cork and Limerick Coillte has a responsibility to ensure that its actions do not negatively impact on water quality. Within the BAU the following are the most significant issues relating to water:

- Water abstraction for domestic use
- Presence of the rare fresh water pearl mussel species
- Presence of important salmonoid rivers, such as the Laune, Feale and Munster Blackwater.

When planning forest operations all the issues listed above are considered. During this process, Coillte will liaise with a wide range of environmental regulators, including the Forest Service, Inland Fisheries Ireland, Shannon and South Eastern River Basin Districts, NPWS and local authorities, particularly with regard to the potential impact of forest operations in proximity to environmentally sensitive waterways.

Coillte actively plays its part in protecting the water bodies water quality. Prior to the commencement of all high impact forest operations, an environmental risk assessment (ERA) is conducted whereby all important aquatic zones (as defined by the Forest Service Guidelines) and permanent relevant watercourses draining the proposed operations area are noted and mitigation measures listed to ensure protection of the waters. It is at this stage, the requirement for the establishment of water protection areas (buffer zones), if not already in-situ, will be stipulated for all watercourses. Reference will be made on how the trees are to be removed and prohibition of machinery movement in the buffer zones during forest operations.

If the proposed 'high impact' forest operations site is judged to be water sensitive, a water monitoring programme will be put in place. This will comprise of daily visual assessment and recording of surface waters draining the site during operations and the immediate adoption of appropriate contingency measures where discolouration of the water is observed. On the most sensitive sites, this monitoring process is backed up with short-term water sampling. Typically, this sampling would be of short to mid duration, lasting a few weeks to several months, depending on the duration of the forest operation. Sampling consists of taking samples from the main tributaries draining the forest site, before, during and after operations are completed.

The adherence to the EU Water Framework and Habitats Directives, has significant implications for forest management in the BAU. It highlights the potential pressures of forests on water quality and increased risks from erosion and sedimentation. The need to move away from monoculture blocks of forests towards restructured forest stands has been recognised in the BAU. When restocking after clear felling, an extensive network of new buffer zones will be established to protect adjoining watercourses. Drainage and cultivation practices on these sites are also designed to minimise their impact on local water. Coillte will continue to work closely with the relevant statutory bodies and assist where possible with their water and fishery rehabilitation plans

Coillte forests in the Nephin Mountains hosted two important research projects studying the effects of forests on water. The Hydrofor Project funded by Coford and the EPA was a study of the effects of forest operations on the ecological quality of water and the Sanifac project funded by the Dept. of Agriculture studied the effect of sediment and nutrient release from forest operations in the Burrishoole catchment. Both studies were carried out under the supervision of National University of Ireland in Galway.

The BAU looks forward to continuing the work on buffer zone management with the Loughs Agency, in particular the potential for broadleaf planting adjacent to salmonid watercourses.

## **2.9 Forest Management Issues**

Coillte's Northwest BAU faces a number of issues in relation to managing its forests effectively for timber production while also promoting their use for their recreational and social purposes. The BAU borders three counties in Northern Ireland; Co. Derry, Co. Tyrone and Co. Fermanagh.

Over the past 5 years these have included:

- Poaching of deer; The increased level of poaching in the recent period has put greater emphasis on security.
- Illegal use by motorised vehicles, inappropriate recreation with quads and motorbikes
- Security; Coillte is at the risk of major losses through theft, vandalism of property, and crop damage. To minimise this loss the BAU has commenced the implementation of the Company's security policy, in the BAU we have a contractor assigned to security of the estate.
- Litter and waste dumping; The majority of illegal dumping of domestic waste occurs where forests adjoin public roads and at forest entrances. The problem is extenuated in rural and remote areas but in close proximity to large urban areas. Coillte work closely with available Litter wardens to try combat this increasing problem.
- Anti-social behaviour; Coillte are investigating the most appropriate methods of security including the development of cameras in order to reduce this problem and lead to prosecutions.

Coillte implemented by-laws for access to and use of Coillte managed lands. Recreation sites where there are ongoing issues such as illegal access on motorised vehicles, dumping, anti-social behaviour etc. will be prioritised as candidate sites for installation of the relevant signage. These bye-laws may be enforced by the Garda Siochana and offences may be liable to a fine and/or imprisonment.

### 2.9.1 Deer Management

Wild deer on Coillte's estate is managed in accordance with accepted principles of Sustainable Deer Management (SDM) whereby, the conservation, control and use of the species will be balanced in order to achieve an integrated and collaborative solution to achieving viable deer populations across the Coillte estate at levels which are in harmony with their environment. To this end Coillte maintain Deer Management Plans (DMP) for all areas where deer are present

Wild deer are present on over 60% of the Coillte estate. Through browsing and bark-stripping trees, deer can have a considerable negative impact on any tree crop and on tree species selection as well as the quality, yield and survival of forest crops. Deer can also impact land use objectives on neighbouring lands and can be a major health and safety hazard, particularly on public roads.

Deer are wild animals free to roam across large areas of multiple land ownerships. They are a protected species, and one which attracts considerable attention and differing views as to how they should be managed. A key aspect of successful deer management is establishing a collaborative approach between all key stakeholders within the deer's range at landscape level. A considerable element of this process is the acceptance of shared responsibility by all landowners in the area of their role to ensure the effective management of the deer utilising their lands.

Coillte have demonstrated considerable commitment and leadership in recent years in developing collaborative deer management and the establishment of training standards for deer hunters. At National level the company was instrumental in the establishment the Hunter Competence Assessment programme and the Irish Deer Management Forum (a group which has been disbanded since the retirement of its Chairperson and which Coillte wish to re-instate). At Regional and local level Coillte are active participants in a number of deer management partnerships and groups.

The impacts to Coillte's crops are generally localised, predominately in areas with high deer density. A breakdown of deer species abundance has been gathered countrywide coupled with damage inflicted on crops. Damage is mainly confined to the browsing of broadleaved trees and some more palatable conifers such as Scots pine, Douglas fir, larch and Norway spruce. Deer populations are principally controlled through the issue of hunting licences.

Deer management in Coillte is coordinated nationally through a new deer oversight group which was established in 2020. This group is comprised of staff from Estates, Operations, Public Relations and Recreation.

Coillte's summary deer management policy can be viewed here **Deer Management Policy**. As part

of planned work for 2021, Coillte's Deer Oversight Group will review and update our current deer management policy and all supporting documentation.

### 3. The Five Year Forest Plan – Northwest BAU

We are very fortunate in the BAU in the richness and pristine quality of much of our environment, our wild natural resources and the presence of habitats and landscapes that are cherished both at home and internationally. We aim to maintain and enhance these assets while balancing the requirement to realise for the state and its people the enormous investment that has been made in Irish forestry over the years.

#### 3.1 Vision

The long-term vision for the BAU is of forestry management at an intensity that is appropriate to the environmental sensitivity and productivity of its land resource. By adopting policies that ensure our efforts are concentrated on timber production in some areas and on habitat restoration in other areas we will maximise the benefits to the environment, local communities and the timber processing industry.

This vision includes:

- forestry will be a vibrant industry in the area, integrated into the local economy, providing employment opportunities in the forest, the timber industry and in many downstream activities;
- a diverse range of species
- natural and semi-natural habitats are protected and enhanced through appropriate management;
- there is continuity of forest habitat for rare and threatened species;
- the public will gain health and well-being benefits from enjoying a range of recreation activities in the forests;
- forest recreational sites will be a part of the tourism infrastructure and will be an important contributor to the tourism economy;
- there will be a shared vision between the BAU and local communities on expectations from the forests and how they are managed.

#### 3.2 The Forest Resource and the Timber Business

Coillte realises its timber sales through planting and felling on its own estates.

##### The Coillte Estate

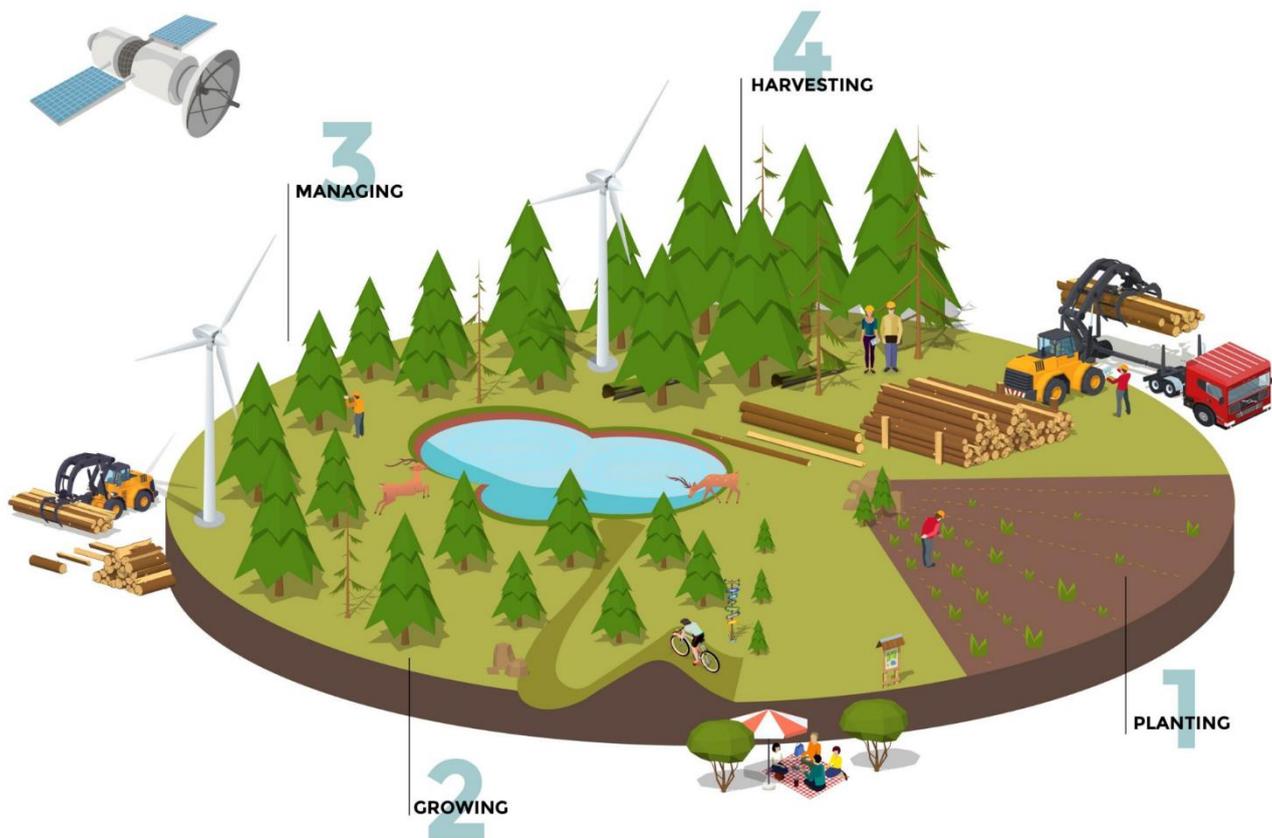
It is Coillte's policy to achieve the maximum volume potential of the estate consistent with sustainable forest management principles (see Section 4).

##### Key Objective 1

**In the Northwest BAU, Coillte aims to produce approximately 2.1 million cubic metres of wood from its forests between 2021 and 2025.**

**1,92 million cubic metres of this will be provided through clear-felling and 0.24 million metres<sup>3</sup> of this will be achieved through thinning.**

Figure 1: The Forest Cycle



Timber supply comes from two main sources, clear felling and thinning.

- Clear fell** is the most common silvicultural system used in Ireland and the UK due to the prevailing forest culture and has predominated over the past century characterized by the establishment of new forest plantations. The extent of clear felling annually is strictly controlled both externally and internally. Externally, the extent of annual clear felling is subject to statutory control by the Forest Service. Internally, control is exercised by the Coillte policy of 'Sustained Yield'. Sustained yield allows our forests to grow and be harvested at a level that is capable of providing a continuous supply of timber for current and future generations. Coillte has introduced a number of Low Impact Silvicultural Systems (LISS) which will apply to some forests in the area. The clear fell system will, however, remain the dominant silvicultural system in the BAU during the plan period. This involves the removal of all marketable trees from an area at the end of the rotation (usually at between 35 to 45 years of age). Due to the poor fertility and the exposed and unstable nature of our sites there is very little scope for alternative systems that remove mature trees more gradually. At clearfell time considerable effort is now put into adjusting felling coupe size and shape to satisfy both environmental and landscape design purposes. Low Impact Silvicultural Systems (LISS) such as 'Small Coupe Felling', 'Change to Broadleaf' and 'Continuous Cover Forestry' are in use in the BAU and it is intended to expand this level where possible during the plan period.
- Thinning** is also a natural part of forest management and it involves staged removals of a proportion of trees in a forest over a rotation, and it is a necessary part of standard forestry practice worldwide. Thinning improves the quality of the forest by regulating the space and light provided to trees as they grow. In line with international best practices, Coillte aims to thin where possible all forests to maximise the quality and volume returns from the estate. Thinning will only occur where the practice can be sustained, namely in forests with no stability threat from high winds. High winds and exposure in the BAU is a limiting factor to thinning and consequently thinning is effectively

concentrated in certain areas of the BAU where it is not as exposed and deemed to be more stable. Historically, because of stability concerns, there is limited standard thinning prescriptions used in this BAU with most thinning events having 2 or 3 interventions. The experience in the BAU to date is that thinning interventions of 3 or more often result in wind blow and are therefore not recommended in certain areas of the BAU.

All felling is controlled by the Forest Service which issues felling licences as appropriate under the 1946 Forestry Act. Coillte will ensure that all harvesting operations meet Forest Service license requirements and are planned at site level, with full assessment of environmental impact, landscape sensitivity, local consultation requirements and relevant site issues.

All felling proposals for either clear felling or thinning will be consulted on in advance with local authorities, Inland Fisheries Ireland and also the National Parks and Wildlife Service; their recommendations are then fully considered.

### **New Planting and Replanting**

Under the terms of felling licences, Coillte will fulfil its obligations to replant clearfell areas.

#### **Key Objective 2**

**In the Northwest BAU, Coillte aims to restock 7,140 hectares of forest by 2025**

### **Forest Roads**

Forest Roads are an essential element of forest infrastructure. They provide access for management, harvesting and transport of timber and enhance the recreational potential of forests. A number of kilometres of new road are constructed each year in the Northwest BAU and there is also the need for maintenance of the existing road network. Our policy is to give each local authority a schedule of areas for harvesting and associated timber volumes, for the next five years and agree designated timber haulage routes with them. Our engineering staff has indicated the optimum layout of our road network and we are gradually extending the roads to this point. This work is ongoing and will not be complete within the timeframe of this plan.

The priority for the road infrastructure over the duration of this plan is to;

- construct approximately 15 km annually of new roads in our forests
- maintain the existing road infrastructure
- extend spur roads where necessary to access timber stands due for harvesting in the period of the plan
- develop road access to areas that are currently inaccessible

#### **Key Objective 3**

**In the Northwest BAU, Coillte aims to construct approximately 77km of new forest roads by 2025.**

### **Factors affecting timber supply**

A number of considerations affect the volume of timber that Coillte can achieve from its forests:

- **Accessing timber crops** can be challenging with both internal (right-of-way issues, poor internal access) and external (right-of-way issues, the state and nature of county council roads/bridges etc.). To address the access issue a list of all difficult areas is currently compiled and these will be prioritised on the basis of timber supply and a plan put in place to address these issues by assigning relevant personnel. The BAU will consider the use of partnerships to help resolve/contribute to access difficulties on a site by site basis. In addition, a review of the road infrastructure will occur and all new haulage routes will be identified in conjunction with Donegal/Sligo/Leitrim Co Councils with a view to improving access.

- **Nutrient deficiencies** The Northwest BAU has a large area of Sitka spruce which is 'in check', much of which was planted in the 1980's. In many cases these crops were planted in anticipation that site nutrition would be supplemented with fertiliser applied from a helicopter. The Northwest BAU is currently reviewing these areas in check and their suitability for fertilisation. This encompasses environmental sensitivities and an economic cost/benefit analysis along with the necessary foliage analysis. If the silvicultural argument is strong in terms of fertilisation we will proceed to apply for a licence to aerial fertilise those areas and conduct consultation with all relevant bodies with regard to safeguarding watercourses and comply fully with Forest Service guidelines on aerial fertilisation. Coillte will continue to evaluate other ground based alternatives on an ongoing basis.
- **Meeting increasingly challenging environmental standards** requires Coillte to review its practices and assess the risks on a regular basis. Coillte has achieved sustainable forest management certification and is committed to ensure that there is continual professional development and refresher training for all staff, personnel and contractors to ensure a high environmental awareness and work standard is maintained. This will incorporate a wide range of training days and courses on all environmental issues and continued co-operation with all statutory stakeholders.
- The provision of a harvesting **infrastructure** that can respond to the environmental challenges will require ongoing training and monitoring of contractors and engaging in all relevant updates on developments in harvesting technology and machine capabilities. This is seen as a central requirement for all contractors wishing to operate in the Northwest BAU.
- The **high proportion of low production forests** in the Northwest BAU is an issue in meeting production targets and the BAU will examine alternative uses in some of these forests as a result. Thus the BAU will actively consider alternative land uses such as wind farm development, one-off property sales and the continued adoption of the Western Peatland Protocols for the alternative management and restocking of these low production sites.
- Sometimes the **popularity of forests for recreation** affects our capacity to fell timber.

### Farm Partnerships

In relation to existing farm partnerships Coillte will:

- develop 10 year plans for farm partnerships that have been in existence for 10 years
- hold annual management meetings with farm partners
- thin farm partnership sites regularly and on time
- carry out an inventory on farm partnership sites

#### Key Objective 4

**In the Northwest BAU, Coillte aims to manage its 33 Farm Partnerships**

### Overall production targets in the Northwest BAU 2021-2025

Coillte's proposed operating targets for the Northwest BAU for the period of the plan- 2021-2025 are summarised in the table below.

#### Northwest BAU main Coillte production targets 2021-2025<sup>4</sup>

<sup>4</sup> Source: Forecast 2016 – 2035 obtained from Coillte Strategic Plan. Actual volumes may vary resulting from an annual refresh of the strategic plan. On an annual basis, over the plan period, Coillte will identify and publish areas where significant differences occur to figures originally published.

<b>Annual Totals</b>					
<b>Year</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Establishment</b>					
<b>Planting (ha)</b>					
Regeneration planting (r/f) (Replanting after felling)	1650	1400	1350	1370	1370
<b>Harvesting Programme</b>					
<b>Harvest categories (000m3)</b>					
Thinnings	47	49	50	50	47
Regeneration felling (P,C,W) felling	369	367	389	401	390
<b>Total</b>	<b>416</b>	<b>416</b>	<b>439</b>	<b>451</b>	<b>437</b>
Felling area (ha)	767	814	852	824	807
<b>Roading Programme</b>					
<b>Roading (km)</b>					
New	25	13	15	14	10
Upgrading	29	28	24	23	24
<b>Total</b>	<b>54</b>	<b>41</b>	<b>39</b>	<b>37</b>	<b>34</b>

### 3.3 Coillte's Non-timber Businesses in Northwest BAU

#### 3.3.1 Renewable Energy Projects

Coillte is developing renewable energy projects both on its own, in conjunction with co-development partners and with third party developers who require land rights from Coillte in order to facilitate developments. In working to realise the potential of its estate for renewable energy development, Coillte carefully considers the social, economic and environmental impact a project may have on the surrounding area.

Coillte has been exploring a range of partnerships and/or joint venture models in relation to its future renewable energy ambitions. Having considered its strategic options in 2018, Coillte has now decided to establish a formal development partnership with ESB, in the form a new standalone renewable energy company. It is expected to establish this development company (DevCO) in 2021.

Coillte adopts a best in class approach to the estate screening for its wind energy projects. This includes a holistic overview of a proposed site and its suitability to accommodate a potential wind farm. At a very early stage an environmental impact appraisal is undertaken. All third party energy interests for the sale/lease of turbine areas or access requirements also follow a screening exercise approval process.

It is important to note that Coillte is not a Planning Authority for the purposes of undertaking an Environmental Impact Assessment and granting planning permission in accordance with the Irish Planning and Development Acts (as amended). In the interests of proper planning and sustainable development, the suitability of wind farm development proposals on Coillte property is a matter for the relevant Planning Authority.

Within this BAU Five Year Forest Plan period, Coillte proposes to continue to investigate wind farm proposals and where appropriate continue to facilitate third party requests. Coillte's interests in projects developed by Coillte or in partnership will transfer to DevCo once that company is established.

The following projects are planned for progression on the Coillte estate within this BAU\*:

<b>Proposed Coillte / Co Development projects on Coillte estate in BAU 1 – correct as at January 2021</b>			
<b>Name of Project</b>	<b>Location</b>	<b>Status</b>	<b>No. of wind turbines/(MW)</b>
Glenard	Donegal	Pre-Planning	TBD
Lenalea	Donegal	Pre-Construction (SSE Co Dev)	7
Drumnahough	Donegal	Planning submitted (SSE Co Dev)	12
Derrykillew 2	Donegal	Under review (Statkraft Co Dev)	TBD
Glenora	Mayo	Pre-Planning (SSE Co Dev)	TBD
Sheskin	Mayo	Pre-Planning (SSE Co Dev)	TBD

<b>Total</b>	<b>TBD</b>
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<b>Proposed third party planning permitted wind turbines on Coillte estate - correct as at January 2021</b>			
<b>Name of Wind Farm</b>	<b>Location</b>	<b>Status</b>	<b>No. of wind turbines</b>
Sheskin	Sheskin Forest, Co. Mayo	Planning permitted	8
Meenbog	Croaghonagh Forest, Co. Donegal	In construction	17
Glenalla	Rathmullen Forest, Co. Donegal	Planning permitted	1
<b>Total</b>			<b>26</b>

Also, within this BAU Forest Plan period, planning permission will be sought by a third party for the following projects:

<b>Proposed projects that will seek / are seeking planning permission for wind turbines on Coillte estate – correct as at January 2021</b>			
<b>Name of Wind Farm</b>	<b>Location</b>	<b>Status</b>	<b>No. of wind turbines</b>
Altcor	Breanter Forest, Co. Donegal	In planning	2
Meenbog 2	Killygordon Forest, Co. Donegal	Pre-planning	TBD
<b>Total</b>			<b>TBD</b>

Over the course of this BAU period, Coillte and at a later point DevCo will continue to seek out opportunities for small, medium and large scale renewable energy developments on sites that are either designated as being open for consideration or suitable for this type of development. Coillte will also continue to facilitate third party developments where appropriate. In all instances, Coillte will avoid significant impacts on nationally designated sites, protected habitats, Coillte’s own biodiversity areas, receiving waters and high conservation value forest areas.

Depending on project specific circumstances, turbulence felling or the realisation of relevant habitat management plans may be required as part of that project. In all relevant instances, turbulence felling will be kept to a minimum and only occur where it is required in order to ensure the safe and efficient operation of a wind farm project. In all instances where premature felling is required, Forest Service requirements regarding the provision of replacement lands will be complied with and for turbulence felled areas, a restocking management plan will be implemented that will involve the re-establishment those areas in place of the crop that is felled.

\* Please note project details provided are subject to change and will be updated if required during completion of final plans.

### **Key Objective 5**

**In the Northwest BAU, Coillte aims to develop/facilitate the development of 11 renewable energy projects in the period to 2025 and will continue to investigate and pursue other opportunities in this area during that period**

### **Biomass Production**

Coillte will consider renewable heat supply opportunities as they arise.

#### **3.3.2 Land sales and development**

Each year the BAU sells, leases or develops a limited area of land, for purposes other than forestry. Most sales are made in response to local demand and typically comprise house sites, isolated dwelling houses, small outlying forest properties, small areas of forest to neighbouring land owners, gravel pits, land to local authorities for infrastructure projects and land for development. Properties sold are those where their value greatly exceeds their value for forestry purposes. A signing-off committee within the company considers all land sales, with larger sales requiring the approval of the Board of Directors. Joint development approaches with local communities are favoured.

It is important to note that no development or lease of lands will be entered into until the consultation/planning process is completed. This includes consultation in particular with local people and communities.

In the course of the period of this plan, properties will be identified which are considered suitable for sale or lease and we will endeavour to consult with the people likely to be affected as these arise.

Coillte also recognises the importance of having its property portfolio registered on the Land Register maintained by the PRA. Coillte will continue to work with the PRA and relevant parties in this regard.

#### **3.3.3. Licensed use of Coillte lands**

Coillte allows permissive access to all of its lands for walking, except those areas closed from time to time for operational purposes. Cycling is allowed on trails and in areas specifically designated for cycling. And all other recreational activities are managed under a licencing process. These activities can be undertaken groups or individuals for both recreational purposes and as a commercial activity. Examples of such activities are mountain-bike events, shooting, pony trekking, off-road driving, orienteering and others as requested. Fees may be applied to licenced events and activities.

The position in regard to these activities is that permission is given under written licence from Coillte. The licence is the formal permission allowing the activity to take place on Coillte lands. It contains a number of conditions and requirements for insurance cover and some of these conditions are specific to the activity and the particular location. Responsibility for issuing the licence, management, processing and safekeeping, rests with the manager at each location. A fee based on the activity is charged for each licence. All the information is available at this location [Coillte Recreation Permits](#)

##### **3.3.3.1 Licensed Hunting**

Game hunting and deer stalking are amongst the oldest forms of forest recreation and continue to be legally enjoyed by many people across the country. Respecting the traditional nature of this activity and recognising the social, environmental and economic benefits which hunting can have, Coillte may permit certain types of hunting on designated areas of the estate. This is in line with Coillte's [Recreation Policy](#), and Deer Management Policy as well as supporting the principles of multiple use forestry.

Hunting is managed and regulated through the issue of licences which are subject to open public

tender. Available areas are advertised bi-annually via the company's website. Tender bids are evaluated by the relevant BAU personnel in accordance with a standard scoring matrix which acknowledges the annual fee offered, the applicant's previous experience, their commitment to safety, as well as environmental and local interest considerations. Coillte is moving toward a position whereby only persons who have completed an approved competence assessment will be permitted to hunt on its lands. Currently this is a mandatory requirement for all those intending to hunt wild deer.

Coillte have produced a Code of Practice which establishes minimum standards expected of all persons engaged in these activities alongside compliance with licence conditions and national legislation. All of the necessary information on hunting is located here [Coillte Hunting Licences](#)

### **3.4 Community, recreation and tourism Proposals**

Coillte's proposed recreation priorities for the North West BAU between 2021 and 2025 include:

- engaging with local community groups and where possible agreeing partnership arrangements for the maintenance and enhancement of existing facilities and possible development of new ones.
- managing and maintaining all existing recreation sites including waymarked ways to the highest standards.
- managing unauthorized usage of the recreation infrastructure in line with best management practice
- sourcing funding and developing new infrastructure including 'access for all' on a based on needs identified in conjunction with stakeholders and funding agencies, and to enhance local tourism potential. The key projects in this BAU over the period of this plan are: :
- engaging with Bord Fáilte and other organisations as appropriate to promote Ards Forest Park and other BAU1 properties as key stops on the Wild Atlantic Way
- Continuing our exploration of the development of amenities with Donegal/Sligo/Leitrim County Councils
- Organise local events for National Tree Week, National Trails Day and National Heritage Week.
- Agreed as part of its annual recreation maintenance plan to consider simplifying signage and include information on cultural history, origin, recent management and biodiversity key species at Brackloon wood.

#### **The Wild Nephin Project**

This project consisting of a joint venture between Coillte and the National Parks and Wildlife Service,(NPWS), with support from Mayo Co. Council and local organisations. Its supports a range of recreation, and Environmental objectives.

The information below gives some background to the project.

*The Wild Nephin Project is about setting aside an extensive area in the Nephin Beg Mountains in the BAU for the development as a wilderness area. The concept of an officially designated "wilderness area" has been part of the North American legal system for almost 50 years following the enactment of the Wilderness Act (1964). In 2009, the European Parliament recognised the need to provide such areas in an increasingly urbanised and developed Europe and called on member states to look at setting aside lands as wilderness or "restoring" lands to primitive qualities where man has the opportunity to engage closely with nature and the natural habitats. Given Coillte's considerable competencies in habitat restoration, its major land ownership in suitable areas and its roles in recreation and partnership building, the company feels it has the competency to act on this call and contribute to the development of an important national asset for future generations. Within this context the project steering group comprising representatives from Coillte, the National Parks and Wildlife Service and the Forest Service was established in 2011 to develop a definition of wilderness in Ireland and consider, initially, the suitability of the Nephin Forest as a wilderness area.*

*In an Irish context, wilderness is a new concept. Wilderness is best defined as a large, remote, wild (or perceived wild), protected and publicly owned landscape with good visual and natural qualities. A wilderness facilitates humans to experience our connections to the larger community of life through the enjoyment of nature, solitude and challenging primitive recreation, without significant human presence or the intrusion of human structures, artefacts or inappropriate activities while supporting a functioning ecosystem. A wilderness is therefore generally free from human management and manipulation and is an area which allows natural processes take place or where, through a process of rewilding, such natural processes are progressively restored, leading to increased stages of naturalness. A wilderness can include modified landscapes that no longer support long term human occupation and/or a viable managed landscape. Nephin as a forest block was found to offer the necessary characteristics to allow the area develop as a wild landscape. In November of 2011, Coillte agreed to set the area aside as a candidate wilderness area pending the development of a conversion plan. It is recognised by Coillte that the setting aside of the wilderness will have long term implications for the commercial exploitation of this forest into the future. For the avoidance of doubt the setting aside of the area as a wilderness will mean that all exploitation will cease post conversion and be seriously constrained during the conversion period.*

*The wilderness project is an innovative project that can deliver considerable benefits on a number of levels. The project will set aside a unique landscape in an Irish context with the potential to re-wild the landscape to provide important habitats, biodiversity improvement, adventurous and challenging recreation within a protected landscape of significant scale. This project has potential to deliver environmental, social and economic benefits to the wider community in the hinterland of the wilderness while "improving" access to a unique and challenging landscape for recreation and scientific uses. This project will improve public access by walking or hiking to the entire eastern portion of the national park lands through the Coillte forest, develop sustainable walking routes on both Coillte owned lands and national park lands to alleviate pressure on sensitive habitats within the national park and allow for future habitat and species enhancement projects to occur to further enhance the biodiversity of the National Park and the Forest.*

### **Key Objective 6**

**In the Northwest BAU, Coillte aims to:**

- **Provide a high quality recreation offering to public.**
- **Maintain all existing recreation sites to the highest standards**

### **3.5 Cultural heritage and archaeology measures in the Northwest BAU**

Coillte as manager of the State's forestry estate has a duty to respect the cultural heritage attached to it. With support and advice from the NPWS it has developed a code of practice in order to protect this archaeological and cultural heritage.

The BAU will continue to protect archaeological sites on its lands and to note any new sites located during surveys. All recorded archaeological monuments are highlighted during the planning stage of operations. They are identified and protected as appropriate by the Forest Manager. Pedestrian access from the nearest public road is provided for such sites. Unrecorded archaeological monuments when located are immediately protected and reported to the Environmental Officer. The Forest Service Archaeologist is also notified who advises accordingly. The BAU will continue to support sites of cultural and literary heritage and will identify, protect and record all new items of heritage which are discovered on our lands.

### **3.6 Environmental enhancement measures**

The following environmental enhancement measures are proposed for the period 2021 – 2025

### 3.6.1 Diversification of species

Coillte policy is to encourage species diversification in order to maintain and enhance the productive potential of its estate and to increase biodiversity in its forests.

To reduce or eliminate the need for artificial fertilisation programmes, a more cautious species selection is being applied within the BAU, so that the species planted will not need supplementary fertiliser over its rotation. This effectively means we are pursuing a policy of planting lodgepole pine or pine/spruce mixtures on the low yielding sensitive sites. Diverse conifer species such as Scots pine can also be used in areas of shallow peat. Riparian zones are either left as open space or planted with suitable native broadleaf species.

### 3.6.2 Practicing Low Impact Silvicultural Systems (LISS)

The selection of a silvicultural system on a forest site will be based on a number of different factors. The decisions will be based on: site stability, the management objective of the site (i.e. timber production or biodiversity), and the surrounding landscape.

The list below explains the area where the various silvicultural systems that collectively are known as low impact silvicultural systems (LISS) are adopted. Low Impact Silviculture Systems such as Continuous Cover Forestry, are regarded as alternative methods of silvicultural management to clear felling. The introduction of LISS systems can only be achieved gradually and can take up to a rotation length to complete. Currently 13% of the productive area of the BAU, is managed under LISS.

Sites on Coillte Estate managed under LISS

1. Old Woodland Sites (OWS)
2. All Broadleaf High Forest (BHF) stands are to be managed under CCF
3. Amenity sites
4. Agreed Biodiversity Areas where current or target habitat is woodland where appropriate according to Biodiversity Management Plan
5. Management Units currently listed for management under LISS, where silvicultural system equals Small Coup Felling (SCF), Continuous Cover Forestry (CCF), Long Term Retention (LTR), Natural Regeneration (NRE)
6. CCF demonstration sites
7. Scots pine stands, where stability and vegetation provides for Natural regeneration

#### Key Objective 7

**In the Northwest BAU, Coillte aims to maintain and enhance the level of broadleaves in the BAU**

### 3.6.3 Biodiversity

At present 23% of the Coillte land area in the Northwest BAU is designated and managed for biodiversity.

- **Retention of Old Woodland Sites (OWS)** which have supported woodland cover since at least 1830 and which have particular importance as reservoirs of native biodiversity. The BAU has 1,995 ha identified as old woodland over numerous different locations. This represents 2% of the Coillte land in the BAU and 8% of the old woodland identified on Coillte's estate nationally. The management of these areas will be in line with Coillte's old woodland sites policy which includes assessing the value of any OWS before felling and high impact operations for designation as high nature value forests, and reviewing all sites that received a good rating from ecologists in the biodiversity survey in 2001-2005 for HCVF potential.

As a result of Phase 1 of our public consultation in relation to updating our plans Coillte will, during the course of the current plan period, include in our plans the completion of the inventory of ancient woodlands on the Coillte estate, and of assessing those sites in terms of their nature conservation value.

- **Continuing the introduction of riparian buffer zones** as part of the planning process along all permanent watercourses, typically these will consist of a 20m unplanted strip on either side of the watercourse and then broadleaf planting for 10m-20m behind the bare strip. Aquatic buffer zones are established primarily for water protection purposes, and not for timber production.
- **Retaining dead wood** in all forests managed by Coillte, consistent with health and safety requirements. Ecologically, dead trees are as important as live ones in natural forest ecosystems. They are important structural elements in forest, providing a wide range of decay classes, which support a wide range of invertebrate and vertebrate animals and epiphytic and saprophytic plants and fungi. Dead and decaying wood can provide habitats for more than one-fifth of the woodland fauna. In the UK, 34% of scarce invertebrates depend upon dead wood. Dead and decaying wood also influences the flow rate and organic debris in forest streams and rivers. The intention is that the concentration of deadwood will be the highest in semi-natural woodlands (old woodland sites and broadleaved stands) where large trees will be allowed to grow old and die off on site. On all sites being surveyed by inventory staff, deadwood stems are being recorded.
- Carrying out **survey and monitoring** of important species and habitats, and of water quality to ensure that we are making progress.
- Participating in **biodiversity action plans** for priority species and habitats in partnership with others.
- Long term **water quality improvement** through changes in practice and the reduction in use of chemicals
- **Controlling invasive species** (such as Rhododendron) on the Coillte estate, through planting of appropriate species.
- Coillte are committed to implementing a maintenance program for the **native woodland sites** over the duration of the plan.

#### **Key Objective 8**

**In the Northwest BAU, Coillte aims to review, manage and maintain the areas of biodiversity.**

## 4. Sustainable Forest Management Policies and Proposals

Coillte manages its forests to FSC® and PEFC™ Forest Certification Standards, ISO 14001 Environmental Management Standard and OHSAS 18001 Occupational Health and Safety Standard.

### 4.1 Using Forest Design

The BAU recognises its responsibilities to ensure that its forests are planned and managed in a manner that enhances the landscape. BAU team members have been trained in forest landscape techniques and design. All of the forests (and associated properties) have been given a landscape sensitivity designation of high, medium or low. Each forest therefore requires attention to a greater or lesser extent based on these ratings. The production and implementation of a landscape plan is a constantly evolving process which is under continuous review.

A number of factors will be addressed when drawing up a landscape plan. Felling coupe size is one of the most important of these. As a general rule felling coupes adhere to Forest Service regulatory guidelines, at the time of publishing is a maximum of 25ha. To this extent, BAU team members have identified coupes which were greater than 25ha and redesigned/restructured these areas as necessary. There may be situations where felling coupes of greater than 25ha will be necessary, and these will be treated on an individual basis, with the appropriate assessment and consultation process carried out prior to any felling taking place. Other factors and constraints which need to be considered are; age and structural diversity, limited species selection, soil type, windthrow risk, elevation, deer abundance and buffer zone management. These factors are by no means exhaustive. For example, in recent times the disease *Phytophthora ramorum* has spread in certain locations in Ireland. The disease can kill Larch species, which was always considered a valuable species in terms of providing colour in a landscape. While the disease has not been detected in this BAU as yet, it will have an impact on species selection when planning landscape design.

Given the overwhelming occurrence of streams and waterways in the forests in this BAU, much of our forest design plan centres around buffer and riparian zone management. As current coniferous crops are clear felled, opportunities arise to create riparian areas both within and around the forest properties. These new areas will be managed as a mixture of open space and native broadleaf species such as Rowan, Birch, and Willow.

### 4.2 Water Protection

Coillte's approach in protecting water quality and other environmental receptors is outlined in our SOP-023 ERA Procedure for Site Operations. This document sets out our standardised procedure in minimising the impacts of forest operations on water quality.

This procedure incorporates adherence to the Forest Service – Department of Agriculture, Food and Marine, Code of Best Forest Practice, which includes a series of Requirements, Guidelines and Notes. Relevant water protection guidelines include Environmental Requirements for Afforestation, December 2016, Standards for Felling & Reforestation (Interim), October 2019, Draft Plan for Forests & Freshwater Pearl Mussel and updated Information Notes on Appropriate Assessment Procedure and completion of Natura Impact Statements (NIS) and regulatory licence/permit conditions pertaining to specified forest operations.

Through the implementation of the ERA procedure under the Environment Management System, the most sensitive sites are identified and additional mitigation measures above and beyond to what is routinely adopted are recorded and implemented during the course of the forest operations.

Amongst the suite of mitigation measures that can be selected by the forest operations manager, one of the most important is the establishment of buffer zones on all significant watercourses within the forest. If not already in place from the time the forest was initially planted, a naturally vegetated buffer zone should be established either at thinning or clearfell & restock stage. On very sensitive sites, such as in the prioritised Top 8 Freshwater Pearl Mussel Catchments, the buffer zones are actively managed and small groups of native broadleaves are planted to hasten the development of a mixed open space/scrub woodland habitat.

Other routine measures, include the restriction of when operations can occur in the year, the provision of silt traps, the minimisation of machinery movement in the buffer zone, extraction route

layout and use of brush and the design and location of temporary bridging over watercourses within the operations site, Furthermore, to address the risk of oil spillages from forest machinery, a pollution control plan is included in the Activity Pack and a pollution control kit is on site for all high impact operations.

Forest operations are actively managed and monitored. On the most sensitive of sites, daily visual monitoring is conducted of all watercourse exiting the operation's site and records kept. On a selection of these sites, short-term water sampling of 'high impact' forest operations described in Section 2.8 is carried out. In addition, a network of long term fixed sampling sites on selected rivers has been established in each BAU. The purpose of this sampling is to determine the cumulative impact of forests and associated forest practices have on water quality. Either water sampling and/or aquatic surveys are conducted on a periodic basis throughout the year.

Finally, the BAU when planning forest operations consults with regulatory, statutory and interested stakeholders on the topic of water, including the National Parks and Wildlife Service, the Inland Fisheries Ireland and Co. Councils.

Details of any relevant work completed or being carried out within the BAU will be included in the final plans.

### **4.3 Reducing use of chemicals**

#### **Pesticides**

Coillte uses an integrated pest management approach; a core principle of Coillte's Environmental Management System and both the FSC and PEFC certification schemes. As such, Coillte is committed to reducing its pesticide usage and, where possible, to using non-pesticide methods to control pests and weeds. Pesticides are applied only when absolutely necessary due to environmental considerations and cost. The decision to apply a pesticide is based on a site assessment, and only taken where non pesticide control options are unlikely to give sufficient protection at a reasonable cost. When pesticides are required, only those approved for use in forestry by the Pesticide Registration & Control Division (PRCD) of the Department of Agriculture, Fisheries and Food (the regulatory body for pesticide use in this country) and FSC listing of Hazardous Chemicals are used. All spraying is targeted, using hand operated sprayers only.

Where pesticides are required, their storage, usage and disposal all comply with national pesticide legislation, EMS, FSC® and PEFC guidelines and Health and Safety guidelines.

In 2021, as part of our Chemical Use Policy all necessary ESRA's were produced, copies of which can be made available if requested to [info@coillte.ie](mailto:info@coillte.ie).

#### **Fertilisers**

Application of fertilisers to areas to be restocked is only carried out where site fertility is low. Where tree crops develop nutrient problems in later years, foliar analysis is undertaken to determine the quantities of fertiliser to be applied. Where required, aerial fertilisation is carried out on thicket stage crops. Approval from the Forest Service is required for aerial fertilisation. This requires the submission of detailed plans and consultation and agreement from the County Council, Fisheries Board and NPWS. Adherence to the Forest Service Guideline on aerial fertilisation is mandatory. A forest crop is described as 'in check' when tree growth is negligible or has ceased altogether. This usually occurs before canopy closure on nutrient poor sites, when the forest is still incapable of recycling the limited amount of available nutrients within the crop

### **4.4 Sharing our plans and consultation**

Coillte's policy is to consult widely with stakeholders in formulating its management plans, policies and objectives. Examples of how Coillte consults with its stakeholders are outlined below:

- consultation on our BAU felling plans takes place on a formal basis with the Forest Service, Fisheries Boards, National Parks and Wildlife Service and County Councils within the BAU;

- Coillte consults at national level in relation to its forests, at BAU level on its Forest Five Year plans and at forest operational level in advance of all high impact operations. The Forest Five Year plans are currently reviewed on a five year cycle;
- Each BAU hosts consultation meetings with stakeholders annually as part of Coillte’s continuing consultation and engagement. This allows Coillte to discuss issues of common interest with stakeholders.
- a comprehensive stakeholder list is held in each of the BAUs. This includes names of local community groups, statutory organisations, non-governmental organisations, farm partners, contractors, customers, and many other stakeholders. Coillte carries out an annual update of our stakeholder list to ensure our records are as accurate as possible;
- Coillte welcome any member of the community and stakeholders in general to view our website [www.coillte.ie](http://www.coillte.ie) to find out more about what we do. Coillte also encourage stakeholders to make contact with us so that we can answer queries, consider views and respond to any issues raised. Those who wish to be added to our stakeholder register can do so by completing and submitting the contact form on our website.

### **Coillte’s stakeholder engagement process on our Five Year Forest Plans**

It is Coillte’s policy to engage widely with stakeholders in formulating its management plans. The Five Year Forest Plans set out a vision for the forests in each business area unit, and also, how Coillte policies and objectives will be implemented at Business Area Unit level during the period of the plan.

The purpose of Coillte’s forest plans is to set out plans for forest management activities that take place in each of our BAU’s. In compiling these plans Coillte applies principles of environmental impact assessment and risk management on potential interactions between forest activities and receptors such as water and soils, biodiversity, archaeology & cultural heritage, landscape, people and material assets.

Some of the topics covered in our forest plans include the following: commercial planning, timber harvesting, timber sales, community facilities and benefits, environmental enhancement measures etc. During the consultation process on these forest plans, Coillte actively engages with stakeholders, in the following ways:

- national newspaper adverts
- regional newspaper adverts
- consultation via Coillte’s website
- emails or letters to our listed stakeholders
- BAU annual consultation meetings
- forest office meetings (by appointment) which allow further feedback

The stakeholder engagement process is carried out in two stages (scoping and draft plan stage) to take input from the public in relation to its forest plans. A map is produced as part of the consultation process, which reflects the areas targeted for clear felling. This map forms the basis of public consultation and if concerns are raised about particular areas they are addressed at this time. Coillte endeavour to take on board inputs during this engagement process, while also balancing diverse opinions and contributions from the public in relation to these plans.

Stakeholders should note that Coillte on occasion have to make adjustments or amendments to our felling plans for reasons such as silvicultural, landscape design, restructuring, market conditions, forest disease and windblow. Any changes are consulted on in line with Coillte’s consultation procedures.

### **Incorporation of results of stakeholder engagement in this BAU**

Following Coillte public consultation processes, submissions received are acknowledged, logged on our Stakeholder Call Log and assigned to the relevant BAU or business area for consideration, response and possible incorporation into our plans.

Details of incorporated changes and responses issued by Coillte to stakeholder submissions during Phases 1 and 2 of public consultation received for this Five Year Forest Plan will be published in the final version of our plans which are due to be completed later in 2021.

#### **4.5 Monitoring and Evaluation**

Coillte continues to monitor the achievement of its objectives and targets using the proforma set out in [Appendix IV](#). The results of this monitoring will be available at the end of the plan period and published on the Coillte website when the final plans are completed.

**Appendix I - Summary of Archaeological Sites in Northwest BAU**

BAU	Type of Monument	No. In BAU	SMRS Number *
B1	Anomalous stone group	1	SL019-175----
B1	Barrow - mound barrow	1	SL031-018001-
B1	Barrow - ring-barrow	2	SL031-048----, SL038-005----
B1	Bawn	2	DG094-006001-, MA110-004001-
B1	Booley hut	2	DG085-006001-, DG085-006002-
B1	Building	4	SL014-076044-, SL014-076045-, SL014-076046-, SL014-076052-
B1	Bullaun stone	1	SL015-059003-
B1	Burial ground	1	MA100-152001-
B1	Burnt mound	3	MA038-205----, MA038-206----, MA038-207----
B1	Cairn - boundary cairn	3	SL019-171001-, SL019-171002-, SL019-172----
B1	Cairn - burial cairn	1	MA046-004001-
B1	Cairn - unclassified	10	DG037-013002-, DG045-034----, DG087-010----, MA030-054----, MA038-099001-, MA047-031----, SL014-076051-, SL019-174002-, SL021-007----, SL028-001----
B1	Castle - tower house	2	DG094-006----, MA110-004----
B1	Castle - unclassified	1	SL015-090001-
B1	Cave	2	SL014-288----, SL014-290----
B1	Church	3	DG094-002----, MA100-152002-, SL008-009----
B1	Cist	4	DG078-042----, MA046-004002-, MA046-004003-, MA046-004004-
B1	Clochan	1	DG085-004----
B1	Crannog	10	MA013-003----, MA046-007----, MA078-013----, MA100-089----, MA109-018----, MA109-019----, MA110-003----, SL020-169----, SL020-269----, SL025-007----
B1	Cremation pit	1	MA046-004013-
B1	Earthwork	4	MA030-053002-, MA100-152003-, SL014-075----, SL020-205----
B1	Enclosure	29	DG026-044----, DG077-011----, DG092-019----, LE002-031----, LE002-045----, LE007-068----, LE010-024----, MA007-016019-, MA031-003----, MA036-004----, MA037-005001-, MA047-038----, MA048-064----, MA060-032----, MA061-035001-, MA070-190----, MA100-087----, MA100-160001-, MA100-160002-, MA100-160003-, MA100-160004-, MA100-160005-, SL015-056----, SL015-057001-, SL015-125----, SL017-047----, SL019-201001-, SL031-016----, SL032-187----
B1	Field boundary	2	MA038-099002-, SL019-201002-
B1	Field system	1	SL031-017001-
B1	Fulacht fia	3	MA061-036001-, MA061-036002-, MA070-107----
B1	Graveyard	1	SL036-063----
B1	Hilltop enclosure	1	SL032-169----

B1	House - 16th/17th century	1	DG078-014----
B1	House - 18th/19th century	1	SL019-176002-
B1	House - early medieval	4	MA046-004009-, MA046-004010-, MA046-004014-, SL008-025001-
B1	House - indeterminate date	2	MA061-031003-, MA061-035002-
B1	House - Neolithic	1	MA007-016018-
B1	Hut site	5	DG026-013002-, DG085-002----, SL015-059004-, SL027-083----, SL032-176----
B1	Kiln	1	MA046-004011-
B1	Mass-rock	1	LE007-093----
B1	Megalithic structure	4	DG036-033----, DG077-025----, MA030-053001-, MA103-054----
B1	Megalithic tomb - court tomb	9	DG101-007----, MA006-027----, MA007-016006-, MA020-001----, MA021-044----, MA028-001----, SL008-011----, SL009-051----, SL015-050----
B1	Megalithic tomb - passage tomb	6	SL014-088----, SL019-177----, SL019-258----, SL020- 128----, SL020-274----, SL020-275----
B1	Megalithic tomb - portal tomb	1	DG077-021----
B1	Megalithic tomb - unclassified	2	DG026-012----, DG069-030----
B1	Megalithic tomb - wedge tomb	6	DG077-024----, DG098-003----, MA031-005----, MA048-067----, SL009-048----, SL009-050----
B1	Moated site	1	SL037-047----
B1	Mound	3	DG037-013003-, DG052-023----, MA030-037----
B1	Penal Mass station	2	DG037-024----, DG052-033----
B1	Pit-burial	2	MA046-004005-, MA046-004006-
B1	Prehistoric site - lithic scatter	1	SL014-277----
B1	Promontory fort - inland	3	DG092-017----, SL015-090002-, SL021-001----
B1	Redundant record	17	DG044-010----, LE002-030----, LE010-026----, LE010- 027----, MA021-090----, MA021-091----, MA021- 092----, MA046-004012-, RO003-028----, SL005-184- ---, SL015-048----, SL021-108----, SL027-166----, SL032-168----, SL032-170----, SL032-173----, SL032- 174----
B1	Ringfort - cashel	21	DG026-007----, DG026-008001-, DG026-013001-, DG026-016001-, DG027-026----, DG077-014----, DG078-039001-, DG101-008----, LE010-006----, LE010-025----, MA047-037----, MA061-034----, MA087-047001-, SL005-118001-, SL006-001----, SL015-059001-, SL020-206----, SL025-013----, SL025- 042----, SL031-017----, SL031-038001-

B1	Ringfort - rath	33	DG097-035----, LE002-002----, LE003-029----, LE006-004----, LE010-004----, LE015-018----, LE015-079----, MA040-033----, MA046-004007-, MA069-008----, MA079-026----, SL008-013----, SL008-025----, SL008-064----, SL014-084----, SL014-085----, SL020-172----, SL021-081----, SL025-021----, SL027-008----, SL027-009----, SL027-059----, SL027-113----, SL027-146----, SL027-147----, SL031-018002-, SL032-175----, SL034-017----, SL034-018----, SL034-037----, SL034-038----, SL034-039----, SL037-002001-
B1	Ringfort - unclassified	9	DG026-014----, DG075-001----, DG078-037----, LE007-006----, LE010-028----, SL008-005----, SL008-010----, SL009-022----, SL015-057002-
B1	Ritual site - holy well	5	DG052-003----, DG052-014----, MA046-002001-, MA046-002002-, MA073-003----
B1	Ritual site - holy/saint's stone	2	DG101-010----, DG101-011----
B1	Road - road/trackway	4	DG101-003----, MA036-003----, MA072-099----, SL045-002----
B1	Rock art	2	DG018-032----, DG062-019----
B1	Settlement cluster	1	DG085-006003-
B1	Souterrain	8	DG078-039----, MA046-004008-, MA061-031002-, MA087-047002-, SL005-118002-, SL015-059002-, SL031-038002-, SL037-002002-
B1	Standing stone	12	DG039-001----, DG045-013----, DG052-032----, DG062-018----, DG076-002----, DG077-027----, DG077-028----, DG087-001----, DG092-007----, MA021-095----, SL014-275----, SL014-293----
B1	Stone circle	1	DG037-013001-
B1	Stone row	2	MA020-002----, SL020-170----
B1	Structure	4	DG026-008002-, DG026-008003-, DG026-016002-, MA061-037----
B1	Sweathouse	1	SL035-123----

\* The SMRS numbers listed in the above table can be used to view and search for these monuments using The National Monuments Service Mapviewer available at [www.archaeology.ie](http://www.archaeology.ie). When the number of monument types exceeds 10 only the first 10 SMRS numbers are listed.

## Appendix II - Habitats and Species in Northwest BAU

### Special habitats in Northwest BAU Protected or rare species in Northwest BAU

Main Properties	Area (ha)	Habitat Quality	Management Strategy	Issues to be Addressed
<b>Upland, Blanket Bog PB2</b>				
Croaghonagh Bog Lower	33.8	Excellent valley bog	LIFE demo site restore bog	Block draining. Monitor water levels and vegetation
Carrick Barr	22.2	LIFE Site	Restore bog	Fell to waste, ring barking, block drains, monitor.
<b>Sand Dunes</b>				
Murvagh	204	Large area of dunes and coastal sand. Mature Corsican Pine Woodland Area contains 50.6 ha of salt marsh	Monitor and maintain Pine Monitor	Control Grazing Continuous cover strategy for CP
<b>Blanket Bog (PB2)</b>				
Doon	520.8	Extensive area	Maintain heath	To control grazing
Derry	196.6	Conifers plantation removed and bog allowed to regenerate. Drain blocking completed under EU funded Life project	Monitor for natural regeneration of Lodgepole pine conifers and trespass	Ongoing monitoring and associated cost of protection.
Sessuecommon	51.1	Maintain health	To control grazing.	Ongoing monitoring
<b>Dry siliceous heath (HH1)</b>				
<b>Slishwood</b>				
Slishwood	24.8	Moderate quality	Follow SAC Guidelines	Control non native invasive tree/shrub species
<b>Dystrophic lakes (FL1)</b>				
Sessuecommon	4.1	Rare Species	Follow SAC Guidelines	Protect lakes
<b>Wet Heath (HH3)</b>				

Doonee	24.5	Good flora/rare species	Follow SAC Guidelines	Control non native invasive tree/shrub species and deer
Knocknarea	13.8	Rare flora	Follow SAC Guidelines	Control grazing
Sessuecommon	15	Rare Species	Follow SAC Guidelines	To control grazing.
<b>Acid oligotrophic lakes (FL2)</b>				
Glencar	17.1	Diverse Flora/Fauna	Protect riparian habitat	Maintain zone of carr woodland
Ballygawley	31.0	Rare flora	Maintain lake habitat	Maintain oligotrophic standing water habitat
<b>Depositing lowland rivers (FW2)</b>				
Cullentra	1.4	Diverse flora	Restore Native woodland	Maintain Riparian habitat
<b>Exposed calcareous rock (ER2)</b>				
Crumpaun	2.7	Excellent Flora	Follow SAC Guidelines	Restore Riparian habitat
Glencar	1.3	Excellent Flora	Follow SAC Guidelines	Restore Riparian habitat
<b>Dry humid acid grassland (GS3)</b>				
Crumpaun	2.0	Grassland habitats	Follow SAC Guidelines	Maintain semi-natural grassland habitat
Gleniff	28.6	Extensive area	Maintain grassland	Control non native invasive species
<b>Eroding upland rivers (FW1)</b>				
Sheskin	2282.4	Owenmore catchment. Numerous small rivers flow through it.	Create riparian habitat of higher conservation value. Allow development of open bog and deciduous scrub habitats.	The survival of broadleaved species in such areas is often poor. Grazing of sheep may also be a problem.

**Native and Mixed Woodlands in BAU**

Main Properties	Area	Habitat Quality	Management Strategies	Issues to be addressed
Ards	25.0	Good flora/rare species	Restore N/W	Control Rhododendron
Greenan/Friary	11.0	Rare flora/species	Restore N/W	
Derryleck	6.6	Good quality	Restore N/W	
Clonkilly	14.4	Good habitat	Restore N/W	Control Trespass
Woodquarter	10.0	Good habitat	Restore N/W	Control invasive species
<b>Oak – Birch – Holly woodland (WN1)</b>				
Cullentra	17.6	Good flora/rare species	Restore native woodland (NW)	Monitoring of deer fence
Slish wood	18.6	“ “ “	Restore NW	Retain Scots pine
Hazelwood	11.1	Rare fauna/flora	Restore NW	Control Nat. Regeneration of beech
Brackloon	73.77	This is an important area of old native oak woodland, which has been well-studied recently.	Improve the quality of the oak-birch-holly woodland habitat.	The costs of ongoing restoration and public access
Laughil	45.48	This is an important area of old oak woodland which is included in a Forest Service funded Native Woodland Scheme.	Area re-established as of oak-birch-holly woodland habitat.	Goat trespass and control of natural regeneration of exotics needs attention in to the future. Damaged by fire in 2010.
<b>Wet Oak – Ash – Hazel woodland (WN4)</b>				
Hazelwood	28.5	Extensive Area	Restore NW	Control invasive species
Derrinrush	25.13	This is an old woodland site which supports one of the best examples of the habitat in the BAU.	Increase the quality and area of the habitat over time.	Deer are present and may be a threat to young deciduous woodland.

<b>Mixed broadleaves woodland (WD1)</b>				
Glencar	11.2	Excellent Flora	Maintain mixed woodland	Increase native woodland
Hazelwood	47.6	Rare flora and fauna	Maintain mixed woodland	Control laurel/ Rhododendron
<b>Mixed broadleaves/conifer woodland (WD2)</b>				
Slishwood	21.2	Good flora	Restore NW	Retain Scots Pine
<b>Mixed Conifer woodland (WD3)</b>				
Slishwood	25.2	Good flora	Increase NW	Retain Scots Pine

### Protected or rare species in Northwest BAU

<b>Catchments</b>	<b>Habitat quality</b>	<b>Management strategy</b>	<b>Management 2016-2020</b>	<b>Issues to be addressed</b>
<b>Freshwater pearl mussel</b> ( <i>Margaritifera margaritifera</i> ) Regarded by International Union for the Conservation of Nature and Natural Resources (IUCN) as 'facing an extremely high risk of extinction in the wild in the immediate future'. Also listed in EU Habitats Directive, Annex II.				
Clady Eske Leannan Owencarrow Owenea Newport Bundorragha	All properties falling within these catchments will be managed to the "Forestry and Freshwater Pearl Mussel Requirements"	Prevent enrichment of river waters by improving the ecological quality of riparian habitats.	Remove conifers and establish riparian scrub over time with the agreement of various regulatory bodies.	Agreement of National Parks and Wildlife Service and fisheries board. The cost of riparian restoration.
<b>Lesser horseshoe bat</b> ( <i>Rhinolophus hipposidero</i> ) Regarded by International Union for the Conservation of Nature and Natural Resources (IUCN) as 'facing a high risk of extinction in the wild in the medium-term future'. Also listed in EU Habitats Directive, Annex II.				
Moore hall, Towerhill	Supports the largest colony of the species in the BAU- both buildings and woodland are important.	Protect roosts and maintain suitable foraging habitat for the species.	No tree felling should be take place within a 20 metre radius of the roost. Low impact silvicultural methods such as continuous cover forestry be practiced 20 and 100 metres of the roost.	Costs of building and maintaining roosts.

<b>Atlantic salmon</b> Listed in EU Habitats Directive, Annex II				
<b>Sword-leaved helleborine</b> Listed in EU Habitats Directive, Annex II				
Brackloon	A population of this very rare and protected orchid species has been recorded from this site. Probably the only site in the BAU.	Maintain and increase (if possible) the population of the species.	Survey the current distribution and population size of the species. Manage the woodland habitat in the immediate vicinity of the species in order to	
<b>Marsh fern</b> Listed in EU Habitats Directive, Annex II				
Creagh	This wetland fern species is considered to be rare and declining due to drainage of its habitat.	Maintain and increase (if possible) the population of the species.	Survey the current distribution and population size of the species. Ensure that no habitat disturbance, i.e. drainage, occurs in the vicinity of the population(s).	

## Species

In terms of species, notable species identified in the BAUs forests are listed below

<b>Notable Species</b>	<b>Notable Species</b>	<b>Notable Mammals</b>
The Globe Flower Irish Ladys Tresses Yellow Birds nest Round leaved Wintergreen Less Tway Blade Narrow Buckler-Fern Lemon scented Fern Broadleaved Helleboreine Birds nest Orchid Purple Saxifrage Mossy Saxifrage Alpine Meadow grass Holly Fern Intermediate Winter-Green Alpine Saw-wort Fringed Sandwood Shade Horse Tail Lesser Butterfly Orchid Gold Cone, Golden Lady BearBerry Slender Cottongrass St. Patricks Cabbage Marsh fen Common Toothwort	Lemon Scented Fern Broadleaved Helleboreine Moss Campion Alpine Bistort Alpine Saxifrage Tea-leaved Willow Northern Rock Cress Chickweed Willow herb Small White orchid Hoary Whitlow grass Yellow Mountain saxifrage Greater Spearwort Calcareous Fens Small Cranberry Bog Ceranberry Bog sedge Narrow leaved Helleborine Slim Sedge Pinewort Buckthorn Brown Beak rush Lesser Twayblade St. Dabeocs Heath	Badger (Meles meles) Merlin Peregrine Falcon Hen Harrier Golden Plover Red Grouse Red-throated Diver Ring Ouzel Golden Eagle Pine Marten (Martes martes) Badger (Meles meles), Red Squirrel Red Grouse Chough Merlin Peregrine Falcon Lesser Horseshoe Bat (Rhinolophus hipposideros)

### Appendix III – Recreation Facilities in the BAU

Location	Description
Ards Forest Park Donegal	Walking trails, Nature trails, looped walks, picnic area, café during summer months
Drumboe Woods Donegal	Walking trails, Nature trails, looped walks, picnic area.
Bonnyglen Wood Donegal	Walking trails, picnic area, viewing points
Murvagh Donegal	Picnic, Coastal walk
Drummonaghan Wood, Donegal	Walking Trails, viewing points, way-marked trails, picnic site
Woodquarter Donegal	Picnic Site, Boat launch, walking trails, way-marked trails, viewing points, fishing platforms
Ballykeeran Donegal	Walking trails, viewing points
Hazelwood Co. Sligo	Picnic Site, Boat launch, Walking Trails, Viewing Points, EU Life Project Demonstration Site with outstanding views of Lough Gill
Dooney Rock Co. Sligo	Walking trails, Viewing points, looped walks, picnic area.
Sliswood Co. Sligo	Walking trails, Viewing points, looped walks, picnic area.
Deerpark Co. Sligo	Walking trails, Viewing points, Way-marked ways, Historic buildings
Carns Co. Sligo	Problems with dumping so car park had to be closed. The trails on this site were upgraded in 2014. Two loop walks were upgraded with trail head signage at both. This property is walking distance from Sligo town and newly developed sports complex at Cleveragh.
Gortarowey Co. Sligo	Newly developed car park and trails including one to multi access standard. Work ongoing on providing two more looped walks in conjunction with Sligo Co Co with cross border funding for same.
Rathcarrick/ Knocknarea Co. Sligo	Newly developed walk from Strandhill village to the top of Knocknarea. Some of the most spectacular scenery is on Coillte property.
Drumharriff Co. Donegal	Looped walking trail.
Union Wood Co. Sligo	Walking trails, mountain bike course, viewing area on Union rock, picnic area and car parking.
Lissadell Co. Sligo	Walking trail, beach, bird watching, picnic area.
Milltown Wood, Co. Leitrim	There are a significant number of looped trails through these woods.

## Appendix IV – Monitoring

<b>Economic Parameters</b>		
<b>No.</b>	<b>Parameter</b>	<b>Measure</b>
<b>Establishment</b>		
1	Afforestation	area established (hectares)
2	Afforestation - Farm Partnerships	area established (hectares)
3	Restocking	area restocked (hectares)
4	Establishment Area Aerially Fertilised	hectares
5	Later Manuring Area Aerially Fertilised	hectares
6	Total kg/ha aerial fertiliser	
<b>Harvesting</b>		
7	Clearfelled area	hectares
8	Clearfell areas greater than 20ha in Upland areas.	no. of Sales Proposals
9	Clearfell areas greater than 5ha in Lowland areas.	no. of Sales Proposals
10	Thinning area	harvest area ( hectares)
<b>Silvicultural Systems</b>		
11	Alternative to Clearfell sites	number of LISS sites
12	Alternative to Clearfell area	area of LISS sites (hectares)
<b>Forest Design</b>		
13	Forest Design Plans required	area of BAU where plan needed (hectares)
14	Forest Design Plans developed:	number of plans
15	Forest Design Plans: blocks restructured	number
<b>Species Composition</b>		
16	Primary species	% area of BAU
17	Secondary species	% area of BAU
18	Broadleaves	% area of BAU
19	Open Space	% area of BAU
<b>Chemicals</b>		
20	Chemical usage	Kgs active ingredient/ha
<b>Land Transactions</b>		
21	Area sold by BAU	hectares
22	Area acquired by BAU	hectares
<b>Environmental Parameters</b>		
<b>No.</b>	<b>Parameter</b>	<b>Measure</b>
<b>Biodiversity</b>		
23	Biodiversity area identified	% area of BAU
24	Biodiversity sites identified	number
25	Biodiversity management plans completed	number
26	Biodiversity features recorded	number
27	Long term retentions,	% area of BAU
28	Deadwood: Standing.	stems/ha in BAU

29	Deadwood: Fallen	stems/ha in BAU
30	Deadwood: Volume	total (m <sup>3</sup> ) in BAU
<b>Water Monitoring</b>		
31	Site Preparation,	no. of operations monitored
32	Aerial Fertilisation - Establishment	no. of operations monitored
33	Manual & mechanical fertilisation - Establishment,	no. of operations monitored
34	Aerial Fertilisation - later manuring	no. of operations monitored
35	Manual & mechanical- later manuring,	no. of operations monitored
36	Harvesting	no. of operations monitored
37	Roading	no. of operations monitored
<b>Forest Health</b>		
38	BAU Forest Health Survey results	any damage recorded [y/n]
39	BAU Forest Health Survey:	any action required to be taken [y/n]
<b>Abiotic Damage</b>		
40	Fires – stocked area damaged	hectares
41	Fire break production	meters
42	Windthrow area	hectares
<b>Deer Culls</b>		
43	Current deer cull return figures	number culled
<b>Social Parameters</b>		
<b>No.</b>	<b>Parameter</b>	<b>Measure</b>
<b>Cultural Heritage</b>		
44	Protected archaeological monuments identified	number
45	Local features/folk heritage recorded on GIS	number
<b>Recreation</b>		
46	Paintball	number licences issued
47	Car rallying	number licences issued
48	Pony trekking	number licences issued
49	Orienteering	number licences issued
50	Community walks/projects	number licences issued
51	Fishing	Number licences issued
52	Hunting	number licences issued
53	Other	number licences issued
54	Visitors to forest parks in BAU	Number estimated
<b>Complaints</b>		
55	Complaints received	number registered
56	Complaints addressed	number signed off
<b>Community</b>		
57	Community partnerships	number
<b>Health and Safety</b>		
58	Notifiable accidents	number

## Appendix V – Forest Details

Forest	Forest Gross Area (ha)	Clearfell Volume m <sup>3</sup>					Thinning Volume m <sup>3</sup>					Clearfell Area (ha)				
		2021	2022	2023	2024	2025	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
DL01 - Errigal	1,265	2,031	5,445	4,780	1,528	0	0	0	0	0	0	5	11	10	2	0
DL02 - Ards Forest Park	528	2,786	0	5,528	8,715	7,472	290	411	290	0	0	6	0	11	15	11
DL03 - Kilmacrennan	1,141	1,386	871	1,004	9,123	479	0	548	3,033	198	1,932	2	2	2	18	2
DL04 - Ramelton	812	3,201	9,634	0	10,976	733	1,435	1,647	1,821	2,324	3,963	6	19	0	18	2
DL05 - Rathmullan	707	4,529	1,733	4,627	588	3,217	653	357	698	1,437	877	9	3	11	1	9
DL06 - Swilly	1,453	14,480	11,326	14,437	11,185	3,355	1,025	989	0	452	253	30	23	27	22	7
DL07 - Foyle	1,390	2,994	7,865	8,650	8,552	19,071	0	466	390	255	0	6	19	18	15	36
DL08 - Lagan	436	0	3,317	0	6,755	1,297	0	1,017	1,202	2,219	892	0	6	0	14	6
DL09 - Convoy	1,210	12,217	5,045	2,251	12,067	5,144	1,263	2,195	1,491	1,872	4,113	23	14	5	26	12
DL10 - New Mills	1,134	390	7,699	4,144	8,049	6,043	2,895	1,439	2,591	1,199	2,889	1	17	9	20	12
DL11 - Gartan	658	4,955	4,939	5,088	2,075	3,227	1,499	123	284	554	628	9	11	10	4	8
DL12 - Meenirroy	2,091	16,415	3,488	3,405	541	1,105	0	275	27	10	1,702	35	8	7	1	2
DL13 - Lough Finn	716	0	3,820	0	0	2,826	0	0	0	0	0	0	8	0	0	7
DL14 - Gweebarra	1,217	3,367	1,471	2,506	6,424	2,287	105	87	80	0	73	7	3	5	10	4
DL15 - Glenties	1,601	6,471	2,746	6,156	3,943	8,672	0	0	68	0	296	16	6	12	6	13
DL16 - The Glens	1,500	6,316	6,790	1,775	2,136	3,319	556	0	409	0	0	13	16	5	4	10
DL17 - Reelan	1,447	6,138	2,924	4,900	941	4,396	514	6	661	0	6	15	6	11	3	8
DL18 - Cark	1,498	744	5,708	3,062	3,431	1,725	51	0	0	0	977	2	14	6	6	3
DL19 - Drumboe	1,179	5,976	10,560	4,148	9,637	4,637	1,874	2,056	1,274	3,867	1,910	13	23	10	20	12
DL20 - Killygordon	1,967	9,944	5,400	18,358	4,380	8,425	2,413	4,156	4,435	5,551	4,346	22	11	44	13	23
DL21 - Ballybofey	1,422	13,297	8,205	2,019	13,981	11,922	2,356	2,651	1,701	971	317	30	18	5	30	29
DL22 - Meencargagh	1,097	6,051	6,625	11,434	3,865	27,865	560	417	195	0	361	10	14	25	7	44
DL23 - Croaghakern	630	1,769	0	2,538	0	0	0	0	0	0	0	4	0	5	0	0

DL24 - Lough Eske	2,088	7,240	10,907	9,357	8,997	17,809	673	2,251	725	2,038	2,107	13	21	23	17	34
DL25 - Brenter	1,847	11,056	11,822	17,825	8,618	10,906	2,651	2,804	556	1,645	947	23	24	38	17	26
DL26 - Killybegs	1,098	694	5,536	17,128	2,668	4,308	0	127	0	0	0	2	11	39	5	11
DL27 - Fintragh	1,117	2,079	4,597	3,189	4,392	139	0	0	0	0	0	4	9	7	7	0
DL28 - Laghey	371	0	2,275	0	0	3,972	131	1,400	0	0	481	0	4	0	0	13
DL29 - Croaghonagh	1,818	2,799	5,333	7,214	0	3,605	0	0	0	63	0	5	11	18	0	8
DL30 - Grousehall	1,239	9,785	22,641	24,655	13,833	14,029	483	816	348	1,244	67	22	60	56	35	37
DL31 - Lough Derg	2,875	20,009	19,148	23,169	9,011	7,546	250	848	613	0	550	43	43	52	17	16
DL32 - Meensheefin	969	2,705	1,483	9,661	8,783	10,869	0	0	0	0	0	5	3	17	20	27
DL33 - Ballinragh	486	0	1,721	3,139	0	1,863	35	0	35	580	0	0	3	6	0	4
DL34 - Murvagh	232	0	0	634	829	0	260	0	0	0	0	0	0	1	1	0
DL35 - Ballyshannon	892	3,348	6,688	1,916	2,095	375	0	0	47	377	739	5	13	4	4	1
DL36 - Pettigo	65	2,425	0	0	5,917	0	0	0	0	655	0	4	0	0	10	0
LM01 - Glenade	137	6,725	0	2,137	1,358	0	0	0	0	397	0	12	0	4	2	0
LM02 - Lough Melvin	501	0	7,623	2,598	3,312	4,888	158	0	2,375	1,534	438	0	15	6	8	7
LM04 - Bonet	1,094	10,010	0	5,639	5,732	12,785	805	1,763	1,405	1,121	1,672	17	0	14	8	22
LM05 - Glencar	347	5,657	36	2,729	9,606	2,474	96	0	86	77	412	10	0	5	13	3
MO01 - Glenamoy	1,811	1,310	1,242	2,835	1,477	1,988	0	0	0	0	0	3	3	7	2	3
MO02 - Ballycastle	3,211	0	1,973	4,722	3,859	4,550	280	502	108	0	0	0	5	12	8	10
MO03 - Carrowmorelacken	299	0	496	352	0	1,109	0	302	220	0	0	0	1	1	0	5
MO04 - Knockaunderry	67	0	0	0	6,684	0	1,438	0	0	0	0	0	0	0	25	0
MO05 - Shannetra	3,144	7,744	20,437	5,877	3,050	4,603	1,516	679	1,316	0	603	17	44	12	7	13
MO06 - Sheskin	4,519	1,282	11,978	10,811	7,696	9,675	550	173	0	0	0	2	27	22	18	19
MO07 - Erris	1,490	0	256	913	0	0	0	0	0	0	0	0	0	2	0	0
MO08 - Nephin	4,412	0	0	473	0	0	0	0	0	0	0	0	0	1	0	0
MO09 - Tristia	1,441	538	0	443	1,656	5,267	0	0	0	0	0	1	0	1	3	12
MO10 - Conn	780	0	0	333	378	3,523	0	484	0	12	502	0	0	1	1	4
MO11 - Bunnafinglas	806	10,988	2,380	0	1,680	1,767	347	196	0	0	0	22	4	0	4	5
MO12 - Swinford	596	369	5,590	3,835	2,003	10,213	506	1,836	328	236	331	1	16	10	6	27

MO13 - Charlestown	502	1,617	835	1,424	6,462	3,345	2,123	1,500	3,806	95	810	3	3	5	13	11
MO14 - Cloonakilliana	278	510	0	1,884	761	3,416	166	302	173	0	0	1	0	6	2	8
MO15 - Kilkelly	258	684	0	0	0	1,168	764	950	333	558	145	2	0	0	0	3
MO16 - Kiltimagh	848	411	3,193	0	429	6,954	2,223	1,654	2,917	2,436	775	1	14	0	2	17
MO17 - Turlough	622	696	2,008	4,551	7,789	0	822	389	889	844	168	1	7	9	16	0
MO18 - Glenisland	2,908	9,306	9,038	16,261	17,648	11,881	2,790	2,091	1,912	2,646	3,475	20	25	42	40	30
MO19 - Cloondaff	1,524	584	916	660	7,870	2,095	0	1	0	0	0	1	2	1	13	3
MO20 - Glennamong	720	0	4,764	0	1,136	0	0	0	0	0	0	0	10	0	2	0
MO21 - Mulrany	2,435	0	0	6,274	0	0	0	0	0	0	0	0	0	16	0	0
MO22 - Achill	14,997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MO23 - Ballyglass	301	0	0	0	0	5,057	446	576	0	1,397	747	0	0	0	0	11
MO24 - Teevenish	604	273	320	0	317	1,119	0	0	0	0	0	1	1	0	0	2
MO25 - Moorehall	284	1,610	925	1,694	3,885	0	0	0	0	0	0	3	2	3	7	0
MO26 - Claremorris	650	0	0	870	1,574	3,739	0	234	0	0	256	0	0	2	2	5
MO27 - Ballyhaunis	191	0	0	0	2,115	0	921	178	914	0	326	0	0	0	10	0
MO28 - Cloghans	122	0	964	0	978	0	0	0	0	0	0	0	1	0	1	0
MO29 - Tourmakeady	439	14	1,055	635	2,878	1,816	0	0	0	0	0	0	2	1	4	3
MO30 - Claddy	562	561	0	204	0	2,181	0	0	0	0	0	1	0	1	0	3
MO31 - Brackloon	117	0	0	7,913	655	414	0	0	0	0	0	0	0	14	1	0
MO32 - Croagh Patrick	824	0	0	1,597	2,152	0	0	0	0	0	0	0	0	3	4	0
MO33 - Barnaderg	815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MO34 - Doolough	1,208	0	0	0	1,210	0	0	0	0	0	0	0	0	0	2	0
MO35 - Kilmovee	439	2,760	0	2,651	0	1,722	1,277	1,171	1,348	892	146	6	0	6	0	8
SO01 - Benbulbin	1,135	10,921	9,814	5,338	11,719	19,377	230	0	411	303	594	25	23	9	20	29
SO02 - Lough Gill	669	12,312	7,788	10,805	1,935	9,753	204	0	19	478	151	26	14	19	3	14
SO03 - Union	1,299	7,587	8,527	13,618	14,482	4,999	1,185	452	174	210	346	15	15	24	41	7
SO04 - Ox Mountain	3,271	43,129	22,404	2,484	6,033	17,310	5	222	963	0	483	94	46	4	17	36
SO05 - Easky	1,054	3,477	5,058	2,423	4,324	2,671	0	0	0	0	0	7	10	5	11	4
SO06 - Moy	3,153	12,501	8,238	10,888	7,633	5,065	435	676	3,180	1,246	0	28	18	24	11	11

SO07 - Tubbercurry	379	1,239	0	1,215	8,721	955	2,011	570	1,015	1,385	1,091	5	0	2	23	3
SO08 - Ballisadare	795	4,598	0	4,065	6,614	0	378	1,364	296	1,408	852	10	0	16	14	0
SO09 - Lavally	472	3,225	1,675	0	11,067	0	788	57	141	568	0	5	3	0	17	0
SO10 - Arigna	2,123	9,287	9,802	13,946	15,983	14,754	1,584	2,345	1,313	2,399	1,098	18	25	31	33	26
SO11 - Drumanone	364	157	1,446	3,166	2,861	0	224	409	583	259	694	1	4	7	4	0
SO12 - Curlews	1,534	8,850	8,468	2,025	9,566	5,178	979	1,314	438	1,508	303	18	20	5	18	6

Appendix VI – BAU Map

