



# Midlands BAU 3 Strategic Plans

2016 - 2020

## Foreword

I have great pleasure in publishing Coillte's Midlands Business Area Unit (BAU) strategic plan.

The purpose of a BAU strategic plan is to set out plans for the forest and non-forest business that will take place in the BAU during the plan period. In practicing sustainable forest management Coillte's aim is to develop its forests in a way that is environmentally sustainable, socially sustainable and economically sustainable. Coillte has applied the principles of environmental impact assessment and risk management to the potential interactions between forest activities and standard receptors in compiling these plans.

The topics covered in the BAU strategic plan include:

### **Commercial Planning:**

- planting
- timber harvesting
- timber sales
- forest roads and access
- licenses, lettings, recreation and non-forestry land uses
- land acquisition and sales
- non-forest business – such as renewable energy

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

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

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

- sustainable forest management
- long term retention of trees
- low impact silvicultural<sup>1</sup> systems
- water quality
- forest design
- use of chemicals

Noel Cassidy, 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. We are committed to the prevention of pollution.

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. The scope of this policy covers the operations and activities associated with our forestry, property sales and energy businesses.

Our objectives are to:

1. Adopt an organisation wide system for managing environmental issues. The Director of Stewardship and Public Goods has responsibility for managing the implementation of this policy and 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, our Environmental Policy to Coillte staff and stakeholders, contractors and their employees and the communities within which we operate.

Noel Cassidy

BAU Manager

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

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# 1. Coillte and the BAU Strategic Plans

## 1.1 Coillte

Coillte is Ireland's leading natural resources companies with operations in forestry, timber panel production, renewable energy and land management. The core purpose of the company is to enrich lives locally, nationally and globally through innovative and sustainable management of natural resources.

### 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 of the Irish State's forests.

### Coillte Today

The company is an export oriented, forestry and forest products business, with interests in renewable energy. The company has three operating divisions - Coillte Forest, Coillte Panel Products and Coillte Enterprise.

The company employs approx. 1,000 people across Ireland and the UK and supports the employment of many more people in jobs that add value to our forest products.

The Forest Service (Department of Agriculture, Food and the Marine) is the forest authority in Ireland. 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.

### Outdoor Recreation

As Ireland's leading provider of outdoor recreation we have more than 150 recreation sites for you to enjoy. For more information on how to get out and enjoy the outdoors see [www.coillteoutdoors.ie](http://www.coillteoutdoors.ie)

## 1.2 Renewable Energy

Coillte is committed to the development of sustainable 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 2020 target of achieving 40% of its electricity consumption from renewable sources. Coillte is fully aligned with government and EU policy in terms of the role we plan 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 BAU Strategic 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 2020 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 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**

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 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 consult our Frequently Asked Questions document as it appears on the Wind Energy Section of the Coillte web site<sup>4</sup> and do not hesitate to contact us at [windenergy@coillte.ie](mailto:windenergy@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 is now playing a key leadership role in delivering sustainable biomass energy solutions to the Irish biomass industry through its new 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 has developed a new partnership model aimed at unlocking the potential of the bio-energy sector here in Ireland and is currently rolling this model out nationally through its new biomass processing hubs. Each Coillte processing hub now supports 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](mailto: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.

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

<sup>4</sup> [http://www.coillte.ie/coillteenterprise/renewable\\_energy/wind\\_energy/wind\\_energy\\_faq/](http://www.coillte.ie/coillteenterprise/renewable_energy/wind_energy/wind_energy_faq/)

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 lifetime of the BAU Strategic 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

In addition to 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 provides a wide range of 'public goods'. Extensive recreation facilities are provided in Coillte's forests including Ireland's best mountain biking facilities. Coillte operates an open access policy for walkers and pedestrian users, and people can apply for licenses and permits to engage in a wide range of other activities. Coillte's recreation policies are set out in the company's website at [www.coillte.ie/aboutcoillte/recreation/recreation\\_policy/](http://www.coillte.ie/aboutcoillte/recreation/recreation_policy/) and a special website [www.coillteoutdoors.ie](http://www.coillteoutdoors.ie) provides information about our recreational opportunities.

Over fifteen per cent of our estate is actively managed for nature conservation. Habitat restoration projects such as the EU funded LIFE Priority Woodland Project, and recreation partnerships like the Dublin Mountains Partnership are showcase projects that demonstrate best practice natural resource management.

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 and they play a role in moderating flooding at times of high rainfall.

We talk to people locally about how to maximise these benefits through our BAU social and environmental panels which are drawn from key stakeholders in each BAU.



## 1.5 Meeting external challenges and constraints

Coillte and all of its forests and lands 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 BAU strategic plans will each contribute to meeting these challenges and constraints.

Challenges and Commitments	Response
<p><b>National Forest Strategy</b></p> <p>The government forestry strategy published in a document titled "Growing for the Future"</p>	<p>In response to the National Forest Strategy:</p> <p>Coillte will set and meet targets for the national timber supply.</p> <p>It will engage in a greater diversification of species and increase broadleaf content according to agreed targets.</p> <p>Coillte will seek to increase the recreational value of some of its forests.</p>
<p><b>National Biodiversity Plan</b></p> <p>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 15% of its forest estate overall for nature conservation and biodiversity management.</p>
<p><b>EC Habitats Directive and EC Birds Directive</b></p> <p><b>(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>

Challenges and Commitments	Response
<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 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 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 and FSC/PEFC) with compliance assessed by way of independent audits by the Forest Service and 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.</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>

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.

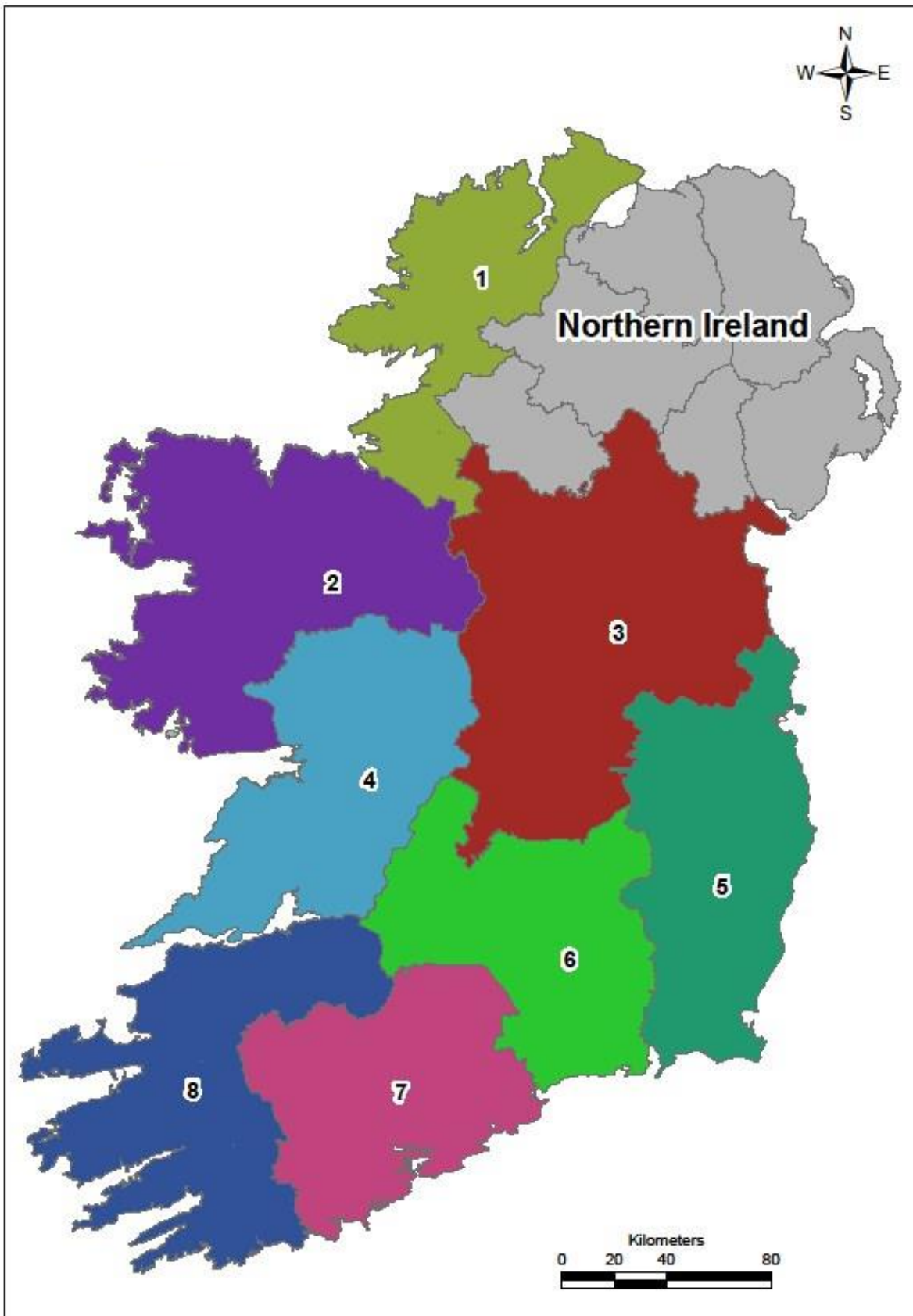
Coillte will liaise closely with Forest Service with regard to this significant potential threat to our Ash woodlands and will respond immediately to any mitigation measures proposed.

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. The challenge for Coillte here is the long term nature of forest planning and the need to realise the commercial potential of mature timber without excessive cost.
- 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.
- Significant increases in illegal disposal of waste, often within Coillte forests, has led to requirements to remove waste and litter, this has led to partnership based approaches to reducing dumping and littering.

## 1.6 Coillte BAUs

Coillte's estate is divided into 8 Business Area Units (BAUs)



Coillte has developed plans for each of these BAUs, called BAU strategic 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 2011-2015. This consultation document refers to the incoming planning cycle 2016-2020.

Coillte also convenes a social and environmental panel for each of its BAUs. Plans and programmes are discussed with these groups to help Coillte to understand social, recreational and environmental issues, opportunities and concerns in the BAU.

## 1.8 Summary on the Various Levels of Coillte Forest Management Planning

The **BAU strategic 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 strategic plan process.

**SF (Site File)** 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 human) 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 V 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.

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## 2. Midlands BAU

### 2.1 The Midlands BAU

All BAUs play important roles in achieving Coillte targets and objectives. The Midlands BAU of Coillte Forest encompasses Counties Cavan, Longford, Louth, Meath, Monaghan, Offaly, Westmeath, Laois (part) and Leitrim (part). It is a large BAU covering 1,292,510 hectares of Ireland. Within this area, Coillte owns 48,565 hectares (3.76%) of which just over three-quarters is forested with the remainder mostly moorland, marsh and lakes.

The BAU geology and landform varies from drumlin rich soils to the north, to the slopes of the Slieve Bloom in the South, both ideal for Sitka spruce production, and the low lying plains in the midlands where peat is the dominant soil type. There is a high proportion of lakes dispersed throughout the BAU. The low lying plains are frequently effected by late spring frosts which limit the use of Sitka spruce but are suitable for Norway spruce production. Ravensdale forest in north Louth is capable of producing high quality Douglas fir.

One of the largest broadleaf plantations in Ireland, extending to 362ha, is located in the BAU in Mullaghmeen and Halfcarton on the Westmeath/Meath border.

### 2.2 Forests and Forest Products in the Midlands BAU

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

During the 2011-2015 period the BAU produced approximately 1.2 million cubic metres of wood (2015 figures estimated). Coillte's production supports major sawmills in Galway, Fermanagh and Laois plus a number of smaller sawmills. It's also a major source of wood fibre for Coillte's boardmills in Clonmel and Waterford.

#### 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 101 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 Midlands 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 BAU recreational activities contribute to the social, environmental and economic life within the BAU boundaries.

A number of recreational facilities are the result of a joint initiative between Coillte and local communities. Examples of this collaborative effort are developments such as:

- **The Burren, Cavan** – A cross-border UNESCO designated Geopark, encompassing the mountainous areas of West Cavan and Fermanagh developed in partnership with Cavan County Council.
- **Deer Park, Virginia** – The Golden Way Heritage Walk was developed with the Virginia Heritage Society and Cavan County Council.
- **Rossmore Forest Park** was upgraded in partnership with the Monaghan County Council led Peace II Task Force. In 2015 the walks were upgraded in cooperation with the Monaghan Phoenix Athletics Club.
- **Black Island** was upgraded in partnership with Hope Heritage Group and funded by the Monaghan County Council Led Peace II Task Force.
- **Dartrey Forest** – Car parking facilities and a number of trails were upgraded in association with Monaghan County Council.
- **Brittas Lake** is a community partnership between Coillte and Clonaslee Community Development Association for the development of Brittas Lake.
- **The Slieve Bloom Eco Walks** were developed in partnership with the Slieve Bloom Rural Development Society.
- **Ballynagall South/Scragh Bog Nature Walk** – this was a joint venture between Coillte and the National Parks and Wildlife Service.
- **Killykeen Cycle Trail** – Developed recently with Cavan County Council.
- **Rathcline Native Woodland walk** – developed in association with Lanesborough Tourism Group and Longford County Council.
- **Knockatallon Walking Trails** were developed through the INTERREG IIIA Programme operated by the Blackwater Regional Partnership. These trails were developed in partnership with Monaghan County Council, Tydavnet Group Water Scheme, Knockatallon Rambling Club and Coillte to create 4 walks of 32km varying in length from 6.5km to 10km.
- **Drewstown Woods - Girley Bog Loop** – developed in association with Meath County Council.
- **Creeve Property Native Woodland Arboretum, Co Longford** – developed in association with Cullyfad Local Community.

Many Coillte forests in this BAU are expansive and offer multiple activities such as walking, hiking, multi access, fishing, picnicking, watching wildlife, canoeing, field archaeology or simple enjoyment of the outdoors.

This BAU has a number of designated areas for recreational activity, and these are detailed on the Coillte website [www.coillteoutdoors.ie](http://www.coillteoutdoors.ie) and are also listed in 'Discovering Ireland's Woodlands' (Coillte) booklet under counties Cavan, Longford, Louth, Meath, Monaghan, Offaly, Westmeath, Laois and Leitrim. A table describing the recreational values of the BAUs sites is available in [Appendix III](#).

There are also a number of Waymarked Ways passing through Coillte property in the BAU. These include the Slieve Bloom Way, The Cavan Way, The Westmeath Way, the Monaghan Way and the Tain Trail, Offaly Way.



Coillte has also developed a number of looped trails in conjunction with Fáilte Ireland, under their Looped Walks Programme including, Brittas, Mullaghmeen, Ravensdale, Killeshandra Castle Lake & Forest Walk, Bailieborough, and there are 4 looped walks in Monaghan in the Bragan mountains.

Coillte welcomes the opportunity to work with local groups and authorities to develop further recreational facilities including loop walks subject to the availability of funding.

Coillte have recently installed electronic barriers for access to Rossmore Forest Park and Dún a Rí Forest Park. Coillte are installing these barriers as means to improve security and the funds collected will help to maintain the facilities.

Coillte actively engages with local communities and other partners to resource the management and maintenance of this valuable recreational offering.

## 2.4 Cultural and Archaeological Heritage in the Midlands BAU

Coillte is aware of some 197 archaeological sites and sites of cultural significance in its landholdings in the Midlands 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 National Monuments Service (NMS), 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. 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 and historical value and a plan implemented for their preservation.

The BAU will continue to support sites of cultural and literary heritage such as Kinnitty Castle property, the Temple in Dartrey and Dartrey Monument and the Burren, and 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 Midlands BAU

Ecological surveys were carried out between 2003 and 2006 to identify areas of maximum biodiversity value and draw up management plans for those areas. The findings of each of the completed surveys, were incorporated into our forest management plans. We consulted on our individual forest management plans a number of years ago.

The ecological survey identified and mapped Coillte lands in the BAU where it was considered most appropriate to manage for conservation value. This area is distributed in over 189 locations. Management plans for these sites have been agreed and adopted with the ecologists and their recommendations will be implemented in Coillte's ongoing management of the areas. Additional biodiversity areas were subsequently identified as biodiversity areas by forest managers, e.g. riparian zones. As a result, the total area included in biodiversity areas in the BAU is 10,343ha (21% of Coillte land in the BAU).

**In the Midlands BAU 21% of its estate has a primary objective for biodiversity.** This includes Raised bog, priority native woodland, former LIFE sites and three People's Millennium Forest.

Management plans have been developed for these areas to ensure their conservation and protection.

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.

Coillte's certification process requires it to identify areas of high conservation value forests (HCVF) across its 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.

HCVF areas in the BAU largely overlap with areas designated for nature conservation, either nationally under the Wildlife Act as Natural Heritage Areas (NHA) or under European Law in the form of the Habitats Directive as Special Areas of Conservation (SAC) or Special Protected Areas for birds (SPA). Some old woodland sites in the BAU have the potential to be classified as HCVF and these sites are identified through Coillte's old woodland assessment procedure.

HCVF areas may be quite large, such as Special Protection Areas in the west of Ireland and the Slieve Bloom Mountains 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 Midlands BAU. Areas shown are in hectares (Ha)

Designation	Area (ha on Coillte lands)
HCVF	17,037
NHA* - Natural Heritage Area	597
SAC* - Special Area of Conservation	1,960
SPA* - Special Protection Area	13,404
Nature Reserve	185
pNHA	3,538

(\*Overlap occurs between categories)

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 Midlands BAU achievements in relation to nature conservation include the following:

- 873ha of Peatland has been restored in 13 sites under LIFE Projects which ran from 2002-2015.
- Two Native Woodland site of 22.2 ha has been restored.
- 4,185 ha are being managed as Old Woodland Sites to retain their semi-natural characteristics

## 2.6 Species and Habitats in the Midlands BAU

Conifers dominate the species profile in the BAU, with sitka spruce being the dominant species. Notable mammals in the area include the lesser horseshoe bat, pine marten, badger and red squirrel.

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 which is a 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).

Sites within Business Area Unit 3 are prioritised according to the above criteria. The following sites are prioritised for control of invasive species; Knockdrin, Kinturk, Castletown, Derrycarne, Glassderry, Ravensdale.

## 2.8 Water Quality and Protection in the Midlands BAU

In terms of water, the main river bodies in the BAU are the Shannon, Erne, Boyne, Barrow and Nore. The rivers and lakes of the area support important salmon and trout fisheries and this is also important to the local economy.

Coillte actively participates in the implementation of the Water Framework Directive and ensures the forest sector plays its part in protecting the water bodies. Prior to the commencement of all high impact forest operations, and environmental impact assessment 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 full implementation of both 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.

Long-term water monitoring will be carried out in several properties in the BAU.

## 2.9 Forest Management Issues

Coillte's Midlands BAU faces a number of issues in relation to managing its forests effectively for production and for their recreational and social benefits. Over the past 5 years these have included:

security, litter, waste dumping, deer poaching, illegal use by motorised vehicles, inappropriate recreation, anti-social behaviour, theft, fires and trespass

Coillte has recently introduced a set of byelaws to assist in controlling these activities.

### 2.9.1 Deer Management

Wild deer are present on 60% of the Coillte estate. Through browsing and bark-stripping trees, deer can have a considerable negative impact 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.

It is Coillte's policy to manage deer 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 maintaining viable deer populations across the 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. Coillte's summary deer management policy can be viewed at [www.coillteoutdoors.ie](http://www.coillteoutdoors.ie)

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 therefore 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 and to ensure the effective management of the deer utilising their lands.

Coillte have demonstrated considerable commitment and leadership management 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. At Regional, and local level Coillte are active participants in a number of deer management partnerships and groups.

It is estimated that wild deer are present in over 40% of Coillte’s estate in this BAU. A breakdown of deer species abundance in this BAU is shown in the table below. Damaging impacts to Coillte’s crops are generally localised, predominately in areas with high deer numbers. 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 species abundance in **BAU 3**

Deer Species Present (hectares)			
Density Classification	Red	Fallow	Sika
<b>Low</b>	518	6,384	0
<b>Moderate</b>	0	8,386	0
<b>High</b>	0	5,620	0
Total area	<b>518</b>	<b>20,390</b>	<b>0</b>

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### 3. The Midlands BAU Strategic Plan

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 and through planting partnerships with others.

##### The Coillte Estate

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

##### Key Objective 1

**In the Midlands BAU, Coillte aims to produce approximately 1,530,000 cubic metres of wood from its forests between 2016 - 2020.**

**1,177,000 m<sup>3</sup> of this will be provided through felling and 363,000 m<sup>3</sup> will be achieved through**

Coillte does not intend to acquire new lands for forest planting in the Midlands BAU during the 2015-2020 periods.

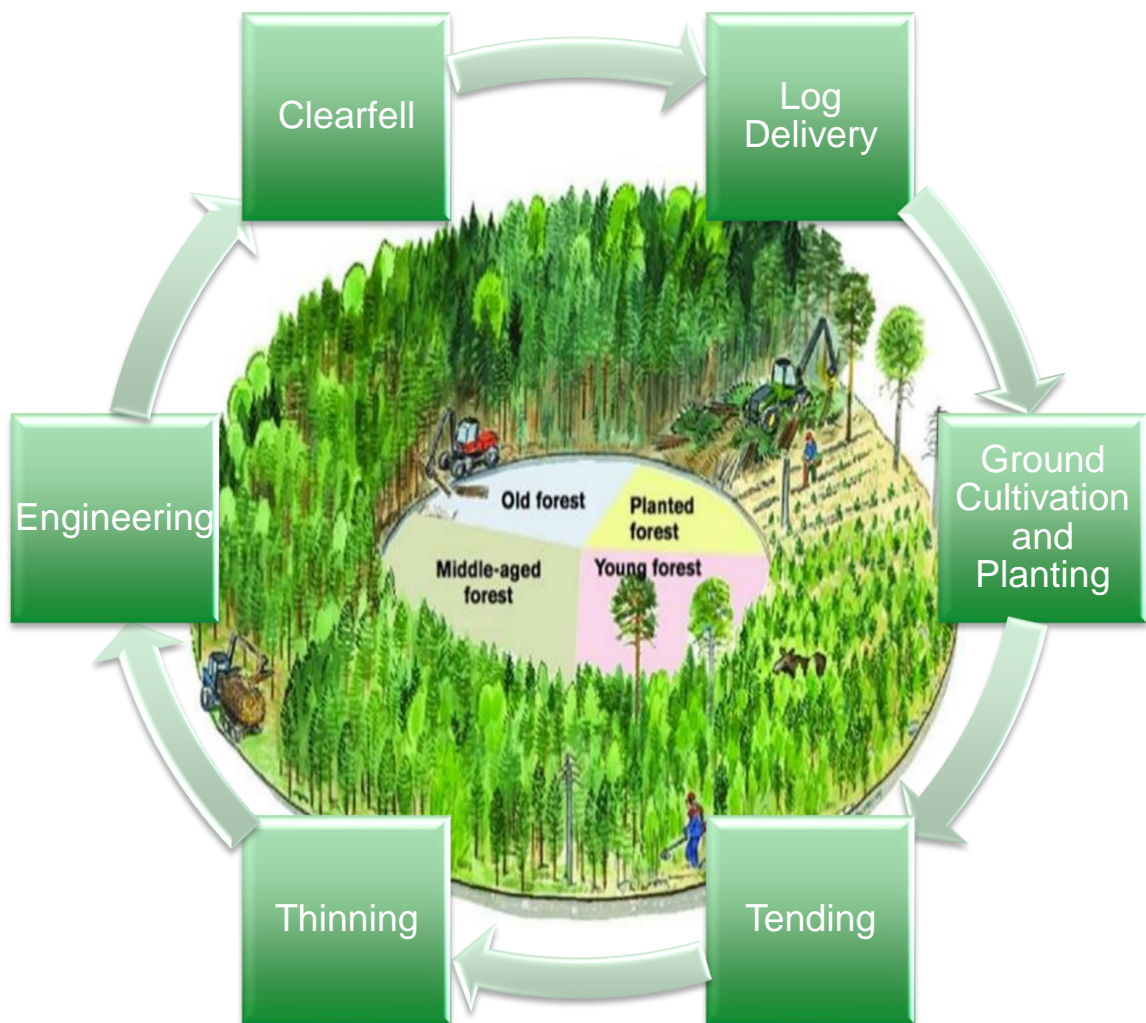


Figure 1: The Forest Cycle

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

- **Clearfell** 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 characterised 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. These felling areas have already been included in Forest Management Plan public consultations in detail during 2016-2020 and can be viewed on [www.coillte.ie](http://www.coillte.ie). at individual forest unit level, also the BAU outlines a list, in local newspapers annually, of the clearfell and regeneration plans for the following year.

### **New planting and replanting**

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

#### **Key Objective 2**

**In the Midlands BAU, Coillte aims to replant approximately 2,924 ha by 2020.**

### **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 Midlands 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 43km 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 Midlands BAU, Coillte aims to construct approximately 43km of new roads by 2020.**

### 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 County Councils in the BAU with a view to improving access.
- **Nutrient deficiencies** - The Midlands BAU overall is a fertile BAU, however there are some areas within Offaly, most notably Peat land areas (Bord na Mona Bogs) where there are nutrient deficiencies. Foliar analysis will be carried out on these areas as necessary and consultation will take place with all relevant bodies with regard to safeguarding watercourses prior to any operations.
- **Meeting increasingly challenging environmental standards** requires Coillte to review its practices and assess the risks on a regular basis. Coillte has achieved Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification Schemes (PEFC) 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 Midlands BAU.
- Sometimes the **popularity of forests for recreation** affects our capacity to fell timber.

- **Diseases** can also have a potential impact on timber supply. In 2010 the plant disease *Phytophthora ramorum* (known as Sudden Oak Death in the USA) was detected in Japanese larch on the Coillte estate, with subsequent findings also in Noble fir and Beech. *Phytophthora ramorum* is a fungus that can infect a variety of tree and shrub species causing loss of foliage, resin bleeding and ultimately plant death. As yet there have been no recorded instances of the disease in this BAU. In an effort to ensure disease symptoms are detected early, thus minimising the spread of the disease, we will continue to monitor our forests. There will be full and ongoing liaison with the Forest Service Plant Health section at all times. As there is no known cure for this disease, Coillte will have to fell diseased trees as they are identified, to comply with EU plant health legislation.
- **Deer damage** is an issue in a number of properties in the BAU and special deer fencing is required, at the time of establishment, to ensure these areas are established successfully. Deer management plans exist to monitor and control deer, e.g. implementation of deer lawns through forest design.
- **Pests** - The principal forest insect problem which occurs in the BAU is the large pine weevil, *Hylobius abietis*. The large pine weevil is the most economically important forest pest in Northern and Eastern Europe and the only insect pest against which Coillte routinely apply chemical insecticides. Adult weevils are attracted to coniferous sites by the smell of cut or fallen trees. Eggs are laid in the stumps and the larvae feed beneath the bark until they become adults. Development from egg to adult takes 12-24 months under Irish conditions and stumps remain suitable breeding sites for 2-3 years after felling. Adult weevils emerge from the stumps and feed on the seedling stem from the root collar upwards, killing the plant. Seedlings can remain susceptible to weevil damage for up to five years, but are most at risk for the first two-three years after planting. In the absence of control measures it is not uncommon for 100% of seedlings to be killed by weevil feeding. In this BAU a number of trials are in place in conjunction with National University Ireland Maynooth (NUIM) investigating the use of nematodes as a biological control for protection against weevil on reforestation sites. NUIM are also carrying out investigations on reforestation sites within the BAU on the use of fungi as a control. Results from these and other trials will feed into our weevil management strategy, so that we can continuously improve how we do things.
- There are **Hen Harrier** habitats in the Slieve Bloom and the Bragan Mountain areas. There is approximately 175,000m<sup>3</sup> due to be felled in these areas between 2016-2020. There is ongoing consultation between Coillte, Forest Service and NPWS with regard to the Hen Harrier.

### **Farm partnerships/Afforestation Services (Private Planting)**

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
- carry out an inventory on farm partnership sites

#### **Key Objective 4**

**In the Midlands BAU, Coillte manages 101 Farm Partnerships.**

## Overall production targets in the Midlands BAU 2016- 2020

Coillte's proposed operating targets for the Midlands BAU for the period of the plan- 2016-2020 are summarised in the table below.

### Midlands BAU main Coillte production targets 2016 – 2020<sup>5</sup>

Annual Totals					
Year	2016	2017	2018	2019	2020
Planting (ha)					
<b>Regeneration planting (r/f) (Replanting after felling)</b>	741	633	560	561	429
Harvesting Programme					
Harvest categories (000m3)					
<b>Thinnings</b>	67	86	73	76	61
<b>Regeneration felling (P,C,W) felling</b>	213	227	228	269	240
<b>Total</b>	<b>270</b>	<b>313</b>	<b>301</b>	<b>345</b>	<b>301</b>
<b>Felling area (ha)</b>	715	570	511	595	534
Roading Programme					
Roading (km)					
<b>New</b>	13	8	8	8	6
<b>Upgrading</b>	33	32	30	29	27
<b>Total</b>	<b>46</b>	<b>40</b>	<b>38</b>	<b>37</b>	<b>33</b>

<sup>5</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.

### 3.3 Coillte's Non-timber Businesses in Midlands 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 the lease or purchase lands from Coillte in order to facilitate these developments or an easement over the estate to develop their projects. 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.

All wind energy proposals that concern the Coillte estate are assessed by Coillte in the first instance via a screening exercise approvals process that includes an environmental impact appraisal. If negative impacts are found, Coillte does not facilitate a situation where these proposals could be put forward to the relevant Planning Authority for their assessment.

However, 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 Strategic Plan period, planning permission will be sought by a third party for the following project:

<b>Proposed project that will seek planning permission on Coillte estate - correct as at January 2016</b>			
<b>Name of Wind Farm</b>	<b>Location</b>	<b>Status</b>	<b>No. of wind turbines</b>
Emlagh	Navan Forest, Co. Meath	In Planning	2
<b>Total</b>			<b>2</b>

Over the course of this BAU period, Coillte 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. In all instances, Coillte will avoid 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.

#### Key Objective 5

**In the Midlands BAU, Coillte aims to continue the development of 1 renewable energy project in the period to 2020**

## **Biomass Production**

Coillte will consider renewable heat supply opportunities as they arise.

Coillte have not carried out any planting for the bio-energy industry. However, trials have been carried out in parts of the country on the recovery of waste wood (lop and top) from clearfell sites to service the bio-energy industry. In the future the Midlands BAU may look further into bio-energy depending on the outcome of the trials.

### **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**

Whilst Coillte has an open access policy for walking, it has a policy to develop the commercial potential of its lands by permitting its use by groups or individuals for other recreational and commercial activities. The company aims to maximise revenues from licensed use. Examples of such activities are mountain-bike events, shooting, pony trekking, off-road driving, orienteering and others as requested. The position in regard to these activities and which benefit both Coillte and the applicant 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 some of these conditions are geared towards the activity and the particular location. Responsibility for issuing the licence, management, processing and safekeeping, rests with the manager at the location. A fee based on the activity is charged for each licence.

#### **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 [www.Coillteoutdoors.ie](http://www.Coillteoutdoors.ie). 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 [codes of practice](#) which establish minimum standards expected of all persons engaged in these activities alongside compliance with licence conditions and national legislation.

### 3.4 Community, Recreation and Tourism Proposals

Coillte's proposed recreation priorities for the Midlands BAU between 2016 and 2020 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 unauthorised usage of the recreation infrastructure in line with best management practice and security policy.
- 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:
- Continuing our exploration of the development of amenities with County Councils including:
  - a. Cycle route at Killykeen Forest Park, Co Cavan
  - b. Slieve Bloom Mountain Bike Trail, Co Laois and Co Offaly

#### Key Objective 6

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

- **Provide a high quality recreation offering to the public**
- **Maintain all existing recreation sites to the highest standards**
- **Work in partnership with proactive communities to upgrade amenity sites**

### 3.5 Cultural Heritage and Archaeology Measures in the Midlands 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 National Monument Services 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 fenced off on site by the forest manager to ensure their protection. 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 such as that at the Temple in Dartrey and the Dartrey Monument 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 2016-2020

### 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 clearfelling. The introduction of LISS systems can only be achieved gradually and can take up to a rotation length to complete. Currently 21% of the productive area of the BAU, is managed under LISS. Continuous Cover Forestry is carried out in many sites. Emo Park, Mullaghmeen, Killykeen, Rossmore, Dun A Ri, Castletown, Knockbarron – Co Offaly, Black Island, Carrick Wood, Ravensdale.

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 Midlands BAU, Coillte aims to maintain and enhance the current level of broadleaves in the BAU, managed for biodiversity.**



### 3.6.3 Biodiversity

At present 21% of the Coillte land area in the Midlands BAU is designated and managed for biodiversity.

Principal methods of retaining biodiversity in the BAU will include:

- **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 4185ha identified as old woodland. This represents 9% of the Coillte land in the BAU or 16% 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.
- **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.
- **long term retention** of some stands of timber is practiced to enhance environmental, landscape and social benefits of our holdings. The target for the period is to set aside 1% of the gross area of the BAU for long term retention. Glendine property known locally as the Ministers Hut has been designated for long term retention. Scots pine is the only conifer tree regarded as a native species and it is our policy to retain them long term where it's possible and safe to do so.
- **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
- Monitoring sites that were the subject of **EU LIFE projects** during the period of the last BAU strategic plan.
- **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 Midlands BAU, Coillte aims to review, manage and maintain the areas of biodiversity.**

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## 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 Policy on water protection and water monitoring is outlined in "Water Protection and Forest Operations Guidelines". This document outlines current best practice in minimising the impacts of forest operations on water quality.

Compliance with the Forest Service's Code of Best Forest Practice, which includes a series of Requirements, Guidelines and Notes, the following are the most relevant to water protection; Requirements on the Freshwater Pearl Mussel and Aerial Fertilisation, Guidelines on Water Quality and Harvesting and an Information Note on Appropriate Assessment Procedure is strictly adhered to.

Through the implementation of the Environmental Risk Assessment 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 and 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 Site File (SF) 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. Sampling is conducted at least three to four times a year, increasing to at least 6 times in areas of intense forest activity is taking place.

In the BAU there are several long term water sampling points identified. Samples are taken at these areas three times a 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.

### **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 bodies. 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.

#### **FSC Implications**

Coillte is currently certified under the Forest Stewardship Council (FSC) forest certification scheme, a voluntary international forest certification scheme. Under this scheme cypermethrin is classed as 'highly hazardous' and can only be used in FSC-certified woodlands, under a derogation from FSC International. Coillte's cypermethrin derogation extended to October 2015.

Therefore Coillte has applied to FSC international for the continued use of cypermethrin, for treating newly planted trees in the forest. Details of this application can be found at this link [http://www.coillte.ie/fileadmin/user\\_upload/pdfs/Application/Republic\\_of\\_Ireland-application\\_form\\_for\\_cypermethrin\\_derogation-2015.pdf](http://www.coillte.ie/fileadmin/user_upload/pdfs/Application/Republic_of_Ireland-application_form_for_cypermethrin_derogation-2015.pdf)

A public consultation process has been completed with stakeholders on the derogation for continued use of cypermethrin. This robust public consultation process included direct contact with five hundred stakeholders over a 45 day period, the derogation application was also publically available on Coillte's website for the duration of the consultation period. In addition, a representative from the FSC and Soil Association, visited Ireland to review the derogation process and met six stakeholders to discuss the issues around the use of cypermethrin. As part of this process, the use of cypermethrin in Coillte's nursery at Ballintemple and in the forest was also fully reviewed. In addition the representative looked at a number of trials on the use of alternatives to cypermethrin, which are ongoing in the forest. They also reviewed Coillte's environmental and safety procedures. FSC will in time make a decision on the application for the continued use of cypermethrin by Irish FSC forest management certificate holders and Coillte await that decision.

### **PEFC Implications**

Coillte is currently PEFC certified and the PEFC Irish Standard allows use of cypermethrin, as it is legally registered for use in Irish forests by the Pesticide Registration and Control Division of the Department of Agriculture, Food and the Marine.

### **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 Working With People**

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 on new policies in relation to its forests, at BAU level on its BAU strategic plans and at forest operational level in advance of all high impact operations. The BAU strategic plans are currently reviewed on a five year cycle;
- Each BAU have a social and environmental panel which meets annually as part of Coillte's continuing consultation and engagement. This forum allows Coillte, and environmental, social and community interests to discuss issues of common interest. The minutes of these BAU panel meetings can be viewed at the BAU head office if required. For more information on the panels, click on [http://www.coillte.ie/aboutcoillte/about\\_coillte/coillte\\_consultation/social\\_and\\_environmental\\_panels/](http://www.coillte.ie/aboutcoillte/about_coillte/coillte_consultation/social_and_environmental_panels/)

- Coillte continues to explore opportunities to improve public participation in forest management;
- 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, complainants, and many other stakeholders. Coillte carry out an annual update of our stakeholder list to ensure that 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.

### **Coillte's consultation process on its BAU strategic plans**

It is Coillte's policy to consult widely with stakeholders in formulating its management plans. The BAU strategic 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 BAU strategic plans is to set out plans for forest management activities that take place in each of our BAU's. In compiling these plans Coillte apply principles of environmental impact assessment and risk management on potential interactions between forest activities and receptors such as water and soils, biodiversity, archaeology and cultural heritage, landscape, people and material assets.

Some of the topics covered in a BAU strategic plan include the following: commercial planning, timber harvesting, timber sales, community facilities and benefits, environmental enhancement measures etc.

During the consultation process on these BAU strategic plans, Coillte actively engage with stakeholders, in the following ways:

- national newspaper adverts
- regional newspaper adverts
- consultation via Coillte's website
- mail shots to our listed stakeholders
- flyers and notices about our consultation process at amenity site entrances
- forest office meetings (by appointment) which allow further feedback

The consultation process is carried out in two stages (scoping and draft plan stage) to take input from the public in relation to its BAU strategic plans. A map is produced as part of the consultation process, which reflects the areas targeted for clearfelling. 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 consultation 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 consultation in this BAU**

Following Coillte public consultation processes, submissions received are acknowledged, logged on our internal system, and assigned to the relevant BAU or team for consideration and possible incorporation into our plans.

The detail in the following table outlines incorporation of changes, responses following consideration of consultation submissions for this BAU strategic plan as a result of submissions received from stakeholders/public during Coillte's public consultation stages (scoping and draft plan) carried out during 2015.

## Incorporation of changes, response in the Midlands BAU Plan

Section reference in plan	Detail incorporated
Foreword	<p><b>Coillte agreed to make the following changes to its plans following consultation with Mr. Neil Foulkes</b></p> <p>The following statement was added <i>“In practicing sustainable forest management Coillte’s aim is to develop its forests in a way that is environmentally sustainable, socially sustainable and economically sustainable”.</i></p>
1.2 Renewable energy	<p>Following the many wind energy submissions received by groups and individuals, Coillte considered each submission and ultimately responded to each submission through the preparation of a detailed Frequently Asked Questions document that was issued to each respondent and uploaded onto the Coillte web site:</p> <p><a href="http://www.coillte.ie/coillteenterprise/renewable_energy/wind_energy/wind_energy_faq/">http://www.coillte.ie/coillteenterprise/renewable_energy/wind_energy/wind_energy_faq/</a></p> <p>Coillte also updated Section 1.2 through the addition of specific focused sections regarding fossil fuels, Coillte’s approach to public participation and consultation, wind energy, biomass and other renewable technologies.</p>
3.3.1 Renewable Energy Projects	<p>In response to some of the wind related submissions received, most notably one received from Mr. Anthony Cohu, Coillte updated the text in each BAU Strategic Plan such that it provides information that is correct as at January 2016 regarding the number of planning permitted projects and proposed projects that concern the Coillte estate. The information is now presented in an easy to reference table that provides details regarding the status of each project at the time of writing in addition to the number of wind turbines/MW proposed as part of that renewable energy project. In addition, wherever relevant, information is also provided about wind energy projects where Coillte has a direct involvement and those projects include a Community Benefit Scheme and / or additional benefits for the host communities.</p>
3.6.2 Practicing Low Impact Silvicultural Systems	<p>Coillte considered the inclusion of areas managed under LISS in each BAU plan, however this data is currently being actively reviewed and will be completed in the coming months. When completed Coillte will upload this data to its website.</p>
3.6.3 Biodiversity	<p>Key objective 7 in the Midlands plan was reviewed and updated.</p>
4.4 Working with people	<p>A web link was added to this section for further information on Coillte’s Social and Environmental Panels.</p>
4.3 Reducing Chemicals	<p>Additional data was added to section 4.3 concerning Coillte’s application to FSC for a derogation for the use of Cypermethrin.</p>

3.2 Clearfelling	<p><b>Following Coillte's consultation with WOI (Woodlands of Ireland) the following changes were made to Coillte's plans</b></p> <p>Coillte agreed to change current text <i>"Clear felling is a natural part of forest management"</i> to <i>"Clearfell 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"</i>.</p>
3.6.3 Biodiversity (Continuing the introduction of riparian buffer zones)	Coillte clarified the statement in its text referencing that <i>"Buffer zones will not normally have a timber production target"</i> .
Appendix 2, Column 5	Coillte amended a misprint <i>"Issues to be Assessed"</i> , now corrected to read <i>"Issues to be addressed"</i> .
2.9 Forest Management Issues	<p><b>Following public consultation and engagement with the Irish Farmers Association (IFA). Coillte are also involved in the National deer management forum, The Wicklow Deer Management Partnership and other deer management groups in BAU South East.</b></p> <p>Coillte have included additional information in terms of how it manages its deer population and statistics on deer species abundance in each BAU.</p>
3.3.2 Land Sales & Development	<p><b>The following text addition agreed with Property Registration Authority (PRA) following consultation</b></p> <p><i>"Coillte 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."</i></p>
1.2 Renewable Energy  4.4. Working with people	<p><b>Following consultation with Mountaineering Ireland (MI)</b></p> <p>Coillte's wind team propose to send Mountaineering Ireland a personalised notification about all wind farm projects that concern the location of wind turbines on the Coillte estate from February 2016 onwards.</p> <p>Coillte have agreed to hold an annual meeting between Coillte's head recreation team and MI to discuss any areas of concern, and any possible proposals which could provide mutual benefit.</p>
<p><b>Incorporation of changes, responses following consideration of consultation submissions specific to BAU 3 – Midlands</b></p> <p>The detail in the table below outlines incorporation of changes, responses following consideration of consultation submissions for the Midlands BAU strategic plan as a result of submissions received from stakeholders/public during Coillte's public consultation stages (scoping and draft plan) carried out during 2015.</p>	
2.3 Community, Recreation and Tourism Facilities in the Midlands	<p><b>Submission by Stakeholders</b></p> <p>Request that additional resources could be put into the recreational elements of recreation areas in the Midlands Forests. In particular we received submissions from stakeholders of Rossmore Forest Park and Castleshane Forest in Monaghan.</p>



	<p><b>Response by Coillte</b></p> <p>Our Core purpose is to manage our forests in an economically, socially and environmentally sustainable manner.</p> <p>We endeavour to continuously improve areas we have designated for recreation and work closely with local community groups to provide further local recreational facilities where possible.</p> <p>During the 2015 consultation process the Midlands BAU met stakeholders of Rossmore Forest Park and Castleshane Forest on Monday 9th November 2015 to discuss and engage on various topics. There were many requests made by the stakeholders which were discussed on the day and subsequent response letters issued following the dialogue in Monaghan.</p>
<p>2.4 Cultural and Archaeological Heritage in the Midlands BAU</p>	<p><b>Submission by Stakeholders</b></p> <p>Submission received from Mr Tom Murtagh regarding the ecological management of Gowna Forest.</p> <p><b>Response by Coillte:-</b></p> <p>Areas referred to in the submission are Erne Head Wood. We were pleased to have received input on various areas of concern within Gowna Forest. The submission request was thoroughly reviewed and responded to and a thank you email response received from Mr Tom Murtagh.</p>
<p>3.2 Social, economic and environmental</p>	<p><b>Submission by Stakeholders</b></p> <p>Coillte contributing to Co Louth in social, economic and environmental aspects of development.</p> <p>The Council said they “welcome the opportunity to contribute to Coillte’s public consultation and hope to be able to work in a close, collaborative relationship with Coillte in future to be able to develop further the potential benefit of Coillte’s properties to the people of Louth and also to help Coillte maximise the non-cash value of its assets”.</p> <p><b>Response by Coillte:-</b></p> <p>We were pleased to have received a submission from Louth County Council and have reviewed the matters raised. Our local Forest Operations Manager has worked with Brendan McSherry during 2015 to develop various areas of interest.</p>
<p>4.4 Working with people</p>	<p><b>Submission by Stakeholders</b></p> <p>Submission received from the Save Rathleash Wood Group requesting consideration be given to various suggestions.</p> <p><b>Response by Coillte:-</b></p> <p>We were pleased to have received the input from Rathleash Wood. All input was considered and a written response issued responding to the issues raised.</p>
<p>4.4 Working with people</p>	<p><b>Submission by Stakeholders</b></p> <p>Submission received from Mr Neil Foulkes requesting a broken table at Doon Forest be repaired.</p>

	<p><b>Response by Coillte:-</b></p> <p>We were pleased to have received the request. The Forest Operations Manager exchanged a number of communications with Mr Foulkes. The broken table was replaced in Doon Forest with a new picnic table unit and other commitments given with regard to the planting of low crown broadleaves in the immediate surrounding area.</p>
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## 4.5 Monitoring and Evaluation

Coillte continues to monitor the achievement of its objectives and targets using the performa set out in [Appendix IV](#). The results of this monitoring will be available in Coillte's sustainability reports which will be published on the Coillte website [www.coillte.ie](http://www.coillte.ie)

## Appendix I - Summary of Archaeological Sites in Midlands BAU

Type of Monument	No. In BAU	SMRS Number *
Barrow - bowl-barrow	2	LH011-001001-, LA007-004----
Barrow - unclassified	4	WM038-013----, WM011-150----, LA006-008----, LA006-007----
Bawn	5	OF030-005003-, LE025-061002-, CV028-009002-, CV017-039----, CV017-038----
Building	1	LE025-060004-
Bullaun stone	3	LF019-068002-, LE025-060003-, LA007-012----
Cairn - boundary cairn	2	OF039-060003-, LA010-001002-
Cairn - unclassified	6	OF039-060004-, MO015-007----, LF005-018----, LE035-029----, CV007-003----, CV004-003002-
Castle - motte	1	OF036-044003-
Castle - motte and bailey	1	ME006-027----
Castle - tower house	1	OF030-005001-
Castle - unclassified	6	OF036-045----, OF036-044001-, LF015-033----, LE025-061001-, CV035-011----, CV028-009001-
Church	1	LE025-060001-
Cist	1	LH011-001002-
Crannog	1	CV019-034----
Designed landscape - folly	1	LA005-010002-
Designed landscape - tree-ring	2	OF016-037----, CV039-038----
Designed landscape feature	2	LA009-016----, LA009-007----
Earthwork	4	WM038-026----, WM026-101----, WM012-128----, WM007-067--- -
Enclosure	41	OF039-028----, OF039-018----, OF039-015005-, OF039-015004-, OF039-015003-, OF039-015002-, OF039-015001-, OF039-015----, OF036-047----, OF035-004----
Field system	4	LH008-055002-, LA013-064----, LA011-001----, CV004-050----
Fulacht fia	2	LH008-092----, LH008-001----
Graveslab	1	OF036-044005-
Graveyard	2	WM020-038001-, LE025-060002-
Hermitage	1	LA007-008----
Hillfort	1	LA007-002----
House - indeterminate date	1	CV001-028----
House - medieval	2	LA009-015----, CV001-027----
Hut site	8	LH005-023002-, LH005-021002-, CV004-026----, CV004-025----, CV004-024----, CV002-042----, CV001-026----, CV001-025----
Icehouse	3	WM011-004----, CV035-008----, CV028-010----
Kiln	1	LE025-061003-
Kiln - corn-drying	1	CV007-012----
Megalithic tomb - court tomb	2	MO013-007----, CV019-035----
Megalithic tomb - portal tomb	2	CV004-004----, CV004-001----

Type of Monument	No. In BAU	SMRS Number *
Megalithic tomb - unclassified	4	MO009-063----, MO009-051----, LA006-001----, CV004-027----
Megalithic tomb - wedge tomb	3	CV007-001----, CV004-005----, CV004-003001-
Mound	2	OF037-011----, OF030-005002-
Promontory fort - inland	1	CV004-036----
Redundant record	5	WM001-054----, OF038-032002-, LA009-011----, LA003-013----, CV007-018----
Ringfort - cashel	5	LF019-119----, CV006-004----, CV002-038----, CV002-029----, CV001-020----
Ringfort - rath	65	WM017-028----, WM012-068----, WM011-109----, WM011-070---, WM011-067----, WM011-003----, WM007-060----, WM003-032---, WM001-026----, OF043-062----,
Ritual site - holy well	1	CV039-037----
Road - class 2 togher	2	LF018-084039-, LF018-084007-
Road - class 3 togher	2	LF018-084011-, LF018-084010-
Road - road/trackway	1	OF037-022----
Road - unclassified togher	2	OF003-002----, LA009-008----
Rock art	15	CV004-064----, CV004-063----, CV004-062----, CV004-061----, CV004-060----, CV004-059----, CV004-058----, CV004-057----, CV004-056----, CV004-055----
Souterrain	3	ME032-021----, LH022-021----, CV019-036002-
Standing stone	6	WM011-075----, MO020-029----, LH004-002005-, LH004-002004-, LH004-002003-, LH004-002002-
Stone circle	1	LH004-002001-
Stone row	1	CV021-073----
Sweathouse	8	LE021-015----, LE021-014----, LE021-013----, LE021-011----, LE021-010----, CV005-013----, CV003-021----, CV003-009----
Well	2	LA006-009----, CV035-007----

\* 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 Midlands BAU

### Special habitats in Midlands BAU

Main Properties	Habitat Quality	Management Strategy 2015-2020	Issues to be Addressed
<b>Raised Bog (PB1) --- LIFE project, Life Nat/IR/000121</b>			
Killyconny bog, Fartagh, Cavan (11.6 ha)	Includes areas of good quality active raised bog and associated habitats.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
Ardgullion Bog, Coolamber, Longford (25 ha)	Includes areas of good quality active raised bog and associated habitats.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
Carn Park Bog, Westmeath (132.2 ha)	Includes areas of good quality active raised bog and associated habitats.  Rare sphagnum pulchrum present.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
Crosswood Bog, Creggan, Westmeath (42.7 ha)	Includes areas of good quality active raised bog and associated habitats.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
Mount Hevey Bog, Ballasport/Kilwarden, Meath/Westmeath border (58.2 ha)	Includes areas of good quality active raised bog and associated habitats.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
Shanderry (Coolrain Bog SAC)	Coolrain Bog is excellent habitat.	Retain high water table to enable peat forming mosses to grow	Monitor and control regeneration of exotic tree species and fire prevention
<b>Raised Bog (PB1) --- LIFE 09</b>			
Lough Ree, Tonagh and Mucknagh (21ha) SAC	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Lough Forbes complex, Cloondara (16.1ha) SAC	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Moneybeg and Clareisland Beg, Goreport (15.7 ha) SAC	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Lough Kinale and Derragh Lough,	Includes areas of good quality active raised bog and associated	Raise water table	Removal of Conifers

Tomymore (37ha) NHA	Habitats.		
Mount Jessop Bog, Mount Jessop (71.9ha) NHA	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Girley Bog, Drewstown (32.2 ha) NHA	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Lough Derravaragh, Derrya (25.6ha) NHA	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Wooddown Bog, Wooddown (50.7ha) NHA	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
Cangort Bog (13.45ha)	Includes areas of good quality active raised bog and associated habitats.	Raise water table	Removal of Conifers
<b>Millennium Forests</b>			
Lacca, Co Laois	17ha	Establish native woodland	
Derrgorry, Co Monaghan	42ha	Establish native woodland	
Portlick, Co Westmeath	52ha	Establish native woodland	Owned by Westmeath County Council and managed by Coillte
<b>Blanket Bog (PB2)</b>			
Doon, Seltan, Leitrim	Extensive expanse of blanket bog over undulating ground	Maintain heath	To control grazing
Slieve Bloom Mountains, Offaly and Laois: Gorteen, Glenconra, Tulla & Crumlin 2, Tinnahinch/Glendine, Barrow Valley, Baunreagh 2, and other properties	Extensive >600 ha, Excellent quality, usually within SAC/NHA	Maintain and enhance quality; using some adjacent areas (e.g. 'red areas') to enhance bog (and hen harrier) habitat.	prevent drainage; protect from fire; prevent and remediate encroachment by self-seeding conifers; consider
<b>Wet Heath (HH3)</b>			
Seltan	Rare species	Follow SAC Guidelines	Control grazing
<b>Petrifying springs (FP1)</b>			

<b>Offaly, on Camcor River:</b>  Glinsk/Glenregan	Relatively large example with the alluvial woodland characteristic <i>Crateneuron</i> moss.  Priority Habitat Tufta Spring  Part of a stream-beech-alluvial woodland complex.	Protect and enhance removal of all conifers.  Maintain quality by maintaining existing conditions	
<b>Dystrophic lakes (FL1)</b>			
Doon, Leitrim	Rare species	Follow SAC Guidelines	Protect lakes
<b>Turlough (FL6)</b>			
Knockbarron, Offaly	Unusual turlough-like hollow in esker complex	Prevent drainage; protect from adjacent forestry operations	Follow guidelines
<b>Alkaline fen (PF1)</b>			
Lough Boora, Offaly	Peatland contains a small excellent orchid-rich site	Removal of remaining conifers	Follow guidelines
<b>Important orchid site</b>			
The Long Derries, Offaly	Grassland degraded by scrub encroachment	Restore to orchid-rich grassland.	Follow guidelines
<b>Hen Harrier</b>			
Eshbrack, (Barratitoppy, Bragan, Knockanearla,, Stramackilroy), Co. Monaghan	Extensive area of bog, heath and lake habitat. Associated with riparian habitat and conifer woodland (young plantations and open mature heather used for nest sites). Rare species present. Part NHA.	Retain existing unplanted blanket bog, lake and heath habitat.  Follow SAC management guidelines. Avoid disturbance due to forestry operations during breeding season.	Follow SAC management guidelines. Ensure adequate age class distribution of conifer crop where hen harrier breeding sites are located.

Slieve Bloom Mountains, Offaly and Laois	Open blanket bog for hunting; pre- thicket plantation for nesting and hunting.	Follow Biodiversity Action Plan to ensure the availability of these habitats. Restructuring in the Slieve Bloom should ensure a continuous availability of pre-thicket plantation  Any lowland winter roosts (where identified) will be protected	Follow SAC management guidelines. Ensure adequate age class distribution of conifer crop where hen harrier breeding sites are located.
<b>Red Grouse</b>			
Doon, Seltan, Tulleyvella, Co Cavan Co Leitrim	Extensive open Peatland	Boleybrack Red Grouse Habitat Management Project in association with NPWS	Enhance habitat of Red Grouse
<b>Golden Plover</b>			
Cuilcagh,  (Commas, Bellavalley Lower, Altachallion)  Cavan	Extensive area of bog, and heath. Associated with riparian habitat. Rare species present. Part SAC. <i>Note: Nests in short vegetation on bog or heath.</i>	Retain existing unplanted blanket bog and heath habitat. Follow SAC management guidelines. Retain woodland as natural reserve.	Protect habitat and follow SAC guidelines.
<b>Common Wintergreen</b>			
Knockdrin, Westmeath	Extensive wetland. Good quality lake with native and mixed broadleaf woodland habitat. Part OWS. Good flora and rare species. NHA.	Maintain water levels. Restore wetland habitat. Restore native woodland. Maintain mixed woodland. Control invasive non- native species.	None.
Balrath, Meath	Moderate sized mixed broadleaf woodland with rare plants. Part OWS. NHA.	Maintain mixed woodland habitat. Protect rare species.	Maintain fenced area.



<b>Leisler's bat <i>Nyctalis leisleri</i> and other bat species (<i>Myotis nattereri</i>)</b>			
Castletown and Carrick Wood, Offaly and Laois	Oak stands/mixed woodland Some of the breeding sites are not Coillte owned	Maintain, expand and develop broad-leaved feeding corridors	Conserve roosts and bat boxes
<b>Red Squirrel</b>			
Carn Park Jamestown Co Westmeath	Cone species such as Scots Pine and Norway Spruce.	Retain some of these species where possible.	Maintain the habitat.
Knockbarron Co Offaly			
Derrycassan Woodville Co Longford			
Emo Park Co Laois			
Ravensdale Co Louth			
<b>Great Spotted Woodpecker</b>			
Erne Head, Co Longford	Mature Broadleaves	Retain broadleaves and standing deadwood	Maintain habitat.

#### **Native and Mixed Woodland in Midlands BAU**

<b>Main Properties</b>	<b>Habitat Quality</b>	<b>Management Strategy 2006-2010</b>	<b>Issues to be Addressed</b>
<b>Oak-birch-holly Woodland (WN1)</b>			
Higginstown, Westmeath	Extensive oak-birch-holly woodland over bog. Rare plants. Small area of oak-ash-hazel on mineral soils. OWS.	Retain existing oak woodland. Increase area of oak-ash woodland habitat.	Monitor site.
The Slip Co Laois	Small	Removal of cherry laurel Manage as natural reserves	Monitor site.

<b>Oak-ash woodland rich in species (WN2)</b>			
Blackwood, Offaly	Core area (70ha) of good native woodland	Strategy to restore to WN2	Restore to broadleaf woodland
Glinsk Co Offaly	Adjacent to alluvial woodland NHA. Good core areas; remainder needs restoring	Manage as broadleaf plantation	Removal of conifers over time
<b>Wet willow-alder-ash woodland (WN6)</b>			
Lough Rynn, Leitrim	Rare Flora	Restore Native Woodland	Control laurel/ Rhododendron
Dromore Lough (Bellamont, Dartrey and The Island), Cavan/Monaghan Border	Very extensive area of diverse habitats including lakes and wet woodland. Good diverse flora. OWS and NHA	Maintain mixed broadleaves. Increase native woodland. Control deer and non-native invasive species.	To control deer by annual deer cull.
<b>Mixed Woodland (WD1)</b>			
Erne Head, Longford	Good quality mixed woodland with some wet woodland. Associated with lake habitat. OWS. NHA.	Maintain existing mixed broadleaf woodland. Restore/increase native woodland.  Await the re-introduction of the NWS grant.	Monitor site.
Balrath, Meath	Moderate sized mixed broadleaf woodland with rare plants. Part OWS. NHA.	Maintain mixed woodland habitat. Protect Wintergreen.  Await the re-introduction of the NWS grant.	Monitor site.
<b>Highly modified broadleaved Woodland (WD1)</b>			
Dysart, Laois	Extensive mixed woodland	Maintain beech wood with native species	
<b>Mixed broadleaved/conifer Woodland (WD2, WD3)</b>			
Colt (42.9ha) Laois	Large, mature site with diverse native species and good structure	Increase the native element; maintain the good structure. Gradual removal of many of the non-native tree species	

Conifer Woodland (WD4)			
Cornagillagh, Leitrim	Good plant diversity	Restore native woodland	Control laurel/Rhododendron
Lough Rynn, Leitrim	Diverse habitats	Restore native woodland	Control laurel/Rhododendron

## Species

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

Notable Species	Notable Species	Notable Mammals
Daboecia cantabrica Lathraea squamaria Neottia nidus-avis Thelypteris palustris Listera cordata Saxifraga spathularis Rhynchospora fusca Rhamnus cathartica Eriocaulon aquaticum, Eriophorum gracile, Arctostaphylos uva-ursi, Juniperus communis Erica erigena	Platanthera bifolia Thelypteris limbosperma, Carex acuta Cephalanthera longifolia Carex limosa Vaccinium oxycoccos Empetrum nigrum Vaccinium oxycoccos Cladium masiscus Carex lasiocarpa, Ranunculus lingua	Lesser Horseshoe Bat (Rhinolophus hipposideros) Pine Marten (Martes martes) Badger (Meles meles), Red Squirrel Birds, Hen Harrier Great Spotted Woodpecker

### Appendix III – Recreation Facilities in the BAU

Location	Description
Rossmore Forest Park (Monaghan)	There are 4 signposted walks in Rossmore: The Nature Trail, The Lake Walk, The Castle Trail and the Access for All Trail. There is a picnic area in the Forest Park.
Senator Billy Fox Memorial Park (Monaghan)	The park consists mainly of old broadleaf woodland and a few open areas of lawn ideal for a picnic. The park has many natural walkways and a river running through it with a new bridge crossing at one point.
Mullaghmeen (Westmeath)	The area has an extensive network of way marked trails for varying levels of fitness including an Access for All Trail. There are a number of historical features in the forest including archaeological monuments, a Booley Hut and Flax pits.
Ravensdale Forest (Louth)	There are 3 way marked trails in the forest, the Tain Trail, the Ring of Gullion and the short but interesting Ravensdale Loop. The forest is rich in archaeological features such as the standing stones just a short detour off the Ravensdale Loop and has many interesting features such as bridges and old driving roads
Townley Hall (Louth)	There are two suggested trails in the wood ranging in length from 1 to 2 kms. There is a picnic area and car park facility.
Slieve Foye Woods (Louth)	There are a number of walks in the wood. Picnic areas in the forest offer panoramic views.
Dún A Rí Forest Park (Cavan)	There are 4 signposted walks in Dún a Rí: The Nature Trail, The Village Walk, The River Walk and the Access for All Trail. There is a picnic area on site.
Killykeen Forest Park (Cavan)	There are several trails and a picnic area in the forest park. A family friendly cycling trail has been completed in partnership with HNR (Harnessing Natural Resources) – a cross border funded agency.
Newcastle Wood (Longford)	There are 28km of walking routes throughout the mixed woodland. There are 4 trails including a multi access trail.
Derrycassan (Longford)	There is a picnic area and several viewing points by the lake. There are three suggested walks in the wood, the “Nature Trail”, the “Walled Garden Walk” and the “Main Avenue Walk”.
Derrycarne (Leitrim)	The woodland provides a very pleasant walk along the shore of Lough Boderg. The remains of an ice house can be seen along the shore. The trail passes through a variety of mixed woodland.

Location	Description
Burren (Cavan)	<p>The Midlands BAU is home to the world's first cross-border UNESCO designated Geopark, encompassing the mountainous areas of West Cavan and Fermanagh.</p> <p>Burren occupies 124ha and within it are in excess of 30 tombs dating from Neolithic times to the early bronze age, old field systems and some 19<sup>th</sup> century artefacts. Most of the present forest was planted in mid 1950's and helped to protect the archaeological and geological features of the site.</p> <p>Burren is a 'rocky' relict landscape of significant archaeological and cultural importance. The site contains monuments, habitation sites and fields surviving from prehistoric times and some are older than the pyramids. Coillte and the local authority are in process of developing an un-manned visitor centre at the site.</p> <p>There is an interpretative centre and a network of roads with paths which offer scenic views of the surrounding landscape in addition to the archaeological and geological resources.</p>
Durrow Abbey (Offaly)	<p>Car park and looped walk through a variety of mixed woodland adjacent to Durrow Abbey.</p>
Garryhinch (Offaly)	<p>Garryhinch Forest is part of the old Warburton Estate. The woodlands consist of mixed conifer and broadleaf and lies on both sides of the river Barrow. There is a picnic area and a car parking facility.</p>
Glasderry Wood (Offaly)	<p>This wood, part of an old woodland site, was formerly part of the Lloyd estate and was acquired by the State in the late 1950's. It is approx 100 metres above sea level. A feature of this site is Lough Roe, an artificial lake. This lake was created for the estate to ensure a plentiful supply of water for the domestic needs, the gardens and recreational needs of the Lloyd family who lived in nearby Gloster House.</p> <p>There are a number of viewing points around the lake on this walk. While there are no way marked trails here, woodland and lakeside walk. The forest road and paths do provide a very pleasant.</p>
Glenafelly Forest Recreation Area (Offaly)	<p>This recreation area takes visitors into the more remote parts of the Slieve Bloom Mountains and allows walkers to explore the geology and former uses of this upland area.</p>
Glenregan Forest Recreation Area (Offaly)	<p>The forest envelopes both sides of the Camcor valley and offers great views over the valley onto west Offaly and the River Shannon. There is an extensive network of forest roads for walking and trekking.</p>
Golden Grove (Offaly)	<p>This is part of an old woodland site on mineral soil over limestone. From the car park, there is a beautiful view of the countryside. The main tree species in this wood are Beech, Scot's Pine, Ash and Norway Spruce. There is an abundance of animal and birdlife here. The most striking aspect of the flora is the profusion of bluebells that carpet a large area of the woodland in the spring. The Golden Grove River is to the south-east of the car park.</p> <p>While there are no waymarked trails in Orange Hill Wood, the loop of forest road and paths does provide a very pleasant walk.</p>
Knockbarron Wood (Offaly)	<p>This site is an area of old woodland with much ecological interest at whatever time of year you visit. There is an ecological walk with notable features of a Turlough and Eskers.</p>

Location	Description
Brittas (Laois)	<p>Brittas is adjacent to the village of Clonaslee, Co. Laois at the foothills of the Slieve Bloom mountains.</p> <p>The first section of the Brittas Loop follows the path of the River Clodiagh through mature stands of Douglas fir. The trail passes by Brittas lake and car park. The lake is a very popular spot for picnics and quiet relaxation as it is very secluded. There is a stand of large mature Scots pine on the lakeside which is the ideal backdrop to the lake.</p>
Carrick Wood (Laois)	<p>This is a reasonably small site with a picnic area and forest walk. The beautiful broadleaf woodland features a prominent local landmark, the 18th century Spire. It is set on a high point in the wood and has a striking architectural presence. It can be seen from several miles away. Restoration work on the Spire completed in 2005. The main tree species are beech with some Scots pine and European larch.</p>
Glenbarrow (Laois)	<p>Glenbarrow is one of the most scenic parts of the Slieve Bloom area with its waterfalls and steep valley. The area has four way-marked trails with car parking facilities.</p>
Monicknew (Laois)	<p>The site is a trailhead for a section of the Slieve Bloom Way (a National Waymarked Way) and also has a number of other walking and hiking trails. Adjacent to the Slieve Bloom Way trailhead is Monicknew Bridge through which the Glen river flows. Pleasant picnic sites adjacent to stream with car parking facility.</p>
The Cut – Glendine (Laois)	<p>The Cut is located at an elevation of 430 metres in the Slieve Bloom Mountains. Extensive viewing from car park.</p>
Deerpark, Virginia, Co Cavan	<p>Forest trails including a heritage walk (multi-access). Car parking facilities.</p>
Black Island, Co Monaghan	
Castle Lake, Bailieborough, Co Cavan	<p>Looped walk around lake and car parking facilities.</p>
Mullrick, Co Cavan	<p>Car park fishing facilities and lake side walk.</p>
Summerhill, Co Meath	<p>Looped walk with car park.</p>
Littlewood, Co Meath	<p>Looped biodiversity walk with car park.</p>
Bawnboy, Co Cavan	<p>Looped walk with car park.</p>
Emo Park, Co Laois	<p>Multi forest walks. Adjacent to Emo Court.</p>

## Appendix IV – Monitoring

Economic Parameters		
No.	Parameter	Measure
<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
Environmental Parameters		
No.	Parameter	Measure
<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

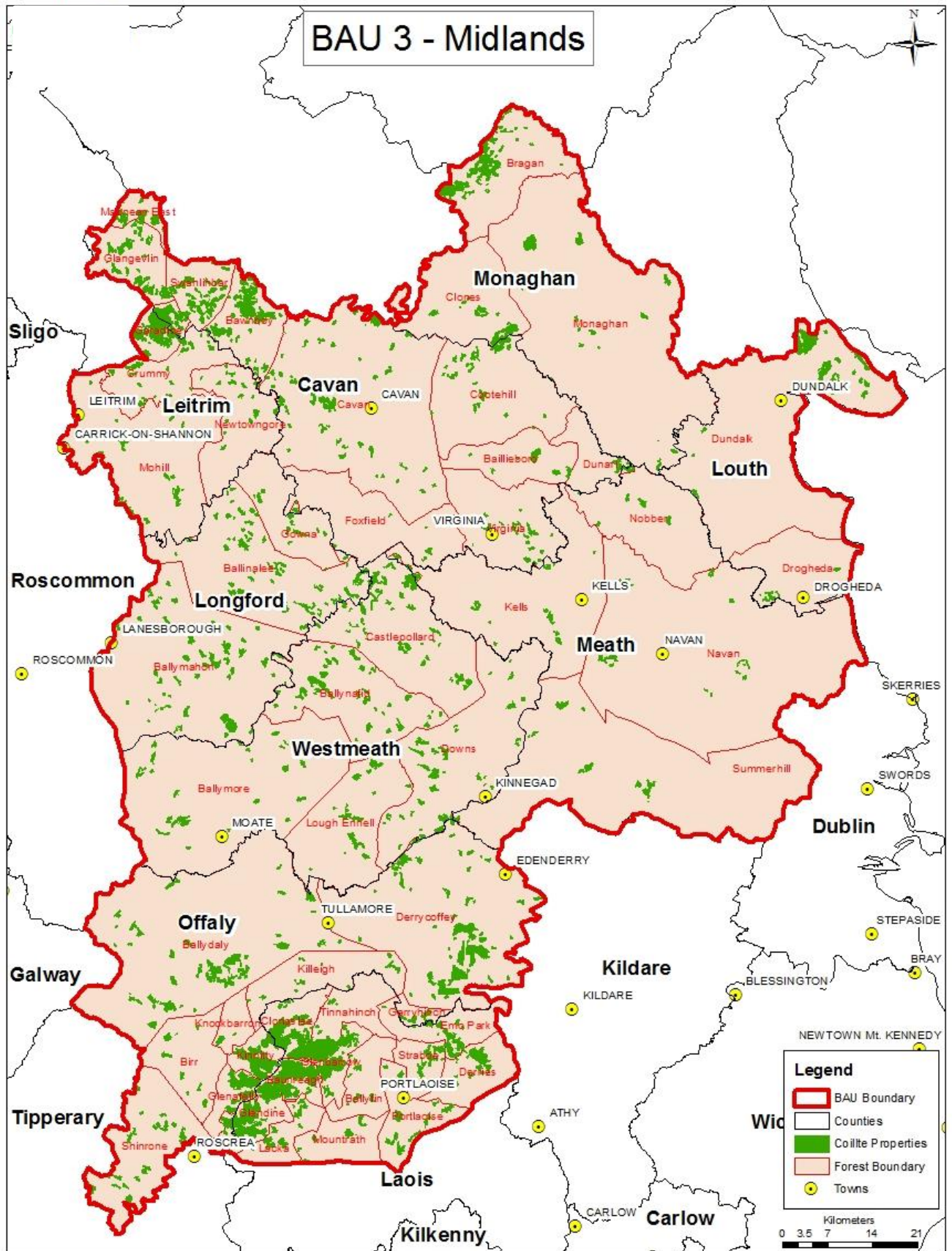
Forest	Forest Gross Area (ha)	Clearfell Volume m <sup>3</sup>					Thinning Volume m <sup>3</sup>					Clearfell Area (ha)				
		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
CN01 - Macnean East	585	5,332	6,393	991	-	10,773	973	1,521	-	1,729	204	18	17	2	-	28
CN02 - Glangelvin	996	6,787	1,732	1,872	-	10,375	435	1,006	3,978	1,492	2,555	19	5	2	-	25
CN03 - Swanlinbar	1,015	-	6,959	1,994	7,981	1,379	1,638	3,883	5,305	1,483	1,751	-	23	7	18	7
CN04 - Bawnboy	1,733	8,929	3,980	5,376	6,227	26,765	9,476	10,739	6,335	7,759	9,685	30	13	19	27	53
CN05 - Cavan	1,422	2,882	4,616	3,682	5,416	8,369	1,370	3,520	864	1,565	1,664	7	19	12	18	16
CN06 - Cootehill	635	-	2,932	19,432	32,133	322	1,382	958	1,594	471	1,007	-	8	36	97	2
CN07 - Baillieboro	343	2,050	2,940	1,285	1,052	3,416	-	128	771	417	558	5	8	2	2	13
CN08 - Dunari	211	2,157	-	5	15	-	-	-	-	-	-	7	-	-	-	-
CN09 - Virginia	432	3,274	-	194	2,302	4,223	353	203	-	88	-	10	-	1	3	6
CN10 - Foxfield	123	-	-	5,476	4,310	-	-	-	-	-	-	-	-	9	6	-
LD01 - Gowna	316	1,741	1,427	3,107	-	882	1,707	142	-	-	-	5	4	9	-	2
LD02 - Ballinalee	1,550	6,293	10,584	1,686	4,334	2,148	3,118	1,007	779	1,503	656	24	24	3	7	3
LD03 - Ballymahon	1,720	15,275	7,026	10,545	-	3,328	5,304	4,204	2,565	3,498	3,668	52	25	36	-	7
LH01 - Dundalk	1,571	9,331	27,753	7,746	7,818	8,713	-	491	377	1,292	216	30	61	16	26	15
LH02 - Drogheda	133	1,142	3,050	474	77	-	-	-	-	-	-	5	6	1	-	-

Forest	Forest Gross Area (ha)	Clearfell Volume m <sup>3</sup>					Thinning Volume m <sup>3</sup>					Clearfell Area (ha)				
		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
LM09 - Garadice	2,150	11,494	8,125	3,254	4,831	5,231	-	3,058	1,705	1,172	1,757	52	21	15	12	8
LM10 - Mohill	616	2,103	512	5,610	10,253	8,931	524	2,476	541	638	2,756	10	1	21	18	17
LM11 - Newtownmore	298	-	5,022	-	-	-	-	914	452	4,915	967	-	18	-	-	-
LM12 - Crummy	462	-	-	-	-	-	2,608	2,360	1,178	3,639	3,160	-	-	-	-	-
LS01 - Clonaslee	2,114	1,244	1,691	9,653	11,150	-	3,524	5,443	9,016	7,306	3,525	5	5	24	24	-
LS02 - Emo Park	604	662	-	518	-	270	3,377	1,033	291	889	-	5	-	1	-	2
LS03 - Derries	619	3,449	2,758	620	5,784	187	-	1,033	475	561	303	11	9	1	11	-
LS04 - Straboe	437	2,166	-	1,352	4,227	-	648	205	116	266	80	10	-	3	8	-
LS05 - Ballyfin	181	1,841	-	797	-	-	618	239	-	-	-	6	-	2	-	-
LS06 - Glenbarrow	1,654	15,385	9,837	10,364	4,567	7,382	3,233	8,692	4,948	3,765	2,037	49	24	20	8	11
LS07 - Tinnahinch	1,005	-	5,016	-	-	-	-	-	955	-	-	-	13	-	-	-
LS08 - Baunreagh	2,007	24,105	8,400	20,699	22,727	39,731	743	1,573	3,025	2,867	471	45	16	31	51	64
LS09 - Glendine	2,514	5,296	18,318	8,711	12,550	20,375	2,536	9,089	11,135	10,559	2,295	22	40	22	40	50
LS10 - Lacka	496	3,859	-	2,795	1,814	-	1,266	490	722	1,283	722	9	-	6	5	-
LS11 - Mountrath	239	-	7,976	8,550	-	523	-	343	1,944	144	543	-	18	16	-	2
LS12 - Portlaoise	644	1,706	6,876	4,197	2,454	2,859	-	147	680	935	548	12	18	7	5	4

Forest	Forest Gross Area (ha)	Clearfell Volume m <sup>3</sup>					Thinning Volume m <sup>3</sup>					Clearfell Area (ha)				
		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
MH01 - Nobber	157	-	-	-	-	-	-	-	-	922	-	-	-	-	-	-
MH02 - Kells	322	-	10,330	1,306	2,262	7,766	-	256	-	-	-	-	24	2	3	14
MH03 - Navan	430	-	3,113	607	4,879	3,757	-	-	-	10	-	-	8	1	7	6
MH04 - Summerhill	547	-	-	2,100	-	3,297	-	130	45	-	460	-	-	5	-	5
MN01 - Bragan	1,948	3,814	8,628	14,598	850	4,565	3,821	4,616	3,456	8,207	9,049	16	21	35	2	8
MN02 - Clones	646	2,507	-	-	4,355	5,786	11,921	2,167	638	1,488	3,674	8	-	-	7	45
MN03 - Monaghan	725	4,465	4,587	-	7,807	7,014	2,886	-	-	-	67	16	11	-	14	11
OY01 - Ballydaly	2,236	818	2,181	4,489	1,113	4,224	-	1,322	308	638	901	4	6	10	2	7
OY02 - Derrycoffey	3,002	4,420	691	1,277	8,266	6,609	3,279	2,299	1,359	697	1,309	9	2	2	27	36
OY03 - Garryhinch	303	-	-	-	4,327	-	-	-	-	-	20	-	-	-	10	-
OY04 - Killeigh	234	-	1,433	3,723	-	-	-	-	-	-	-	-	3	5	-	-
OY05 - Knockbarron	92	-	-	1,691	-	-	-	-	-	-	-	-	-	4	-	-
OY06 - Birr	282	-	-	427	-	-	-	-	-	-	-	-	-	1	-	-
OY07 - Kinnitty	1,495	6,916	7,665	3,424	15,579	8,541	1,514	4,662	2,372	3,090	3,260	22	20	6	26	26
OY08 - Glenafelly	1,090	18,824	14,185	15,046	32,812	8,665	1,421	3,104	2,224	-	302	41	32	35	52	15
OY09 - Shinrone	763	5,481	-	4,540	3,118	-	-	98	917	402	161	20	-	10	6	-

Forest	Forest Gross Area (ha)	Clearfell Volume m <sup>3</sup>					Thinning Volume m <sup>3</sup>					Clearfell Area (ha)				
		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
WH01 - Castlenollard	1,544	10,373	2,542	11,074	8,289	11,004	2,949	467	354	-	197	40	7	19	14	22
WH02 - Ballynafid	1,293	7,912	13,153	8,104	23,748	1,830	1,549	663	724	140	32	29	31	16	41	3
WH03 - Downs	1,228	1,985	4,149	14,202	-	402	588	838	531	367	-	9	9	36	-	2
WH04 - Lough Ennell	614	2,107	-	-	-	-	756	-	39	15	-	7	-	-	-	-
WH05 - Ballymore	792	7,122	-	-	-	-	557	205	266	144	470	25	-	-	-	-

Appendix VI - BAU Map



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