



**Central Munster BAU  
(Business Area Unit)  
Strategic Plan  
2016-2020**

## Foreword

I have great pleasure in publishing Coillte's Central Munster 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



PJ Trait

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

BAU Manager

### **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.

PJ Trait

BAU Manager

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<sup>2</sup> FSC licence 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, Medite/SmartPLY and Coillte Land Solutions.

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 <http://www.coillte.ie/our-forests/explore/>

### **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:

1. Open and transparent public participation and consultation with stakeholders and local communities.
2. Best in class Environmental Impact Assessment and Appropriate Assessment that enhances and preserves local ecology and the habitats therein.
3. Complying with all relevant environmental legislation, health and safety legislation, regulations and other requirements as they arise.
4. 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.
5. Considering the impact on recreational users, and also the opportunity there may be when developing a wind farm to develop enhanced recreational facilities.
6. 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>2</sup> to meeting Ireland's energy needs.

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<sup>2</sup><http://www.dcenr.gov.ie/energy/SiteCollectionDocuments/Energy-Initiatives/Energy%20White%20Paper%20-%20Dec%202015.pdf>

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 the FAQ section of the Coillte website web site ([www.coillte.ie/faq](http://www.coillte.ie/faq)) and do not hesitate to contact us at [info@coillte.ie](mailto:info@coillte.ie).

### **1.2.3 Biomass**

The key guiding principle for Coillte's vision is that Ireland's biomass is a limited and valuable indigenous resource and should be harnessed in a way that maximises value throughout the supply chain. Coillte does so by providing competitive, long term and secure biomass fuel supply contracts for its woodchip clients and also assists in the evaluation of both the technical and commercial viability of projects for large scale industrial energy users.

Coillte 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.

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 of 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 policy is set out in the company's website at <http://www.coillte.ie/media/2016/12/Coillte-Recreation-Policy.pdf> and all information about our recreational activities and opportunities can be found at <http://www.coillte.ie/our-forests/explore/>

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>

<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 will be 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, FSC and 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.

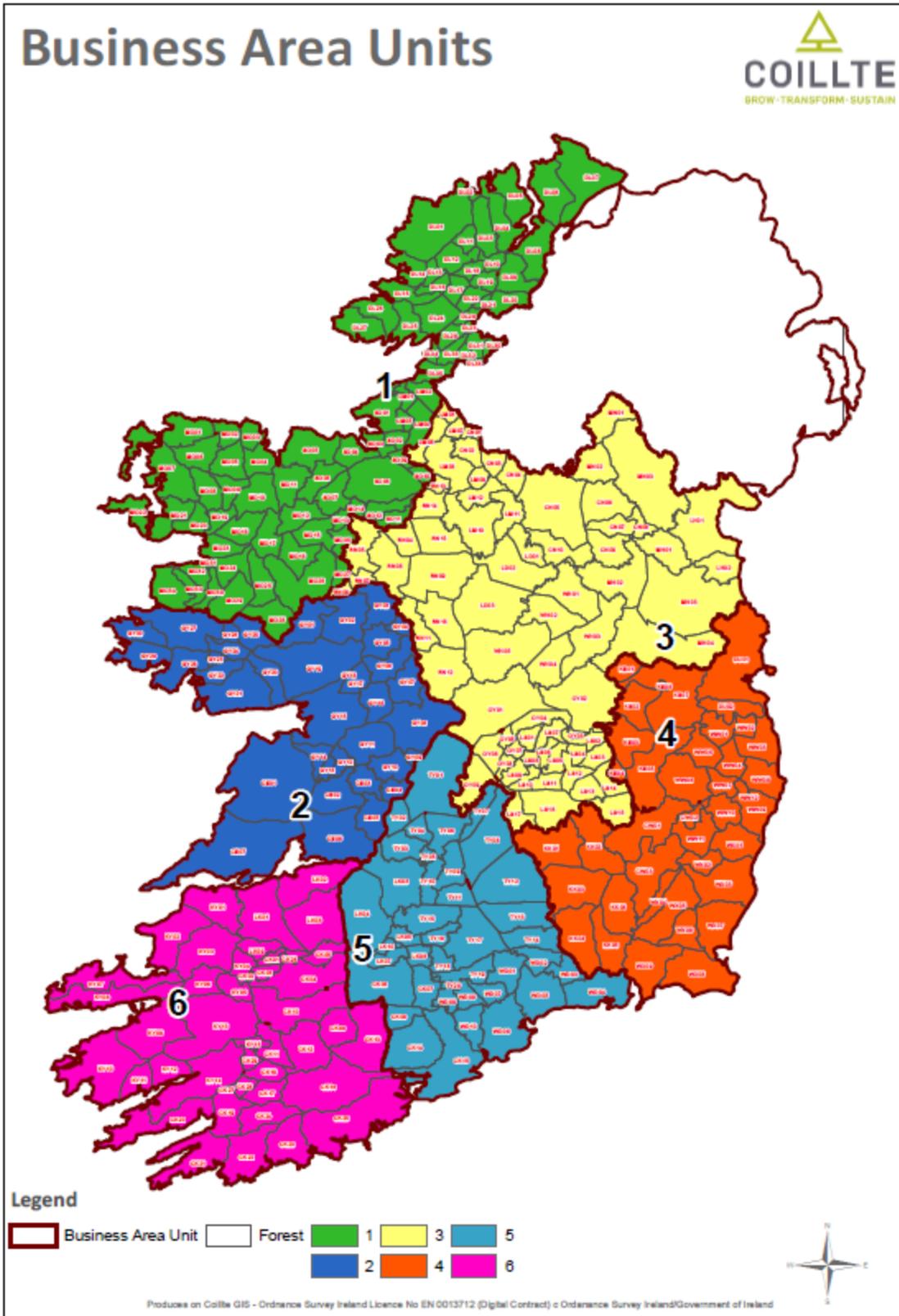
Coillte will liaise closely with the Forest Service with regard to this significant potential threat to our Ash woodlands and will respond immediately to any mitigation measures proposed.

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 6 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, a Webmap is available to view areas with proposed Clearfells and areas which have the potential to be thinned in the review period. [Click here](#) to access the Webmap.

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## **2. Central Munster BAU**

### **2.1 Central Munster BAU**

All BAUs play important roles in achieving Coillte targets and objectives. The Central Munster BAU of Coillte Forest encompasses Counties Tipperary, Waterford, Cork (part), Limerick (part). It is a large BAU covering 917,796 hectares of Ireland. Within this area, Coillte owns 73,014 hectares (8%).

Main population centres in the area include Waterford, Dungarvan, Clonmel, Cahir, Cashel, Nenagh, Thurles and Roscrea. Other main towns within the environs are Fermoy, Midleton, Templemore, Borrisokane and Newport. Main mountain ranges and upland areas include Slievenamon, Comeraghs, Devils Bit, Knockmealdowns, Galtee, Ballyhouras and Slieve Ardaghs.

There is one Coillte owned Boardmill within the environs namely Medite in Clonmel, Co Tipperary.

The climate for forestry operations is suitable, with moderate rainfall and relatively good ground conditions, soil types are mainly gley, podsols, brown earths and peats.

### **2.2 Forests and Forest Products in the Central Munster BAU**

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

During the 2011-2015 period, the BAU produced approximately 2 million cubic metres of wood. Timber produced within the BAU during the period 2011-2015 was primarily sold to Medite, SmartPly, Murray's, Glennons, Woodfab, ECC, GP Wood, Coolrain and Laois Sawmills.

In addition Coillte's production supports both Coillte owned panel mills and other sawmills in the surrounding area such as Hollyford.

#### **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 180 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. However, there is a new Coillte scheme called Premium Partners which is similar to the Farm Partner Scheme. This initiative started in 2017 and is in its infancy.

### **2.3 Community, Recreation and Tourism Facilities in the Central Munster BAU**

Coillte has a long association with the communities, clubs and individuals who use our 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 Central Munster BAU recreational activities complement the landscape and terrain within its boundaries and contribute to the social and economic life of the area.

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:

- Aherlow Nature Park - Aherlow Fáilte has a long term lease of a Scot's Pine stand adjacent to the Christ the King Statue. The Aherlow Nature Park is a series of walking trails, with information panels on the flora and fauna of the area. The Ballyhoura Way also passes through this site. This site was developed in conjunction with Aherlow Fáilte and FÁS Rural Social Scheme.
- Ballyhoura Mountain Bike / Trail Centre - Located close to Ardpatrick village, this is the hub of the recreation network at Ballyhoura and one which has become very popular and is attracting record numbers of bikers. Facilities include - car parks, toilet and shower facilities, bike wash, 90KM of mountain bike trails, numerous way-marked walking trails and picnic facilities. There are a number of National Looped Walks and a National Way-marked Way (NWMW) passing through this forest. There is up-to-date signage in place. This mountain biking trailhead and trails were funded by Fáilte Ireland and support from both Cork and Limerick County Councils. Ballyhoura Development Group have marketed and promoted this venture since its completion 2009.
- Colligan - A woodland and riverside amenity area with a car park, National Looped Walks, arboretum, picnic area and up-to-date signage. This project was developed in partnership with Waterford County Council.
  - The development and enhancement work to the walks and trails in the BAU such as Marl Bog, Bishops Wood, Carey's Castle, Glenbawn (Marlfield), in County Tipperary; Clondonnell, Coolishal, Faithlegg, Kilclooney and Mahon Bridge in County Waterford.

There are also a number of Waymarked Ways passing through Coillte property in the BAU. These include East Munster Way and Slieve Felim Way.

Coillte has also developed a number of looped trails in conjunction with local communities and Fáilte Ireland, under their Looped Walks Programme. The most popular are Glen of Aherlow providing spectacular views of the Galtee Mountains, Glengara Wood at the foot of the Galtee Mountains, Corrin/Glenabo Wood near Fermoy, Mount Hilary, North Cork, Ballyhouras on the Cork/Limerick border, Glenshelane, and Carey's Castle, Co. Waterford and Bishops Wood in Dundrum, Co. Tipperary.

There is also a Coillte Forest Park located in the BAU, namely Ballyhoura Mountain Bike Trail. The National Centre for Mountain Biking is located here on the Cork/Limerick border and is a significant amenity in the BAU, the centre is extremely popular and is attracting record numbers of mountain-bikers.

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 designated areas for recreational activity, and these are detailed on the Coillte website <http://www.coillte.ie/our-forests/explore/>. A table below describing the recreational values of the BAUs sites is available in [Appendix III](#).

Coillte have been at the forefront in developing Ireland's first off-road cycle trails over recent years. These trails have been very successful and we receive numerous requests for new trail development around the country. Coillte are currently undertaking the development of an off-road cycling strategy to examine the best potential locations for future trail development.

We seek to provide high quality, authentic and safe experiences for all our visitors. One of the key issues for providing for safe cycling on the estate, is the development of sustainable trails and this requires a strategic approach to a national, regional and local trail offering. We are working closely with key partners in this strategic work, including Cycling Ireland, Fáilte Ireland, the National Trails Office and the Dept. of Environment, Community and Local Government. Further queries can be directed to [recreation@coillte.ie](mailto:recreation@coillte.ie).

## 2.4 Cultural and Archaeological Heritage in the Central Munster BAU

Coillte is aware of some 300 archaeological sites and sites of cultural significance in its landholdings in the Central Munster BAU. These monuments include megalithic tombs of different kinds, Cashel's, Fulcacht Fia's, Standing Stones, enclosures, cairns, Bronze Age Burial Mounds, Ring Forts, Holy Wells and crannogs. Monumental locations are recorded on Coillte's Geographically Information System. A summary of archaeological sites in the BAU is provided in [Appendix I](#).

With support and advice from the NPWS, 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. Examples include –

1. Children's Graveyard TY06 Killeen Property – Through engagement and consultation with local interested parties (amateur archaeological group in Templederry, Co. Tipperary), the Forest Service and Emmet Byrnes (Forest Service Ecologist), a management plan was agreed and implemented to protect and enhance this little known local feature. The plan was initiated as part of the 2011-2015 GFL application. Routes and methodology during harvesting operations were agreed and implemented to minimize damage and disturbance to the features in question. The removal of the large timber from this steep site and the subsequent protective measures (fencing) were implemented through the establishment process. This area is now protected and future proofed from any potential operational transgressions. The route/old track to the feature was also cleared for the purpose of future access.
2. Sweathouses in Keeperhill forest TY03 (namely Doonane property and Middlequarter) are two examples where Coillte removed trees and created a buffer to the existing sweathouses. These features are now protected from potential operational transgressions going forward. Further minor track clearance and minor maintenance works – specifically access routes have been maintained through a collaborative approach locally under the Rural Social Scheme providing workers and arranged through Coillte Forest Recreation team.
3. Cultural Wall features have been protected in TY01 Sopwell Property through clearance of vegetation off the walls and minor drainage works. Allowing for the features to 'breathe' these maintenance and enhancement works were carried out during roadwork operations prior to harvesting.
4. Gorteenshingaun TY07 – Fencing of Ringforts at establishment phase or during harvesting operations is a common procedure as part of normal maintenance and Forest operations. Gorteenshingaun ringfort is an example of a ringfort buffered by fencing for the purpose of protecting the feature. The area was fenced after a thinning operation cleared the ringfort buffer and the fence was erected subsequently to this operation. This area is now protected and future proofed from any potential operational transgressions as is a standard procedure.
5. Curreeny – Gortahumma Ring Barrow Management plan was implemented further to engagement of an Archaeologist. The management plan involved the manual felling of trees on the ring barrow and the removal of the timber by processor through lifting off the feature. The feature was fenced within two years of the operation in 2013 and this feature is now protected from potential operational transgressions going forward.
6. There is an important hill fort site at Corrin, near Fermoy and examples of clusters in the Knocknagoun Mountain.

As the BAU has a large portfolio of Farm Partnerships the protection and buffering of archaeological features is generally in place. Notwithstanding this, Coillte, during subsequent operations in these areas are fully cognisant of the importance of protecting these features. Archaeologists are regularly engaged in an advisory capacity for the purpose of best practice and in line with Forest Service Guidelines as they relate to archaeological features on the estate.

The BAU will continue to support sites of cultural and literary heritage and will identify, protect and record all new items of heritage which are discovered on its lands.

## **2.5 Biodiversity and High Conservation Value Forests (HCVF) within the South Central 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 13,343 ha (18% of Coillte land in the BAU).

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 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 following table shows statutory designated areas and HCVF in the Central Munster BAU. Areas shown are in hectares (ha).

Designation	Area (ha on Coillte lands)
HCVF	11,239
NHA* – Natural Heritage Area	359
SAC* - Special Area of Conservation	1,491
SPA* – Special Protection Area	8,872
Nature Reserve	0
PNHA	1,831

(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 assess 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 Central Munster BAU achievements in relation to nature conservation include the following:

- Approx. 7,524 hectares of Old Woodland sites in BAU and a number of these are being managed as OWS to retain their semi-natural characteristics;
- Native Woodlands site located at Bansha West (Slievenamuc Forest), Garryclogher (Cahir Forest) and Galagh (Dungarvan Forest).
- 9ha of Yew Woodland at Cahir Park restored under EU Life Project.
- Peoples Millennium Forest, Glengarra Wood. 20 ha planted with Native species.
- Habitats regulation assessments take place in relation to all works on designated sites.

There are a number of ways in which OWS sites can be managed:-

- Existing native woodland is being retained in some areas e.g. Monaduanna, Lismire, Dreenagh, Dromdeer.
- Conifer stands are being restored to native woodland where ecological reports recommend a good reason to do so e.g. Gurteen, Island wood, Cappagh.
- There are areas of broadleaf commercial production, Gurteen, Dromdeer, Glenabo.
- There are areas of commercial production of light-crowned conifers (pines, larches, Douglas fir), Greenwood, and Thomastown.
- There are areas of spruces, where sites are not suited to light-crowned conifers, Streamhill, Ballyknock

## 2.6 Species and Habitats in the Central Munster BAU

The predominant non-forest habitats within the BAU consist of heath, wet and dry, raised and blanket bog and freshwater habitats together with the open moorland on the Galtee/Galty and Knockmealdown mountains ranges and along Munster Blackwater. Some excellent examples of these semi-natural habitats are within Coillte ownership.

The BAU also contains other special habitats including excellent oak/birch/holly woodlands and mixed broadleaf woodlands. Notable animal species in the BAU include the Nightjar, Little Egret, Pine Marten, Red Squirrel, Fresh Water Pearl Mussel, Hen Harrier, Otter, Wood Ants, Badger and Bats.

The BAU aims to maintain and where possible enhance the habitats of these species. Management plans have been drawn up for agreed biodiversity areas which will ensure that forest operations will not interfere with the habitat of these species where they exist on Coillte land. The Biodiversity Action Plans, produced by Coillte, for the hen harrier and the freshwater pearl mussel will continue to be drawn upon. Close communication will be maintained with the NPWS on all matters relating to all of the above species.

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 in the South Central BAU**

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. Other invasive species found in the BAU include giant hogweed, laurel and Japanese knotweed. Work has been carried out to help eliminate these species.

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

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

## **2.8 Water Quality and Protection in the Central Munster BAU**

In terms of water, the BAU is dominated by the South East (SERBD) & West (SWRBD) River Basins and the Shannon (SRBD) International River Basin. The main rivers include Blackwater, Lee, Nore, Suir and Shannon. Lough Derg is also a dominant water feature. The rivers and lakes of the area support important salmon and trout fisheries and this is also important to the local economy. There are also associated freshwater pearl mussel populations.

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

- Water abstraction for domestic use.
- Presence of important salmonoid rivers, such as the Licky, Clodiagh and Munster Blackwater.
- Presence of the rare hardwater species fresh water pearl mussel species (*Margaritifera Durrovensis*) in the Nore River catchment.

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

Water sampling is conducted on high impact operational sites, for example ground preparation, road making and harvesting. Samples are taken before, during and after operations, samples are usually taken above, within and below the operational site. The provision of sediment traps is now standard practice where there is any risk of siltation occurring. A pollution control plan is in place and a pollution control kit is on site for all high impact operations.

Two of the catchments are designated SACs for the fresh water pearl mussel (*Margaritifera margaritifera*), namely Nore and Clodiagh.

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, an 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.

## **2.9 Forest Management Issues in the Central Munster BAU**

Coillte's Central Munster 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 include:

Security; Coillte has a security plan in place which the BAU implements to help minimize the risk of losses through theft, vandalism and crop damage.

Litter and waste dumping; Illegal dumping is unsightly and unnecessary, causing serious problems

to habitats, species, and human health. It pollutes our water courses, damages soil nutrients, encroaches on habitat space, kills insects and animals, and is a threat to both the people who live in the area and recreational users. It also has a negative economic impact on tourism and discourages both tour companies and tourists in visiting certain areas. This is an ongoing issue both in rural areas and areas close to urban centres. The majority of it is domestic waste. Coillte works closely with local authorities and groups to help clean this up.

Illegal use by motorized vehicles, inappropriate recreation and anti-social behaviour; Coillte through the security plan utilize the most appropriate methods of security including the erection of cameras to help reduce the problem but also to bring about prosecutions.

Deer poaching; This can be problematic in certain areas and Coillte work closely with the NPWS and An Gardai Siochana to help minimize the extent of the problem.

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

### **2.9.1 Deer Management in the Central Munster BAU**

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 here [Coillte Deer Management Policy](#)

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 55 % 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 5

Density Classification	Deer Species Present (hectares)		
	Red	Fallow	Sika
Low	1,732	15,383	1254.39
Moderate	0	2,838	1214.07
High	0	7,313	2826.38
<b>Total area</b>	<b>1,732</b>	<b>25,534</b>	<b>5,295</b>

### 3. The Central Munster 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.
- Provide renewable energy in forms such as providing fibre for Biomass

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

Coillte realises its timber sales through planting and felling on its own estates and through the management of external partnerships.

##### The Coillte estate

It is Coillte's policy to achieve the maximum volume potential of the estate consistent with

sustainable forest management principles (see Section 4).

### **Central Munster**

The silvicultural systems used across the BAU include clearfelling, continuous cover forestry, conversion to broadleaf, long term retention and small coupe felling. The management objective will either be timber production or biodiversity. Management decisions are site specific and generally based on stability, soil type, species and growth rates.

#### **Key Objective 1**

**In the Central Munster BAU, Coillte aims to produce approximately 2.69m cubic metres of wood from its forests between 2016 and 2020.**

**Approximately 2m m<sup>3</sup> of this will be provided through felling and the balance 0.67m m<sup>3</sup> will be achieved through thinning.**

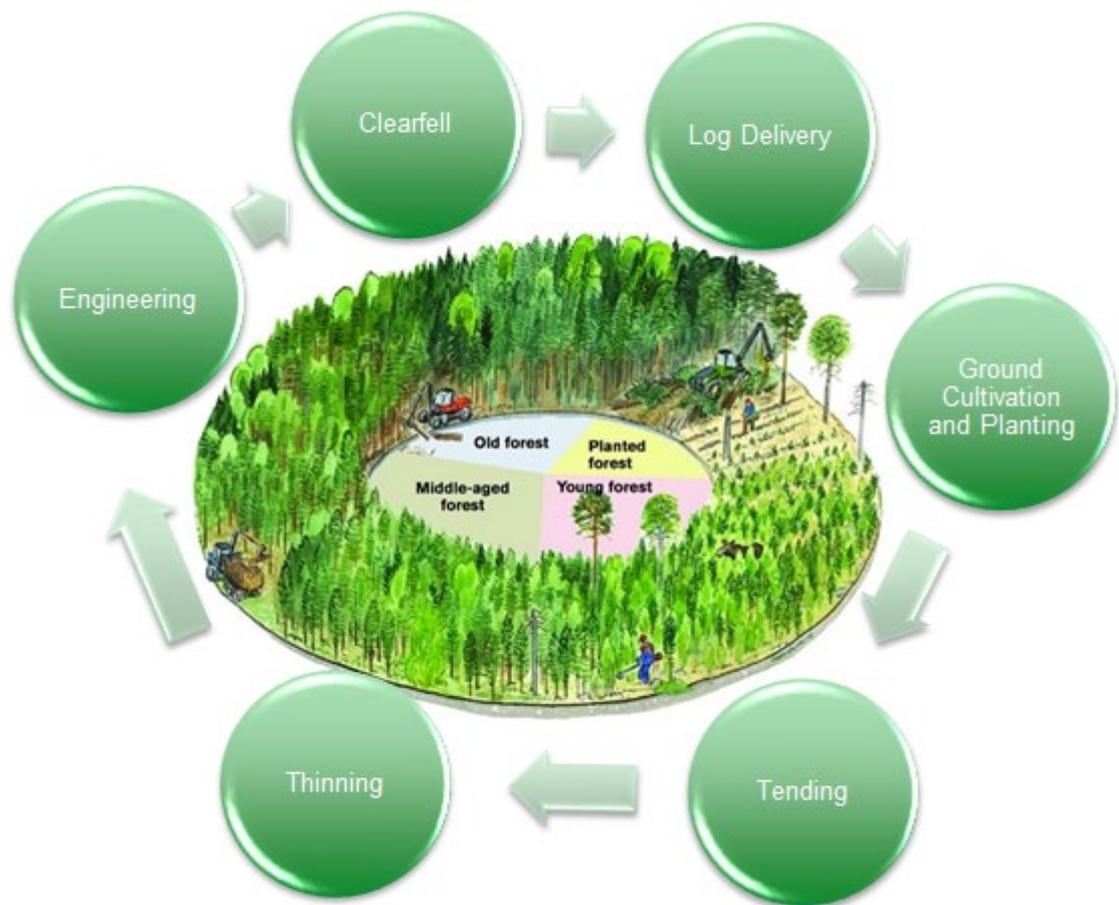


Figure 1: The Forest Cycle

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 2014 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 where appropriate and their recommendations are then fully considered. 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 Central Munster BAU, Coillte aims to replant approximately 7,183 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 Central Munster 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. We also build new forest roads on our External Partnerships.

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

- construct 71km of new roads where necessary 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 Central Munster BAU, Coillte aims to construct approximately 71 km of new forest 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 Cork / Waterford / Tipperary / Limerick Co Councils with a view to improving access.
- **Nutrient deficiencies** The Central Munster BAU is primarily very fertile, however there are a small number of areas around Slievenamon, Ballyhouras, Knockmealdowns, Galtee Mountain Range and Littleton which require a treatment of fertiliser. This treatment will be carried out following consideration of environmental sensitivities and an economic cost/benefit analysis along with the necessary foliage analysis. If the silvicultural argument is strong in terms of fertilisation we will proceed to apply for a licence to aerial fertilise those areas and conduct consultation with all relevant bodies with regard to safeguarding watercourses and comply fully with Forest Service guidelines on aerial fertilisation.
- **Meeting increasingly challenging environmental standards** requires Coillte to review its practices and assess the risks on a regular basis. Coillte has achieved sustainable forest management certification and is committed to ensure that there is continual professional development and refresher training for all staff, personnel and contractors to ensure a high environmental awareness and work standard is maintained. This will incorporate a wide range of training days and courses on all environmental issues and continued co-operation with all statutory stakeholders.
- Restrictions on carrying out operations in **Hen Harrier** areas during nesting season and in **Fresh Water Pearl Mussel** areas in winter and wet months
- 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 Central Munster BAU.
- Sometimes the **popularity of forests for recreation** affects our capacity to fell timber.

## Farm Partnerships

In relation to existing farm partnerships Coillte will:

- develop 10 year plans for farm partnerships that have been in existence for 10 years
- hold annual management meetings with farm partners
- thin farm partnership sites regularly and on time
- carry out an inventory on farm partnership sites
- if required construct/upgrade roads to access timber

### Key Objective 4

**In the Central Munster BAU, Coillte aims to manage its folio of 180 Farm Partnerships.**

### Overall production targets in the Central Munster BAU 2016- 2020

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

#### Central Munster BAU main Coillte production targets 2016 – 2020<sup>3</sup>

Annual Totals					
Year	2016	2017	2018	2019	2020
<b>Establishment</b>					
<b>Planting (ha)</b>					
Regeneration planting (r/f) (Replanting after felling)	1413	1237	1299	1708	1526
<b>Total Planting</b>					
<b>Harvesting Programme</b>					
<b>Harvest categories (000m3)</b>					
Thinnings	160	111	129	128	142
Regeneration felling (P,C,W) felling	424	373	372	404	449
<b>Total</b>	<b>584</b>	<b>484</b>	<b>501</b>	<b>532</b>	<b>592</b>
Felling area (ha)	1,240	862	842	845	917
<b>Roading Programme</b>					
<b>Roading (km)</b>					
New	21	12	14	14	10
Upgrading	57	55	52	50	47
<b>Total</b>	<b>78</b>	<b>67</b>	<b>66</b>	<b>64</b>	<b>57</b>

<sup>3</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 Central Munster 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, Coillte proposes to develop or facilitate a third party develop the following 4 planning permitted projects on the Coillte estate:

<b>Proposed planning permitted projects on Coillte estate – correct as at January 2016</b>			
<b>Name of Project</b>	<b>Location</b>	<b>Status</b>	<b>No. of wind turbines/(MW)</b>
Bunkimalta Wind Farm	Keeper Hill Forest, Co. Tipperary	Planning permitted	15
Cappawhite Wind Farm	Redhill Forest, Co. Tipperary	In construction	9
Glasha Hydro-Electric Power Scheme	Kilsheelan Forest, Co. Waterford	Planning permitted	(1MW)
Upperchurch Wind Farm	Upperchurch Forest, Co. Tipperary	Planning permitted	2
Ballyhoura	Ballyhouras Forest, Co. Cork	Planning permitted	6
Castlepook	Ballyhouras Forest, Co. Cork	Planning permitted	14
<b>Total</b>			<b>46</b>

Coillte is directly involved in the development of Bunkimalta Wind Farm projects. The Bunkimalta Wind Farm project will have the capacity to produce clean electricity for the equivalent of approximately 24,000 households. This projects will include a Community Benefit Scheme that will provide funding to local projects and initiatives.

Also, within this BAU Strategic Plan period, planning permission will be sought by a third party for the following 3 projects:

<b>Proposed projects that will seeking / are seeking 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>
Glenahiry	Clonmel Forest, Co. Waterford	In planning	4
Glencarbry	Upperchurch Forest, Co. Tipperary	In planning	4
Carrigadoon	Slievenamon Forest, Co. Tipperary	Pre-planning	8
Ardglass	Midleton Forest, Co. Cork	In planning	4
Knocknamona	Dungarvan Forest, Co. Waterford	In planning	8
<b>Total</b>			<b>28</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 Central Munster BAU, Coillte aims to facilitate the development of 11 renewable energy projects in the period to 2020**

#### **Biomass Production**

Coillte will consider renewable heat supply opportunities as they arise.

#### **3.3.2 Land Sales and Development**

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

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

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

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

### **3.3.3 Licensed Use of Coillte Lands**

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.coillte.ie](http://www.coillte.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 a [code 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**

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Coillte's proposed recreation priorities for the Central Munster 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 unauthorised usage of the recreation infrastructure in line with best management practice and security policy.
- Continue to manage and maintain actions of the linear long distance National Waymarked Ways that pass through the BAU, namely; the Slieve Felim Way, the Multeen Way and the South Leinster Way
- Maintain and upgrade the Coillte recreation sites and infrastructure at the Marl Bog, Bishops Wood, Greenfield, Knockanroe, Doonane/Ballyhourigan and Marlfield in Co. Tipperary. Faithlegg, Kilclooney, and Carey's Castle in Co. Waterford. Glenstal in Co. Limerick.
- Continue to maintain the EU LIFE bog restoration site at Sopwell in North Tipperary.
- Maintain the ongoing partnerships or agreements with community groups on sites such as the Devils Bit, Knockanacree, Grangecrag and the Glen in Co. Tipperary and Mahon Bridge in Co. Waterford.

### **Key Objective 6**

**In the Central Munster 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 South Central BAU**

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

The BAU will continue to protect archaeological sites on its lands and to note any new sites located during surveys. All recorded archaeological monuments are highlighted during the planning stage of operations. They are identified and 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 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.

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 Central Munster BAU, Coillte aims to maintain and enhance the level of broadleaves in the BAU.**

### 3.6.3 Biodiversity

At present 15% of the Coillte land area in the Central Munster 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 5,203 ha identified as old woodland. This represents 11% of the Coillte land in the BAU and 20% 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 an unplanted strip on either side of the watercourse in addition to a strip of broadleaves. 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. There are 55 Stands designated for retention in 17 forests in BAU totalling 546 ha. 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, and engaging with partners in developing new habitat management projects.
- **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 Central Munster 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, windrow 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. The disease has been detected in the BAU, and it will have an impact on species selection when planning landscape design.

Also, given the occurrence of streams and waterways in the forests, 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 & 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 Management Unit Site File (MUSF) 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.

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

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

#### **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 [Application](#)

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.

## Update on FSC Pesticide Derogation Approval

Following a review by FSC and Soil Association of Coillte's application and the consultation process, the FSC board issued an FSC pesticide Derogation approval for the "use of Cypermethrin for the control of large pine weevil *Hylobius abietis* in certified forest plantations in Ireland" effective from 1st March 2016 to the 1st March 2021. Coillte are currently implementing the conditions and will be reporting on the implementation at its next FSC audit. The pesticide derogation approval and conditions can be viewed at this link: [Approval](#)

## 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 each BAU head office if required. For more information on the panels, click on <http://www.coillte.ie/about-us/social-responsibility/consultation/>
- 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 stakeholder engagement 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 & 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 stakeholder engagement 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 stakeholder engagement 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.

<b>Incorporation of changes, responses in this BAU Plan</b>	
<b>Section reference in plan</b>	<b>Detail incorporated</b>
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 <b>Frequently Asked Questions</b> document that was issued to each respondent and uploaded onto the Coillte web site: <a href="http://www.coillte.ie/faqs/">http://www.coillte.ie/faqs/</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 for further information on Coillte's Social and Environmental Panels was added to this section.</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)	<p>Coillte clarified the statement in its text referencing that <i>"Buffer zones will not normally have a timber production target"</i>.</p>

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	<p><b>Following consultation with Mountaineering Ireland (MI)</b></p> <p>Coillte's windteam 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>
4.4 Working with people	<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>
<b>Detail Specific to BAU 5 – Central Munster</b>	
2.6 Species and Habitats in the South Central BAU	<p>Notable mammals in the BAU include the Nightjar, Little Egret, Pine Marten, Red Squirrel, Fresh Water Pearl Mussel, Hen Harrier, Otter, Badger and Bats.</p> <p>Coillte provided local beekeeper with area to keep bee hives.</p>
2.8 Water Quality and Protection in the South Central BAU	<p><b>Coillte Actively participates in the implementation of the Water Framework Directive</b> and ensures the forest sector plays its part in protecting the water bodies.</p> <p><b>Tipperary County Council note Coillte's</b> commitment to abide by all regulations and requirements in regard to protecting water quality and also the implementation of the Water Framework Directive. The Council further welcomes Coillte's water monitoring programme which is implemented close to water sensitive sites for 'high impact' forest operations.</p> <p>Coillte would also welcome an opportunity to meet with Tipperary County Council with a view to explaining how we operate in the different areas in relation to our plans in this region.</p>
2.4 Cultural and Archaeological Heritage in the South Central BAU	<p><b>Submission by Stakeholders:</b> We would like the protection of our historical assets to form a central part of Coillte's future strategy. This means establishing a protection buffer zone around existing archaeological sites and allowing for potential future archaeological excavation.</p> <p><b>Response by Coillte:</b> We also manage our operations to take account of the many cultural and archaeological sites that are on our land. Our policies and procedures ensure that these are protected and if any new ones are discovered these are also protected. This protection includes but is not limited to the provision of buffer zones around these sites to ensure their ongoing protection.</p>
3.6.2 Biodiversity	<p><b>Participating in Biodiversity Actions Plans for priority species and habitats in partnership with others.</b></p>

3.4 Community,  
Recreation and Tourism  
Proposals

**Submission by Stakeholders:** From Co Author of Kilcash 1190-1801 outlining the importance of maintaining and conserving the Coillte area which surrounds Killavally, Killurney, Kilcash and Glenbower.

**Response by Coillte:** Our Core purpose is to manage our forests in an economically, socially and environmentally sustainable manner including the aforementioned areas. 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.

#### 4.5 Monitoring and Evaluation

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

## Appendix I - Summary of Archaeological Sites in Central Munster BAU

BAU	Type of Monument	No. In BAU	SMRS Number *
B5	Architectural fragment	1	WA004-028----, WA029-023002-
B5	Barrow - ditch barrow	1	TS066-041003-, TS066-041004-
B5	Barrow - mound barrow	1	TS052-016----
B5	Barrow - ring-barrow	1	LI024-309001-, LI024-309002-, LI024-309003-, TN033-038----, TN033-051----, WA006-022001-, WA006-027----
B5	Barrow - unclassified	1	TS066-041005-
B5	Battery	1	CO088-022003-
B5	Bawn	1	TS078-028001-
B5	Booley hut	1	CO008-066----, WA006-014003-
B5	Boundary stone	1	CO056-009----, TS091-021----, WA012-002----, WA024-045----
B5	Bridge	1	CO066-048----
B5	Bullaun stone	1	CO055-016002-, CO066-037----, WA029-023003-
B5	Burial	1	WA012-010----
B5	Burial ground	1	CO054-146002-, TN027-124----
B5	Burnt mound	1	WA004-016----
B5	Cairn - boundary cairn	1	CO008-019----, CO008-020----, CO008-023----, CO008-024----, CO008-025----, WA023-063----
B5	Cairn - burial cairn	1	LI055-043----
B5	Cairn - unclassified	1	CO008-021----, CO008-022----, LI048-068----, LI049-076----, LI049-078----, LI055-019----, LI055-022----, LI055-023001-, LI055-023002-, LI055-024----, LI055-027001-, LI055-027002-, LI055-029----, LI055-030----, LI055-031----, TN027-140002-, TN033-002----, TN038-018----, TN040-039002-, TS045-014----, TS075-064----, TS079-024005-, TS090-005----, TS091-023----, WA023-004----
B5	Castle - motte	1	TS054-054----
B5	Castle - tower house	1	CO064-109002-
B5	Church	1	TS091-002001-
B5	Cist	1	CO008-012001-, CO008-012003-, CO008-012004-, CO054-093----, TN040-039001-, WA006-022004-
B5	Cross	1	TN028-092----
B5	Deer park	1	TS054-071----
B5	Earthwork	1	CO064-109001-, LI048-066001-, LI056-023----, TS048-024----, TS087-031----

BAU	Type of Monument	No. In BAU	SMRS Number *
			CO009-001----, CO028-003----, CO034-046----, CO035-042----, CO035-046----, CO055-008----, CO055-012----, CO065-108----, CO088-103----, LI024-042----, LI024-165----, LI024-176----, LI025-017----, LI048-065001-, LI049-073----, LI049-164----, LI049-255----, LI058-018----, TN019-029----, TN033-041002-, TN038-017----, TS043-041----, TS043-044----, TS045-012----, TS045-020----, TS051-013----, TS051-038----, TS054-055----, TS054-056----, TS055-037----, TS059-062----, TS064-004----, TS067-106----, TS073-028----, TS091-008----, WA001-005----, WA005-006----, WA005-060----, WA005-061----, WA014-058001-, WA014-061----, WA022-044----, WA029-031----
B5	Enclosure	1	-, WA022-044----, WA029-031----
B5	Field system	1	TS087-034----
B5	Fulacht fia	1	CO035-044----, CO045-083----, TS064-007----, WA006-025----, WA038-060001-, WA038-060002-
B5	Furnace	1	CO035-151----
B5	Hillfort	1	TN027-140001-, TS079-024001-, TS079-027----
B5	Hilltop enclosure	1	CO065-061----
B5	House - 17th century	1	TS078-028----
B5	House - 18th/19th century	1	WA001-037----
B5	House - indeterminate date	1	WA014-054----, WA015-059002-
B5	House - vernacular house	1	CO046-054----
B5	Hut site	1	WA014-058002-, WA014-058003-, WA014-058004-, WA015-059003-
B5	Icehouse	1	CO077-052----
B5	Kerb circle	1	WA006-024001-
B5	Linear earthwork	1	WA029-071----
B5	Mass-rock	1	CO017-028----, LI049-266----, TN032-015----, TS073-035----
B5	Megalithic structure	1	LI055-039----, LI056-047----, TN032-007----
B5	Megalithic tomb - passage tomb	1	LI049-077----
B5	Megalithic tomb - portal tomb	1	TS075-045----
B5	Megalithic tomb - unclassified	1	TN038-022----
B5	Megalithic tomb - wedge tomb	1	LI055-033----, TN039-007----, TN039-014----
B5	Midden	1	CO088-025----
B5	Mill - corn	1	CO035-039----, CO088-054----
B5	Millstone quarry	1	LI059-005----
B5	Mine	1	WA005-058----, WA007-088----, WA035-009----
B5	Moated site	1	CO035-047002-, TN023-060----, TS055-038----, WA015-059001-
B5	Mound	1	LI049-166----, TN028-033----, WA039-009----
B5	Promontory fort - inland	1	LI059A001----
B5	Redundant record	1	CO008-038----, CO054-030----, LI056-030----, TN035-083----, TS045-021----, TS045-023----, TS050-018----, TS051-039----, TS067-071----, TS068-138----, TS079-024002-, TS079-024003-, TS079-024004-, WA001-025----, WA001-026----, WA003-010----, WA006-023002-, WA006-024002-, WA011-001001-, WA011-001002-, WA011-001003-, WA013-003----, WA013-014----, WA030-075----

BAU	Type of Monument	No. In BAU	SMRS Number *
			CO020-019----, CO028-001----, CO028-002----, CO034-039----, CO034-040001-, CO034-042001-, CO034-043----, CO034-045----, CO045-029----, CO046-053001-, CO053-049----, CO055-018----, CO075-032----, LI014-037----, LI014-136----, LI023-027----, TN011-024----, TN019-028----, TN019-037----, TN023-021----, TN023-022001-, TN023-022002-, TN023-051----, TN027-136----, TN028-017----, TS049-033----, TS055-036----, TS066-040----, TS069-043----, TS073-013----, TS077-024----, TS078-003----, TS081-011----, TS082-053----, TS086-003----, WA001-004----, WA001-006----, WA002-006----, WA002-012----, WA002-035----
B5	Ringfort - rath	1	, WA002-036----, WA015-002----, WA034-002----
B5	Ringfort - unclassified	1	WA017-052----, WA017-053----
B5	Ritual site - holy well	1	CO025-103----, CO035-069----, CO054-097----, CO055-016001-, CO064-025----, LI023-028----, LI055-020----, TN028-031----, WA029-023001-, WA030-061003-, WA035-006----
B5	Road - road/trackway	1	TS048-043----, TS091-001----
B5	Sheepfold	1	WA014-059----
B5	Souterrain	1	CO020-024----, CO034-040002-, CO034-042002-, CO035-079----, CO045-128----, CO046-053002-, LI048-062----, LI048-066002-, TS078-003001-, WA034-073----
B5	Standing stone	1	CO008-012002-, CO046-051----, CO054-041----, CO054-044----, CO054-092----, CO054-112----, CO055-060----, LI048-065002-, LI048-065003-, LI048-065004-, TN023-022003-, TN023-067----, TN033-040----, TN039-058----, WA002-008----, WA006-022003-, WA006-022005-, WA006-022006-, WA006-039----, WA013-021----, WA014-060----, WA014-062----, WA033-009----
B5	Standing stone - pair	1	LI048-039----, TN019-040----, TN033-041001-, WA033-008----
B5	Stone circle	1	LI056-052----
B5	Stone row	1	CO054-040----, WA006-022002-, WA006-023001-
B5	Structure	1	TS075-059----
B5	Sweathouse	1	TN032-010----
B5	Water mill - horizontal-wheeled	1	CO054-031004-
B5	Water mill - unclassified	1	TN019-003----

\* The SMRS numbers listed in the above table can be used to view and search for these monuments using The National Monuments Service Map viewer 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 South Central BAU

### Special habitats in South Central BAU

Main Properties	Habitat Quality	Management Strategy	Management 2016-2020	Issues to be Addressed
<b>Petrifying springs (FP1)</b>				
<b>Eroding/Upland rivers (FW1) &amp; Depositing/lowland rivers (FW2)</b>				
River Suir and tributaries – SAC 2137	Remove conifers through harvesting and maintain habitat during establishment process	Protection and preservation of rare species within these rivers by the creation of buffer zones	Monitor through section 4s and biodiversity management plans	Avoidance of siltation and eutrophication
Blackwater and tributaries – SAC 2170		Protection and preservation of rare species within these rivers by the creation of buffer zones		Avoidance of siltation and eutrophication
<b>Dry Heath (HH1)</b>				
Cooneen, Ballyhourigan, Barnabaun, Bauraglanna, Bunkimalta, Coolruntha, Middlequarter	Dry Heath	Retain existing unplanted dry heath habitat. Increase area of open dry peat habitat. Restore. Open riparian zones	Retain open areas,. Fell, do not replant areas.	Monitor through Section 4s and remove regenerating non-native species as appropriate
Shanrahan Foildarrig Killeatin Gortacullin Kildanoge Knockballiniry Knockalisheen Ballyhaght Jamestown Glenanair West Glenanair East Long Mountain Coolfree	Good quality dry heath habitat in relatively natural condition.	Retain existing unplanted dry heath habitat. Increase area of open ground. Restore open riparian zones.	Retain open areas. Fell, planting by agreement with NPWS.	Monitor grazing and burning.
<b>Wet Heath (HH3)</b>				
Knocknamoheragh Ballyroe Ballyhaght Jamestown Glenanair West Glenanair East Long Mountain Coombs Toor	Good quality wet heath	Retain existing unplanted wet heath habitat. Restore open riparian zones.	Retain open areas. Restore riparian zones	Maintain boundary integrity
<b>Raised Bog (PB1)</b>				

Scohaboy Bog – Sopwell Property TY01  Derrybreen Bog TY01	Raised bog minimally impacted by anthropogenic activity.  Deep Bog areas forested but suitable for restoration.	Retain existing unplanted Raised bog habitat. Restore open riparian zones. Some sites in the District have been selected for restoration under Coillte’s Life-Nature Raised Bog Restoration Project.	Retain open areas. Block drains. Implement ongoing monitoring of Life- Nature Project sites.	Regeneration of Birch in areas where forest has been removed.
<b>Blanket Bog (PB2)</b>				
Dromdeeveen Upland blanket bog (NHA)  Keeper Hill TY03 Mauhersleive Mountain TY05	Blanket bog minimally impacted by anthropogenic activity.  Deep Bog areas forested but suitable for restoration.	Retain existing unplanted blanket bog habitat.  Restore open riparian zones.	Retain open areas.	Regeneration of Birch in areas where forest has been removed.

**Special habitats (non-forest) in Central Munster BAU**

Main Properties	Habitat Quality	Management Strategy	Management 2016-2020	Issues to be Addressed
<b>Oligotrophic Lakes</b>				
Monaincha – TY08	Good quality Oligotrophic water-bodies in acid peatland catchments.	Retain and monitor.	Retain and monitor.	N/A

**Protected or rare species in Central Munster BAU**

<b>Main Properties</b>	<b>Habitat Quality</b>	<b>Management Strategy</b>	<b>Management 2016-2020</b>	<b>Issues to be Addressed</b>
<b>Bats</b>				
Gortarush - TY11	A Coillte-owned building in the International Scout Centre houses a colony of Whiskered bats and is an NHA, Dundrum 2096	Protect roost and maintain suitable foraging habitat.	The creation and/or maintenance of broad- leaved tree or shrub edges to certain forest tracks leading from the roost are part of the management plan for the Biodiversity Area.	Close liaison with NPWS on an ongoing basis.
<b>Hen Harrier</b>				
CK06, LK03, LK07, LK10, TY03, TY04, TY05, TY06, TY10 – (SPA 4165)	These SPA's are of good quality and provide a highly rated Hen Harrier habitats.	Maintain suitable foraging and nesting habitats.	Consultation with NPWS & FS, retain open space and restructuring plan.	Reduction of log supply to the industry, loss of revenue, additional costs.
<b>Little Egrets</b>				
Ballyannon	Good quality high woodland roosts adjacent to main feeding estuarine habitats.	Retain High Forest where Egrets have likely nesting sites	Retain old conifers for nesting sites	Consultation with Steering Group Members
<b>Freshwater Pearl Mussel</b>				

All properties within the 6km zone such as: Licky, Clodiagh and Munster Blackwater Rivers and tributaries  Aherlow Rivers	Freshwater pearl mussel, Salmon, River, Brook and Sea lampreys, Otter (Annex II habitats Directive)	Manage all forest operations in an environmentally friendly manner. Adhere to all Forest Service guidelines and SOPs.	Carry out Appropriate assessments and complete EIA's on relevant sensitive Clearfell sites within the catchment of the pearl mussel of the Munster Blackwater in consultation with NPWS and Forest Service. Ensure minimal impact on soil and water quality during forest operations upstream of FPM populations through Coillte EIA procedure.	Be aware of current legislation. Maintenance of water quality.
<b>Freshwater Pearl Mussel</b>				
<i>Margaritifera durrovensis</i> Nore Catchment - TY07 - Longford wood, Gorteenashingau n (part of) TY08 - Monaincha, Sheehys, Timoney, Gortnagowna TY12 - Grangecrag, Kilcooly, Sallybog, Crab, Knockatooreen, Kilbraugh	These catchments are of good water quality and provide a highly rated pearl mussel habitat <i>M. durrovensis</i> - hardwater spp., only occurs in Ireland, one small population in River Nore	Comply with FS FWPM Guidelines on.	Consider postponement of clear-felling on deep peat sites within the catchments of the pearl mussel in consultation with NPWS. Recommendations on Forest Service FWPM Guidelines and WFD Sub-basin FWPM Forestry Management plans to apply. Liaise with pearl mussel technical group of FS	Reduction of log supply to the timber industry loss of revenue. Increased cost of special protective measures.
<b>White Clawed Freshwater Crayfish</b>				
Sopwell	Habitat adjacent to Raised bog restoration Project EU LIFE Nature	Maintain and monitor and manage native species and regeneration	Maintain and monitor and manage native species and regeneration	No Impact

<b>Twaite Shad</b>				
Lower parts of Suir and Munster Blackwater rivers Lough Derg	Not Known	Maintain best practice riparian zone management during operations adjacent to areas with Shad	Maintain best practice riparian zone management during operations adjacent to areas with Shad	None of note
<b>Wood Millet (Rare Plant and Old Woodland indicator species)</b>				
East Cork Woodlands	Broadleaf and Mixed woodlands of moderate naturalness retaining remnant relict native under storey vegetation	Conserve plant populations and habitats as recorded in ecological surveys.	Retain populations at known locations through maintenance of existing habitat.	

**Native and mixed woodlands in Central Munster BAU**

<b>Main Properties</b>	<b>Habitat Quality</b>	<b>Management Strategy</b>	<b>Management 2016-2020</b>	<b>Issues to be Addressed</b>
<b>Oak-birch-holly Woodland (WN1)</b>				
Greenwood Ballard	Small sized woods but in general of good quality, some problems with invasive exotics e.g. <i>Rhododendron</i>	Maintain areas of antive oak canopy, facilitate expansion of oak wood, and monitor spread of exotic species.	Fell, replant with native species where appropriate.	Cost of invasive species removal
<b>Oak-ash Woodland (WN2)</b>				
Barnane TY07	Small to medium sized woods but in general of good quality, some problems with invasive exotics e.g. <i>Rhododendron ponticum</i>	Maintain areas of native oak canopy, facilitate expansion of oak wood, and remove exotics.	Utilise transformation to native woodland through thinning out conifers to retain woodland condition. Fell at rotation, replant with native broadleaves and Scots pine where appropriate. Address rhododendron control.	Cost of Rhodo removal and control of deer.

<b>Wet woodland (Riparian-Wet Willow-Alder-Ash WN5/WN6)</b>				
Castlelough TY02	Small to medium sized woods but in general of good quality some problems with invasive exotics.	Maintain areas of native canopy, facilitate expansion of native wood, and remove exotics.	Address control and removal of exotic species.	Cost of removal of exotics.
<b>Mixed broadleaved Woodland (WD1)</b>				
Garranorish TY01 Knockanacree TY01	Mixed woodland, with areas of relict native ground flora. Some problems with invasive exotics e.g. Rhododendron and Cherry laurel	Restore some areas to broadleaf woodland in most suitable areas. Maintain woodland structure and species diversity in other areas. Implement Coillte OWS policy in these woodlands.	Manage under CCF. Utilise transformation to native woodland through thinning out conifers to retain woodland condition. Address Rhododendron and Cherry laurel control.	Cost of Rhodo and Cherry laurel removal. Control of deer
Castlemartyr Glenbower Cahir Park Castleblagh Gurteen Cappagh Rincrew Dromana	Mixed woodland retains areas of relict native ground flora.  Some problems with invasive exotics e.g Rhododendron and Cherry Laurel	Restore native woodland in most suitable parts of these woodlands. Maintain woodland structure and species diversity in other areas.  Implement LISS in these woodlands.	Fell, replant with native species  Address rhododendron and cherry laurel control.	Cost of invasive species removal
<b>Mixed broadleaved/conifer Woodland (WD2, WD3)</b>				

Castlelough TY02 Coolbaun TY02 Laghile TY01 Castletown TY02	Mixed broadleaf/conifer woodland, retains areas of relict native ground flora. some problems with invasive exotics e.g. Rhododendron and Cherry laurel	Restore some areas to broadleaf woodland in most suitable parts of these woodlands. Maintain woodland structure and species diversity in other areas. Implement Coillte's OWS policy in these woodlands.	Manage under CCF. Utilise transformation to native woodland through thinning out conifers to retain woodland condition. Fell, replant with broadleaf and light crowned conifer species where appropriate. Address Rhododendron and Cherry laurel control.	Cost of Rhodo and Cherry laurel removal. Deer browsing
Glensheskin Castleblagh Gurteen Cappagh	Mixed Broadleaf/Conifer woodland retains areas of relict native ground flora.  Some problems with invasive exotics e.g Rhododendron and Cherry Laurel	Restore some areas to native woodland in most suitable parts of these woodlands. Maintain woodland structure and species diversity in other areas  Implement LISS in these woodlands.	Fell, replant with native species  Address rhododendron and cherry laurel control.	Cost of invasive species removal
<b>Mixed conifer Woodland (WD3)</b>				
Glenabo Graigue Castleblagh	Mixed conifer woodland retains areas of relict native ground flora.  some problems with invasive exotics e.g Rhododendron and Cherry Laurel	Restore native woodland in most suitable parts of these woodlands.  Retain some areas of Light crowned conifer species where ground flora is of good quality.  Replant areas with Light crowned conifer species Implement LISS in these woodlands.	Fell, replant with native species and or light crowned conifer species.  Address rhododendron and cherry laurel control.	Cost of invasive species removal

## 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 oxycoccus Empetrum nigrum Vaccinium oxycoccus Cladium masiscus Carex lasiocarpa, Ranunculus lingua	Lesser Horseshoe Bat (Rhinolophus hipposideros) Pine Marten (Martes martes) Badger (Meles meles),

## Appendix III – Recreation Facilities in the Central Munster BAU

Location	Description
Bishops Wood, Dundrum, Co. Tipperary	Located approximately 1km from Dundrum village. This site has a car park and picnic area along with woodland walks. There is a Scout Centre located in the woods also.
Carey's Castle, Clonmel, Co Tipperary	Car park and picnic area located beside the ruins of an old house. The East Munster way passes through this site.
Castlelough, Co Tipperary	Castlelough is located on the shores of Lough Derg. There is a car park, picnic area and woodland walks.
Devil's Bit, Co Tipperary	There is a National Looped Walk that runs close to the famous Devils' Bit landmark.
Doonane, Co Tipperary	A National Looped Walk and linear mountain access route passes through this forest in the Silvermines / Keeper Hill area. There is a mass rock, sweat house and cairn off the trails that are also popular with walkers. A car park was constructed in recent years. Up-to- date signage is also in place. The Slieve Felim Way, a long distance National Way Marked Way also passes through this forest.
Faithlegg, Co Waterford	Woodland walks with panoramic views of the Suir and Nore rivers confluence.
Glen - Kilsheelan	Short walk into a mature beech woodland that has a locally restored well.
Glenstal, Co Limerick	A National Looped Walk has its trailhead at the forest entrance to this property and a large section of this trail passes through the forest. Up-to-date signage is in place. The Slieve Felim Way, a long distance National Way Marked Way also passes through this forest.
Grange Crag, Co Tipperary	2 National Looped Walks are waymarked through this Coillte managed forest. There are a number of features from the bygone estate days that are included in the walks including an ice house and folly tower.
Greenfield, Cappawhite, Co. Tipperary	Car park, ponds and the Multeen Way are located in this forest.
Kilclooney, Waterford	Car park, picnic area, woodland walks and viewpoints. Access to Corrie Lakes in the Comeragh Mountains.
Knockalough, Co Tipperary	National Looped Walks that originate from the village in Upperchurch pass through this forest.

Location	Description
Knockanacree, Co Tipperary	This is a broadleaf woodland on the outskirts of the eco-village of Cloughjordan. There are 3 waymarked trails in the forest.
Knockanroe/Step, Co Tipperary	A National Looped Walk passes through this forest which is located in the Silvermines. It is very popular with walkers. Up-to-date signage is in place. The Slieve Felim Way, a long distance National Way Marked Way also passes through this forest.
Laghile, Co Tipperary	A National Looped Walk that originates in the village of Kilcommon passes through this forest.
Mahon Bridge	Community project comprising of a woodland walk.
Marl Bog, Co Tipperary	Located close to the village of Dundrum, this site is very popular with the walkers and runners from the local community and athletics club. Facilities include an extended car park, picnic area, lake and 2 waymarked woodland walks.
Marlfield, Co. Tipperary	Small parking area and a number of woodland walks on the banks of the river Suir.
Schoaboy Bog, Sopwell, Cloughjordan, Co. Tipperary	EU LIFE bog restoration site with picnic area, parking and a timber bog walk and viewing platform. There is also educational signage to explain the conservation of this site.
Aherlow – Glen of Aherlow	<p>Slievenamuc/Gortavoher</p> <ul style="list-style-type: none"> <li>• Car park at Ardarou</li> <li>• 7 National Looped walks that are maintained by Aherlow Fáilte</li> <li>• Ballyhoura Way NWMW</li> </ul> <p>Northern slopes of the Galtys</p> <ul style="list-style-type: none"> <li>• Parking area at Glencoshabinná</li> <li>• Partnership with Mountain Meitheal South East in upgrading access points.</li> </ul>
Ardarou / Glenville	River side walk including 2 timber footbridges. Car park and picnic facilities. Maintained in conjunction with Avondhu Blackwater Rural Social Scheme.
Ballyannan	Popular wood on the fringe of Midleton Town popular with walkers and joggers.
Ballyhoura Trail Park	<ul style="list-style-type: none"> <li>• Trailhead facilities include; <ul style="list-style-type: none"> <li>○ access to 5 MTB trails</li> <li>○ access to MTB skills and Category 4 trails</li> <li>○ 3 waymarked walking trails</li> <li>○ Ballyhoura Way</li> <li>○ Trim trail</li> <li>○ parking for approx. 80 cars,</li> <li>○ bike hire (Trailriders)</li> <li>○ bike wash</li> <li>○ showers and changing facilities</li> <li>○ picnic areas</li> </ul> </li> </ul> <p>These facilities are maintained in conjunction with Ballyhoura Development Ltd.</p>

Location	Description
Ballinaboola (close to Ballyhea on the western side of the Ballyhouras)	<ul style="list-style-type: none"> <li>• Car park</li> <li>• 2 National Looped walks</li> <li>• Ballyhoura Way</li> </ul> <p>Maintained in conjunction with Ballyhoura Development Ltd.</p>
Bansha Woods	Car park and picnic area with a pond.
Caher Park (close to Cahir)	<ul style="list-style-type: none"> <li>• Parking area</li> <li>• Access to the Suir</li> <li>• Fishing stands for people with disabilities (project in conjunction with Tipperary Co. Co., Inland Fisheries, local Angling Club)</li> <li>• Tipperary Heritage Way</li> <li>• EU LIFE Site (priority woodland) - restore and maintain Yew woodland.</li> </ul>
Castleblagh (close to Ballyhooly)	<ul style="list-style-type: none"> <li>• Looped walk</li> <li>• Blackwater Avondhu Way</li> </ul> <p>Maintained in conjunction with Avondhu Blackwater Rural Social Scheme.</p>
Castlemartyr	<p>Two separate properties with;</p> <ul style="list-style-type: none"> <li>• 2 way marked trails</li> <li>• Picnic facilities</li> <li>• nature information</li> <li>• car park</li> </ul> <p>Maintained in conjunction with Castlemartyr Community Employment Schemes.</p>
Colligan (close to Dungarvan)	<ul style="list-style-type: none"> <li>• car park</li> <li>• Picnic facilities</li> <li>• 2 National Looped Walks</li> </ul>
Corrin (close to Fermoy)	<ul style="list-style-type: none"> <li>• 1 looped walk</li> <li>• Car park</li> <li>• Picnic facilities</li> </ul>
Curragh (close to Middleton)	<ul style="list-style-type: none"> <li>• 2 parking areas</li> <li>• Picnic facilities at the Ballynaclashy car park.</li> </ul>
Darragh Hills (close to Kilfinnane)	<ul style="list-style-type: none"> <li>• 2 National looped walks with archaeological features and scenic views.</li> </ul> <p>Maintained in conjunction with Ballyhoura Development Ltd.</p>
Galty Castle (close to Kilbeheny)	<ul style="list-style-type: none"> <li>• 1 National Looped walk</li> <li>• Car park</li> <li>• Picnic facilities</li> </ul> <p>Maintained in conjunction with Ballyhoura Development Ltd.</p>
Glenanair (close to Ardpatrick)	<ul style="list-style-type: none"> <li>• car-park</li> <li>• picnic area</li> <li>• National Looped Walk.</li> </ul> <p>Maintained in conjunction with Ballyhoura Development Ltd.</p>
Glenabo (close to Fermoy)	<ul style="list-style-type: none"> <li>• Car park</li> <li>• Blackwater Avondhu Way</li> </ul>
Glenbower (close to Killeagh)	Amenity area comprising of both Coillte and community woodland with walking routes, car park and picnic facilities.

Location	Description
Glengarra (close to Cahir)	<ul style="list-style-type: none"> <li>• Arboretum</li> <li>• Millennium Woodland</li> <li>• LIFE conservation project to restore and maintain oak woodland.</li> <li>• 2 looped woodland walks</li> <li>• Car park</li> <li>• Picnic facilities</li> </ul> <p>Maintained in conjunction with FÁS</p>
Glenshelane (close to Cappoquin)	<ul style="list-style-type: none"> <li>• Car park</li> <li>• Picnic facilities</li> <li>• 4 walks all of which are serviced by a number of footbridges</li> </ul>
Kilbarry (close to Coolagown/Fermoy)	Coolagown, east of Fermoy, amenity woodland consisting of car park, walking trails and viewing points/information panels.
Knockmealdowns (northern flanks)	<ul style="list-style-type: none"> <li>• 7 number of looped walks</li> <li>• Duck pond (Ardfinnan, Ballybacon, Grange and Newcastle (ABGN) Gun Club)</li> <li>• Tipperary Heritage Way</li> <li>• East Munster Way</li> <li>• Blackwater Way</li> <li>• Kilballyboy car park</li> </ul> <p>Maintained in conjunction with ABGN Gun Club and Knockmealdowns Active.</p>
Marlogue (Great Island of Cobh)	<ul style="list-style-type: none"> <li>• car park</li> <li>• picnic facilities</li> <li>• access to the sea</li> </ul>
Moanbaun (close to Watergrasshill)	<ul style="list-style-type: none"> <li>• Parking area</li> <li>• Looped Walk</li> </ul>

## 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>		
No.	Parameter	Measure
<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	Notifyable 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
CK06 - Ballyhouras	4,456	8,003	26,967	8,624	6,260	15,259	12,373	7,100	5,345	3,792	9,468	28	54	18	11	33
CK07 - Kilworth	1,790	1,401	15,866	8,010	11,685	13,878	5,090	4,708	4,280	7,038	2,941	5	37	15	23	23
CK08 - Ballyhooly	2,306	29,171	8,974	12,222	3,501	22,244	5,639	3,542	8,257	6,069	7,718	69	23	35	10	56
CK14 - Midleton	2,417	12,653	15,509	3,000	20,701	7,161	2,886	8,729	6,679	15,638	7,322	36	42	12	58	25
CK15 - Ballynoe	2,298	8,091	14,412	31,896	26,885	8,806	3,857	6,324	3,027	4,602	4,175	16	36	78	50	18
LK03 - Glenstal	2,508	3,982	11,143	6,637	582	24,523	17,153	4,040	3,951	4,213	9,754	12	27	19	1	56
LK04 - Lough Gour	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LK05 - Galbally	87	-	-	922	-	-	-	-	-	-	-	-	-	2	-	-
LK06 - Galty	941	11,255	715	5,477	2,143	3,440	-	1,451	4,409	1,213	2,470	38	2	18	7	11
LK07 - Kilfinane	2,902	2,708	10,155	14,513	49,106	22,129	7,369	4,545	3,104	2,707	6,046	6	27	45	99	37
LK10 - Ballylanders	880	12,112	1,504	1,003	17,598	367	2,377	398	327	1,347	1,134	30	4	3	48	1
TY01 - Borrisokane	713	5,704	7,069	444	1,866	3,722	194	272	-	-	260	17	19	1	4	6
TY02 - Arra	822	6,414	2,416	4,060	-	4,676	1,382	1,422	3,326	1,718	1,159	17	6	7	-	8
TY03 - Keeper Hill	3,384	9,944	12,982	25,750	26,937	12,724	2,662	7,821	14,710	8,817	9,020	43	30	69	62	29
TY04 - Silvermines	760	-	2,027	494	1,924	-	4,820	1,190	2,254	110	3,814	-	4	1	5	-
TY05 - Kilcommon	1,268	14,523	1,053	11,853	454	4,280	2,369	3,490	2,025	1,259	2,761	46	2	22	1	8
TY06 - Templederry	1,697	4,381	10,238	42	5,745	9,620	187	873	2,483	2,484	1,847	10	19	-	12	15
TY07 - Devils Bit	1,423	5,292	1,363	2,673	14,541	9,263	5,055	3,602	3,687	2,544	4,404	12	4	8	29	14
TY08 - Templemore	997	558	3,641	3,211	1,958	-	-	752	44	248	70	4	11	5	4	-
TY09 - Upperchurch	1,730	2,338	10,786	32,837	5,543	10,266	9,024	2,743	3,252	1,629	2,643	6	19	83	20	21
TY10 - Redhill	1,498	6,059	1,361	8,485	9,559	13,938	8,523	4,683	6,135	1,891	5,200	24	3	21	17	38
TY11 - Dundrum	669	1,277	1,460	6,423	-	5,663	-	63	1,329	-	924	3	3	12	-	10
TY12 - Littleton	2,276	23,625	21,661	10,196	9,430	10,831	5,888	301	2,179	1,220	3,189	85	58	18	20	16
TY13 - Fethard	1,142	2,287	12,190	3,914	5,284	8,543	3,244	1,891	1,687	2,180	4,725	6	32	7	11	22
TY14 - Slievenamon	1,346	14,561	-	484	11,451	7,283	2,887	1,043	121	1,671	1,027	39	-	2	18	12
TY15 - Slievenamon	1,544	7,520	5,427	8,180	2,382	1,929	2,719	1,813	3,007	3,886	1,827	29	12	15	4	7
TY16 - Aherlow	1,305	14,671	885	714	-	5,539	1,779	1,692	454	1,312	1,158	53	2	1	-	22
TY17 - Cahir	3,562	23,476	15,668	8,605	7,247	21,823	6,371	4,095	5,131	2,466	3,638	97	37	19	15	50
TY18 - Glengarra	874	8,705	3,861	15,692	2,563	3,217	-	2,890	3,119	3,008	2,252	22	11	33	7	7
TY19 - Knockmealdowns	4,652	36,421	35,092	12,722	7,237	32,463	10,983	1,620	3,844	3,024	4,979	85	73	25	13	57
TY20 - Barnahown	990	-	896	-	7,314	6,114	-	-	924	1,127	1,412	-	2	-	12	10
WD01 - Clonmel	3,095	33,311	29,500	5,750	19,152	26,409	4,182	5,971	4,459	9,645	4,831	107	63	9	39	58
WD02 - Kilsheelan	2,577	18,055	15,694	23,194	9,063	20,427	7,880	6,121	4,849	5,653	2,854	54	39	46	19	50
WD03 - Portlaw	1,222	5,854	4,119	4,932	1,877	1,148	3,604	2,404	2,198	3,682	2,931	19	11	9	5	2
WD04 - Tramore	854	-	2,169	5,362	6,781	1,526	3,997	2,663	1,860	1,508	344	-	6	9	11	7
WD05 - Kilmacthomas	2,718	11,972	10,240	3,960	27,343	55,946	11,169	4,077	3,196	6,828	8,271	32	22	12	56	105
WD06 - Dungarvan	3,628	33,626	10,410	23,913	28,804	20,666	1,427	2,923	4,042	2,199	1,338	101	26	51	54	31
WD07 - Mellory	1,799	5,677	7,663	4,129	17,666	2,818	652	705	2,760	1,999	3,306	11	17	9	33	7
WD08 - The Vee	1,260	-	11,714	3,484	3,506	10,872	2,317	468	1,438	2,346	2,709	-	27	7	6	16
WD09 - Ballyduff	975	15,784	10,987	26,117	9,323	5,417	-	592	3,735	2,502	3,058	28	20	47	18	8
WD10 - Knockanore	1,673	22,722	14,715	21,722	20,590	14,376	-	1,998	1,587	4,605	5,305	50	32	49	43	21

## Appendix VI – BAU Map



