



South East Five Year Forest Plan 2021-2025

Foreword

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

The topics covered in the five year forest plan include:

Commercial Forest Planning:

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

Forest Planning for public benefits and public use:

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

Forest Planning for sustainable use of resources:

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



A handwritten signature in black ink that reads "Peter McGloin". The signature is written in a cursive style.

Peter McGloin
BAU Leader – South East

¹ Growing, cultivating and felling trees

Statement of Compliance with Principles of Sustainable Forestry Management

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

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

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

Our objectives are to:

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

Peter McGloin

BAU Leader – South East

² FSC licence code FSC- C005714

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1. Coillte and Five Year Forest Plans

1.1 Coillte

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

History

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

Coillte Today

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

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

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

Nature Conservation and Biodiversity

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

Outdoor Recreation

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

1.2 Renewable Energy

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

government and EU policy in terms of the role we play in relation to renewable energy development in Ireland.

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

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

In terms of developing our renewable energy resources we are committed to:

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

1.2.1 Public Participation and Consultation for renewable energy projects

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

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

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

1.2.2 Wind Energy

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

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

Should you require further information regarding Coillte's involvement in the wind energy industry, please consult the Frequently Asked Questions section of our website (www.coillte.ie/faqs) and do not hesitate to contact us at info@coillte.ie

1.2.3 Biomass

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

1.2.4 Other Renewable Technologies

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

1.3 Coillte's Resource Management Approach

During 2011 and 2012 a major project was undertaken within Coillte Forest to review fundamentally our approach to managing our forest resource. The underlying objective of this work is to use optimisation techniques to ensure we are maximising the return from the land resource in a balanced and sustainable manner. In 2013 this project moved into implementation phase and, after a successful pilot programme, has now been adopted as the primary planning tool for Coillte forest. The schedule itself is built through running a management model. It is important that the model reflects

- the costs and benefits of all possible actions,
- the crop and site types and the circumstances under which each action is allowed,
- and the relevant management objectives and constraints operating at a strategic and local level

As the model was developed and refined each BAU was consulted on the model as it applies to their area. The outputs of the management model may span multiple years or decades and in this format, will be used as a strategic resource management tool.

A major benefit of the approach to Coillte is the speed with which a new national activity schedule is generated which reflects, for example, the impact of storm or a significant shift in markets. In extreme cases a stand may have its scheduled fell year shifted as frequently as every quarter, as the model is re-run to incorporate emerging information on demand or crop parameters.

This is why forest management principles, objectives and constraints are reflected into the model and form the basis the BAU plan.

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

1.4 Benefits of Coillte to the public

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

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

1.4.1 Trees, Carbon and Climate Change

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

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

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

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

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

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

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

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

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

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

1.4.2 Coillte Nature

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

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

For more information, see www.coillte.ie/coillte-nature/

1.5 Meeting external challenges and constraints

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

1.5.1 Statutory and non-Statutory regulation and certification of forestry

	Response
<p>National Forestry Programme 2014-2020 “To develop an internationally competitive and sustainable forest sector that provides a full range of economic, environmental and social benefits to society and which accords with the Forest Europe definition of sustainable forest management .”</p>	<p>In response to the National Forestry Programme: Coillte will set and meet targets for the national timber supply. Coillte will seek to increase the recreational value at selected forests. Coillte will continue to manage 20% of all its forests exclusively for nature conservation and biodiversity</p>
<p>National Biodiversity Plan Ireland is a signatory to the 1992 Convention on Biological Diversity and is committed to biodiversity protection and enhancement measures in the National Biodiversity Plan.</p>	<p>Coillte is making a meaningful contribution to the National Biodiversity Action Plan through the designation of 20% of its forest estate overall for nature conservation and biodiversity management. Since 2014, we have reviewed and categorised these biodiversity areas and have an ongoing plan in place to update our biodiversity plans to enhance the ecological value and potential of these sites. Coillte initiated a partnership with the National Biodiversity Data Centre based in Waterford which currently holds more than 85,000 records of different species of animals and plants from Coillte lands.</p>
<p>EC Habitats Directive and EC Birds Directive (92/43/EEC) as transposed into Irish law under the S.I. No. 477 of 2011 EUROPEAN COMMUNITIES (BIRDS AND NATURAL HABITATS) REGULATIONS 2011. 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. All forest operations which potentially could impact on such sites are assessed under the criteria outlined as required by the Regulations.</p>

<p>Water Framework Directive (2000/60/EC)</p> <p>The EU Water Framework Directive establishes a framework for the protection of rivers, lakes, coastal and ground waters by requiring States to achieve good ecological status for all waters, ensuring that status does not deteriorate in any waters. The summary timetable and work programme for the production of the second cycle of River Basin Management Plans (RBMPs) 2015-2021 was published in July 2015. In addition a Significant Water Management Issues (SWMI) report will be published and will be open to public consultation until December 2015. This will feed into the draft River Basin Management Plans for 2015-2021 to be published in December 2016. The RBMPs will be open to further public consultation with a view to publish an updated and final version in December 2017.</p>	<p>National Surface and Drinking Water Regulations have been enacted since 2007 to give legal status to the criteria and standards to be used for classifying surface waters in accordance with the ecological objectives approach of the Water Framework Directive. The classification of waters is a key step in the river basin management planning process and is central to the setting of objectives and the development of programmes of measures. Waters classified as 'high' or 'good' must not be allowed deteriorate. Waters classified as less than good must be restored to at least good status within a prescribed timeframe. The environmental targets or goals and the programmes of measures (POMs) to be included in river basin management plans must therefore reflect these requirements.</p> <p>Coillte has been proactive with the regulatory agencies, such as the Forest Service, Inland Fisheries Ireland, Local Authorities, EPA and NPWS, in deriving POMs to be implemented by the forest sector in avoiding and/or minimising the potential impact of forest activities on water quality. A central tenet of the POMs is the adherence to the Forest Service Code of Best Forest Practice and Guidelines, including all relevant regulations and requirements, and the Forest Standards for Ireland (National, FSC and PEFC). Furthermore, compliance will be assessed by way of independent audits by the Forest Service, the FSC and PEFC.</p>
<p>Sustainable Forest Management (SFM)</p> <p>SFM is the forestry sector's response to sustainable development. Balancing the economic, environmental and social elements is now the accepted way by which forest management is conducted. Forest certification ensures best forest practice is implemented and provides stakeholders with an opportunity to contribute to the management of forests. Compliance with forest certification standards is assessed annually by independent auditors.</p>	<p>Coillte is fully committed to a policy of sustainable management of all of its forests and forest lands. Coillte applied for FSC certification of its forests in 2000 and were awarded an FSC certificate in 2001. Coillte applied for PEFC certification of its forests in 2013 and were awarded a PEFC certificate in 2014. These external forest management certification schemes endorse Coillte's policy of sustainable forest management, balancing the social, economic and environmental aspects of forest management.</p>

1.5.2 Pests and Diseases

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

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

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

1.5.3 Societal Expectations

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

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

1.5.4 Illegal Dumping

Due to the vast and rural nature of the Coillte forest estate, illegal dumping has become a major issue for Coillte with sites close to urban centres being particularly prone to this criminal activity.

Illegal dumping in our forests is not just an unpleasant eyesore, it is an environmental hazard and causes serious problems to habitats, species, and human health. It can pollute rivers and drinking water sources, damage biodiversity and is a threat to both the people who live in the area and recreational users. In addition, it poses a health and safety risk to those staff and contractors who are tasked to remove this illegally dumped litter.

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

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

1.5.5 Forest Fires

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

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

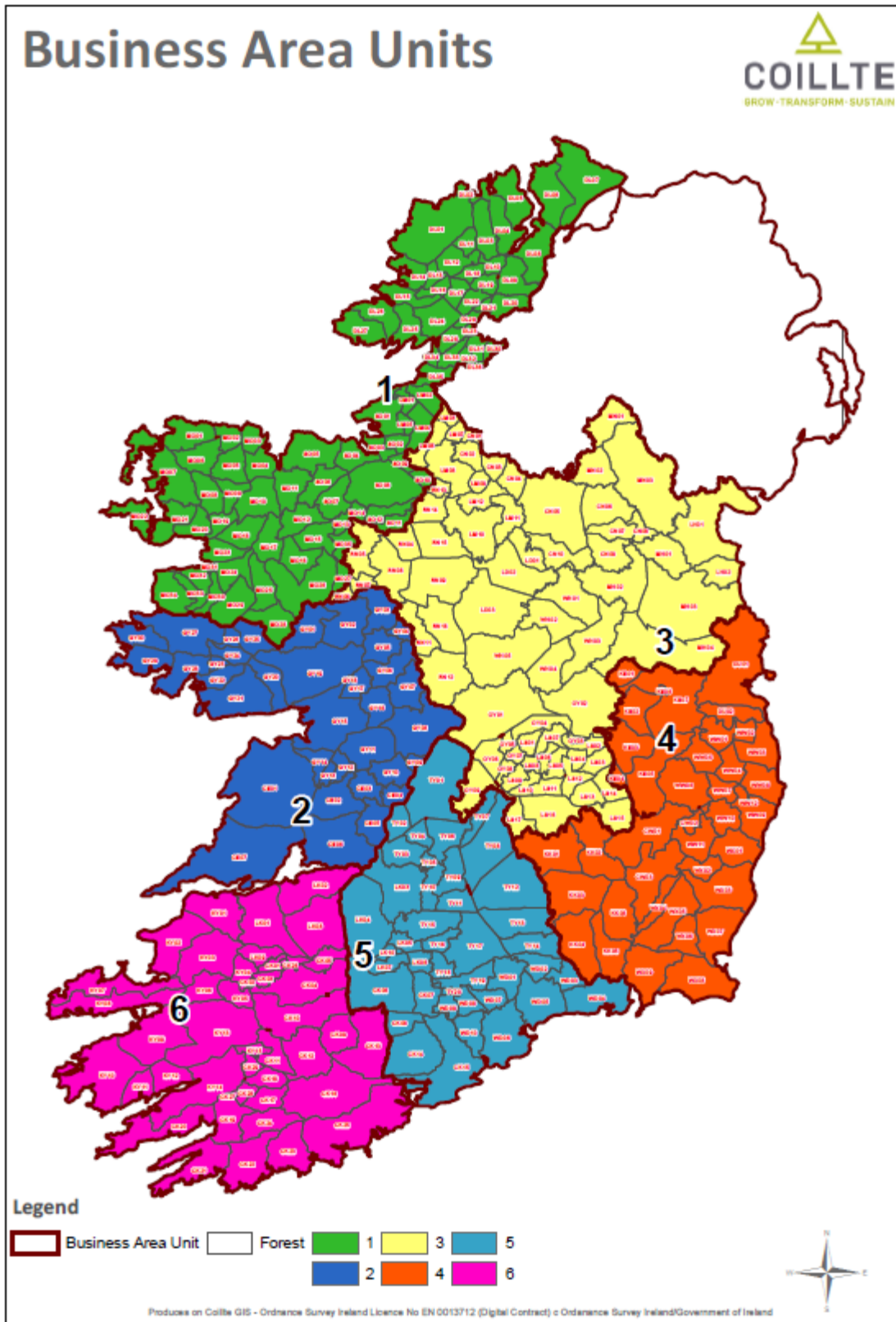
- Surveillance of fire
- Transportation of staff and equipment
- Fire fighting

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

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

1.6 Coillte BAUs

Coillte’s estate is divided into eight Business Area Units (BAUs).



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

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

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

1.7 Summary on the Various Levels of Coillte Forest Management Planning

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

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

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

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

2. South East Leinster BAU

2.1 The South East Leinster BAU

All BAUs play important roles in achieving Coillte targets and objectives. The South East Leinster BAU of Coillte Forest encompasses the entire counties of Kilkenny, Kildare, Dublin, Wicklow, Carlow and Wexford. It covers 1,003,205 Ha of Ireland. Within this area, Coillte owns 59,730 Ha (5.96%) with well over 90% of which is forested with the remainder mostly open moorland, marsh and lakes.

Large population centres include the suburbs of South Dublin (including Tallaght, Rathfarnham and Dalkey), the coastal areas of Bray, Greystones, Wicklow, Arklow and Wexford which have high population centres, while in Kildare, Newbridge and Naas are the main population centres and Blessington, Carlow and Baltinglass dominate the western area of the BAU with finally Kilkenny, New Ross, Gorey and Enniscorthy in the southern geographic area. The map below shows the major towns and roadways in the South East Leinster BAU.

The climate for forestry operations is suitable, with moderate rainfall and relatively good ground conditions. The soil types in the BAU are quite fertile and assist in the growth of highly productive forestry.

2.2 Forests and Forest Products in the South East Leinster BAU

A map of Coillte's Forests in the South East Leinster BAU can be viewed in **Appendix VI**.

During the 2016-2020 period, the BAU produced approximately 1.9 million cubic metres of wood (2020 figure estimates). This timber was primarily sold to Murray Timber Products primarily in Ballon Co. Carlow, Glennon Brothers in Fermoy, Eastlog in Aughrim, SmartPly in Waterford, Medite in Clonmel, Coolrain in Coolrain and Laois in Portlaoise. Many other smaller mills buy timber for example Glenwood, Greenwood, Michael Grace, Leitrim sawmills and Griffith stakes.

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

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 153 farm partnerships within the BAU. This number is not expected to increase in the lifetime of this plan, as we are no longer engaged in this area. We will continue to support our existing partners.

2.3 Community, Recreation and Tourism Facilities in the South East Leinster BAU

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

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

Dublin Mountains Partnership (DMP):***Dublin Mountains Partnership (DMP)***

The DMP was officially launched in October 2008 and a recreation manager has been in place since January 2009. All six partners (Coillte, Dún Laoghaire-Rathdown County Council, Dublin Mountains Initiative, National Parks & Wildlife Service, South Dublin County Council and Dublin City Council) are highly committed to the work of the DMP and funding is in place to continue the excellent progress into the future. Over the last number of years the partnership has undertaken and completed a number of projects to improve recreation, manage environmentally sensitive sites and improve awareness of forest biodiversity. These include:

- Maintaining and upgrading the Dublin Mountains Way,
- Installing electronic gates in the Hell Fire and Barnaslingan car parks,
- Master plan for the Mountain bike Trails in Tiknock,
- Dublin Mountains Way promotional brochure produced, Volunteer and community involvement through the Volunteer ranger service and the consultative forum.

The DMP have supported the Coillte Nature Dublin Mountains Makeover plans, promoting recreation in seven forest properties which have exceptionally high visitor numbers. The forests will have areas managed through Continuous Forest Cover (CCF) and conversion to native woodlands through clearfell and replanting of native tree species.

The Wicklow Way Partnership (WWP):

The WWP was set up in 2011 and all six partners (Coillte, Wicklow County Council, Mountain Meitheal, County Wicklow Partnership, National Parks and Wildlife Service and the DMP) are highly committed to enhancing, upgrading and maintaining the Wicklow Way to the highest standard. The partnership has completed a number of re-routes that has enabled it to take sections off road by utilising Coillte and NPWS lands.

The Wicklow Outdoor Recreation Committee (WORC):

The committee consists of Coillte, Wicklow County Council, County Wicklow Partnership, Fáilte Ireland, Wicklow Tourism, Wicklow Uplands Council, National Park & Wildlife Service and Wicklow IFA. The five main objectives of the Wicklow Outdoor Strategy are to:

- Develop an integrated outdoor recreation management,
- Improve opportunities and facilities for sustainable outdoor recreation,
- Support conservation through outdoor recreation,
- Promote, educate and raise awareness,
- Stimulate outdoor recreation tourism and entrepreneurship.

Coillte are members of both the Wicklow Way Partnership and St. Kevin's Way Partnership with the WORC group. The BAU has a high recreational usage with a number of National Way-marked Ways traversing Coillte property within the BAU. These include sections of The Wicklow Way, St. Kevin's Way, The South Leinster Way and The Dublin Mountains Way.

Over 70 kilometres of the WW and St. Kevin's pass through a significant number of properties in the BAU. An annual maintenance plan is agreed with the WORC group members to improve the trails.

At present, we are working with South Dublin County Council to prepare a feasibility study for a recreational project in the Hell Fire Massey's area of South Dublin.

Coillte has also developed a number of trails in conjunction with local communities and other agencies. An example of this would be the NeighbourWood Scheme walking in Baltinglass. Further examples are rerouting the Spinc Walk in Glendalough and planned construction of a pedestrian bridge across the Avonmore River to link Ballygannon to the Avonmore Way.

There are two highly utilised forest amenity parks located in the geographical area covered by the BAU, Donadea Forest Park located just outside Clane in Kildare and Avondale House and Forest Park located just outside Rathdrum in Wicklow which is being re-developed into a state-of-the-art visitor destination through our partnership with Failte Ireland.

In total €8 million will be invested in phase 1 of the re-development of Avondale Forest Park 'A Place for Visionaries', which is supported by Wicklow County Council and is set to create a major boost for Ireland's tourism industry

There will also be a state-of-the-art visitor centre on site that will offer a café and restaurant, before leading to Coillte's 'Evolution of Forestry' installation and a breath-taking Tree Top walkway providing 360-degree views of the canopy and Avonmore River valley.

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

This BAU has 42 designated areas for recreational activity, and these are detailed on the Coillte website <http://www.coillte.ie/our-forests/attractions/>

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

2.4 Cultural and Archaeological Heritage in the South East Leinster BAU

Coillte is aware of 305 archaeological sites and sites of cultural significance in its landholdings in the South East Leinster BAU. These monuments include megalithic tombs of different kinds, cashels and other enclosures and crannogs. A summary of archaeological sites in the BAU is provided in [Appendix I](#).

With support and advice from the NPWS, 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 19th and early 20th 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; Tintern in Wexford and Camenabologue property in Glenmalure Forest where there is a link track between Glenmalure and Glen of Imall and has both cultural and historical significance dating back to pre-1798 times and is protected during forest operations. An old Sitka spruce tree on Stafford's Avenue, Shelton Property is reputed to be the second highest tree in Ireland, this tree is protected. Coillte will identify, protect and record all new items of heritage which are discovered on its lands.

2.5 Biodiversity and High Conservation Value Forests (HCVF) Within the South East Leinster BAU

Habitats and features of biodiversity value on the Coillte estate are protected during forest operations.

The table below shows that approx. 10,858 ha of Coillte land in the South East BAU is protected during operations or enhanced to increase its biodiversity value. This equates to approximately 18% of all Coillte land in the BAU.

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

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

Bio Ref	Description	Area (ha)
Biodiversity Areas	Habitats that have particular value for nature or biodiversity.	8,820
Biodiversity Features	Small features (usually <2ha) that add biodiversity value to the forest stand, protected during forest operations	745
Riparian Buffer Strips	Strips of land that adjoin streams, rivers and lakes, and are managed for their protection.	1,293

(*Overlap occurs between categories)

Biodiversity Areas

Biodiversity areas are essentially habitats of nature conservation value that occur on the Coillte estate. They vary widely in terms of the habitat type present and in terms of their ecological value.

Coillte began the process of identifying and mapping habitats of nature conservation value on the estate in 2000. During 2001-2005, freelance ecologists were commissioned to complete this work.

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

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

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

Some biodiversity areas have very high ecological value and are significant at national or international level, while others are of moderate value and are significant at a more local level.

Each year, the sites of highest biodiversity value are targeted for monitoring and management activities. These sites are identified on a rolling programme each year.

Biodiversity Features

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

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

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

Riparian Buffer Strips

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

The purpose of buffer strips is to protect watercourses from any damage that may arise during forest operations. Conifer trees that were planted in riparian buffer strips in the long-distant past (when

forestry policy was were very different to today) are removed and the strip is either left open to revegetate naturally. Sometimes, clumps of native broadleaves are manually planted in the buffer strip.

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

HCVF

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

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

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

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

All management operations in HCVF areas are designed to maintain and/or enhance the designated conservation value and operations are further managed using the precautionary principle.

The table below shows statutory designated areas and HCVF in the South East BAU. Areas shown are in hectares (Ha). Note

Designation	Area (ha on Coillte lands)
HCVF	5,418
NHA* – Natural Heritage Area	63
SAC* - Special Area of Conservation	1,997
SPA* – Special Protection Area	2,363
Nature Reserve	466
pNHA	2,287

*** to be filled in**

2.6 Species and Habitats in the South East Leinster BAU

The following rare and/or protected species are known to be present in the BAU. The red kite, red squirrel, otter, merlin, peregrine falcon, wood warbler, nightjar, little egret, red grouse, woodpecker, a number of bat species, fresh water pearl mussel, greater broomrape, pine martin, badger and the narrow-leaved helleborine (see [Appendix II](#) for list of examples).

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.

2010 coincided with the successful introduction and breeding of the red kite. In addition, further populations of the fresh water pearl mussel have been identified and as a consequence Coillte have changed the procedures being used in these areas in order to ensure the continued existence of populations.

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

2.7 Invasive Species

Within the BAU there are a number of species that are not native to Ireland and which are capable of having a negative effect on native biodiversity. Most notable, from a Coillte point of view, are Rhododendron and to a lesser extent laurel which are a significant issue in some properties. Other species of concern include Japanese Knotweed and giant hogweed. 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 South East Leinster BAU

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 Kilkenny, Kildare, Dublin, Wicklow, Carlow and Wexford, Coillte has a responsibility to ensure that its actions do not negatively impact on water quality. The main reservoirs for Dublin city and suburbs are located in County Wicklow. The headwaters of many streams and rivers feeding these reservoirs rise in Coillte property. Within the BAU the following are the most significant issues relating to water:

- Presence of naturally acidic sensitive streams and rivers due to underlying bedrock of granite and schist,
- Water abstraction for domestic and industrial use by Local Authorities and Group Water Schemes, such as Roundwood (Vartry) reservoir,
- Presence of important salmonoid rivers, such as the Dargle River,
- Presence of the fresh water pearl mussel in the Slaney River catchment.

The main rivers in the BAU are the Liffey, Dodder, Tolka, Avonbeg, Avonmore, Vartry, Slaney, Barrow, Nore & Suir. The rivers and lakes of the area support important salmon fisheries and this is also important to the local economy. There are also associated freshwater pearl mussel populations within some of these fisheries.

Furthermore, the BAU falls within the National River Basin and covers 9 river catchments either

partially or completely.

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

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

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

2.9 Forest Management Issues

Coillte's South East Leinster BAU faces a number of issues in relation to managing its forests effectively for production and for their recreational and social benefits. During the period 2016 to 2020 issues have included:

- Security; Coillte is at the risk of major losses through theft, property, vandalism and crop damage. In order to minimise this loss the BAU has commenced the implementation of the Company's security policy, this involves drawing up security plans,
- Litter and waste dumping; The majority of illegal dumping of domestic waste occurs where forests adjoin public roads and at forest entrances. The problem is increased in rural and remote areas but in close proximity to large urban areas. See section on PURE which outlines some of the work undertaken,
- Deer poaching; The increased level of poaching in the recent period has put greater emphasis on security. Coillte in conjunction with the NPWS and An Garda Siochana try to minimise the extent of the problem,
- Illegal use of motorized 2 and 4 wheeled vehicles and inappropriate recreation, anti-social behaviour: Coillte utilise the most appropriate methods of security including the erection of cameras in order to reduce this problem but also to bring about prosecutions.

Coillte implemented by-laws for access to and use of Coillte managed lands. Recreation sites where there are ongoing issues such as illegal access on motorised vehicles, dumping, anti-social behaviour etc. 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.

Coillte staff in BAU 4 have worked with community groups such as Friends of Glenart to highlight issues and their impact to community groups, Gardai and the general public.

PURE

The PURE project is a partnership project and the first of its kind in Ireland which incorporates statutory and non-statutory organisations, including; **Wicklow County Council, Dun Laoghaire Rathdown County Council, South Dublin County Council, Coillte, National Parks & Wildlife Service**, and the **Wicklow Uplands Council**. Funded by **The Department of Environment Community and Local Government** PURE was established to combat illegal dumping/fly-tipping in the Wicklow/Dublin Uplands. The project was officially launched in September 2006.

Since the establishment of PURE, the project has removed over 3,400 tonnes of illegal dumping from the landscape, a large proportion collected from Coillte properties. Invariably, many of these Coillte sites are located in some of the most beautiful, scenic, and frequented areas of the upland region. These sites also serve as amenity areas located on the tourist route of the Wicklow/Dublin Mountains.

PURE collaborate with Coillte Forestry Managers, Local Authorities, and their individual staff members, to insure a fast response to reports of dumping on Coillte Land and also insure a fast removal of this dumping.

PURE is the first project of its kind in Ireland to record all incidents of illegal dumping by GPS. This information is then transferred to a GIS data base system which provides comprehensive information on; location of dumping, land owner, type of waste dumped, and the amount of dumping located at the site.

The GPS unit also enables the user to take a photograph of the site. Since the introduction of the GPS/GIS recording system in 2008, PURE have built up a base-line data on all dumping sites related to Coillte properties in the Wicklow, South Dublin and Dun-Laoghaire areas.

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.

Coillte will continue to support PURE and will assist the project in its Evaluation and Submission of Extension, to the Department of Environment Community and Local Government (DECLG), for PURE 5, which is planned to commence in mid-2016.

The Pure Mile was developed in 2010 to foster a greater appreciation and awareness of our country roadscapes by rewarding and acknowledging local community efforts. The competition encourages communities and groups living in rural areas to adopt a mile stretch of road (approx. 1.6 km), and keep this area litter/rubbish free. Over 2,500 volunteers now help keep 500 miles clean through this popular initiative.

2.9.1 Deer Management

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

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

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

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

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

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

Coillte's summary deer management policy can be viewed here **Deer Management Policy**. As part of planned work for 2021, Coillte's Deer Oversight Group will review and update our current deer management policy and all supporting documentation.

3. The South East Leinster BAU Five Year Forest Plan

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

3.1 Vision

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

This vision includes:

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

3.2 The Forest Resource and the Timber Business

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

The Coillte estate

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

Key Objective 1

In the South East Leinster BAU, Coillte aims to produce approximately 2,566,000 cubic metres of wood from its forests between 2021 and 2025.

2,037,000m³ of this will be provided through felling and 529,000m³ will be achieved through thinning.

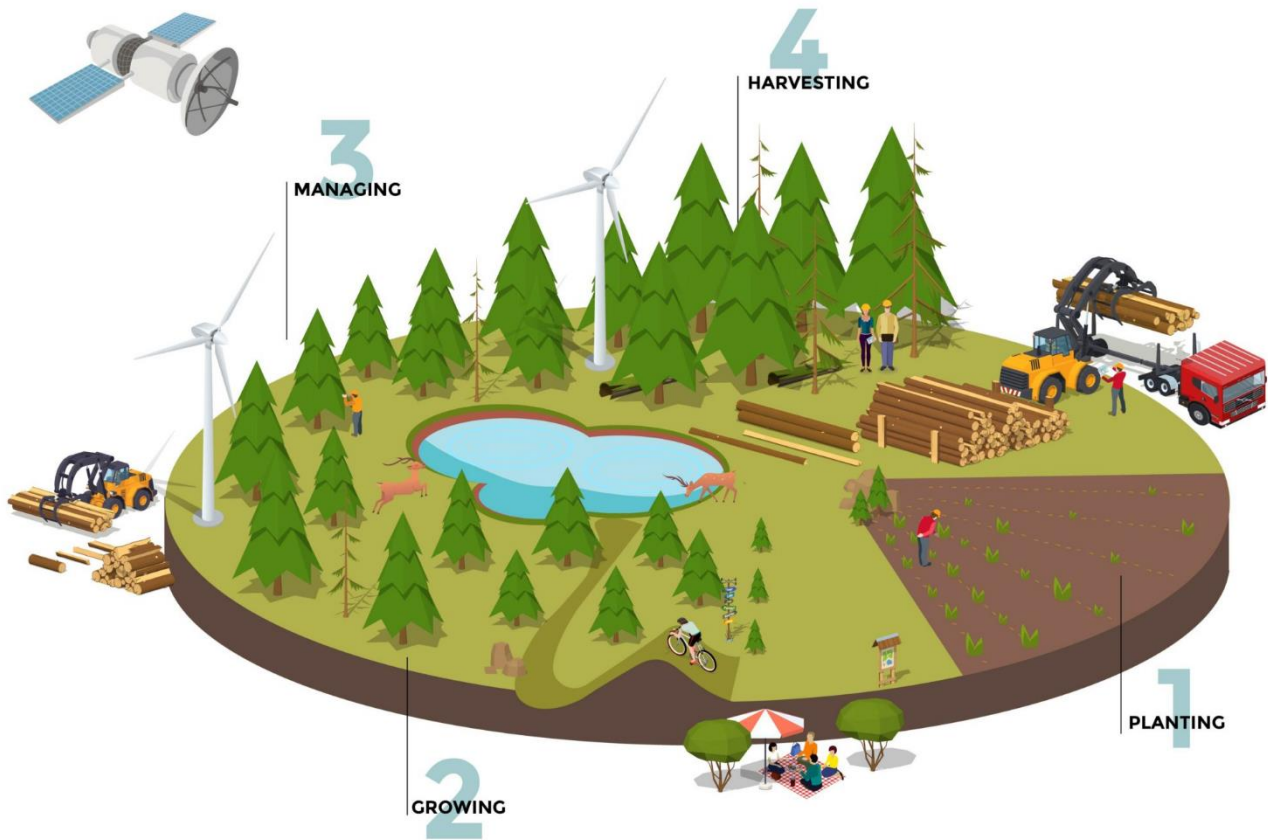


Figure 1: The Forest Cycle

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 characterized by the establishment of new forest plantations. The extent of clear felling annually is strictly controlled both externally and internally. Externally, the extent of annual clear felling is subject to statutory control by the Forest Service. Internally, control is exercised by the Coillte policy of 'Sustained Yield'. Sustained yield allows our forests to grow and be harvested at a level that is capable of providing a continuous supply of timber for current and future generations. Coillte has introduced a number of Low Impact Silvicultural Systems (LISS) which will apply to some forests in the area. The clear fell system will, however, remain the dominant silvicultural system in the BAU during the plan period. This involves the removal of all marketable trees from an area at the end of the rotation (usually at between 35 to 45 years of age). Due to the poor fertility and the exposed and unstable nature of our sites there is very little scope for alternative systems that remove mature trees more gradually. At clearfell time considerable effort is now put into adjusting felling coupe size and shape to satisfy both environmental and landscape design purposes. Low Impact Silvicultural Systems (LISS) such as 'Small Coupe Felling', 'Change to Broadleaf' and 'Continuous Cover Forestry' are in use in the BAU and it is intended to expand this level where possible during the plan period.
- **Thinning** is also a natural part of forest management and it involves staged removals of a proportion of trees in a forest over a rotation, and it is a necessary part of standard forestry practice worldwide. Thinning improves the quality of the forest by regulating the space and light provided to trees as they grow. In line with international best practices, Coillte aims to thin where possible all forests to maximise the quality and volume returns from the estate. Thinning

will only occur where the practice can be sustained, namely in forests with no stability threat from high winds. High winds and exposure in the BAU is a limiting factor to thinning and consequently thinning is effectively concentrated in certain areas of the BAU where it is not as exposed and deemed to be more stable. Historically, because of stability concerns, there is limited standard thinning prescriptions used in this BAU with most thinning events having 2 or 3 interventions. The experience in the BAU to date is that thinning interventions of 3 or more often result in wind blow and are therefore not recommended in certain areas of the BAU.

All felling is controlled by the Forest Service which issues felling licences as appropriate under the Revised 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; their recommendations are then fully considered. BAU outlines a list, maintained on the Coillte website, of the clearfell and regeneration plans for the following year and notifies stakeholders annually. In addition, Coillte provides a Webmap which is accessible by the public from the Coillte website which shows indicative forest areas where harvesting will occur during the five year plan.

New planting and replanting

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

Key Objective 2

In the South East Leinster BAU, Coillte aims to replant approximately 8,275 hectares by 2025.

Forest Roads

Forest Roads are an essential element of forest infrastructure. They provide access for management, harvesting and transport of timber and enhance the recreational potential of forests. A number of kilometres of new road are constructed each year in the South East Leinster BAU and there is also the need for maintenance of the existing road network. The road network in the BAU is substantial. There is little requirement for any major expansion of new road over the next five years. Coillte hopes to reduce the road density down to 18m/ha in line with Company policy, however due to topographic issues - mountainous areas invariably require more roading, this figure will not be achieved in this BAU. Consultation is undertaken with local authorities in relation to the movement of timber on public roads. Each harvest site map shows designated haulage routes which have been agreed with local authorities. The priority for the road infrastructure over the duration of this plan is to;

- construct 66 km of new roads in our forests,
- maintain the existing road infrastructure,
- extend spur roads where necessary to access timber stands due for harvesting in the period of the plan,
- develop road access to areas that are currently inaccessible.

Key Objective 3

In the South East Leinster BAU, Coillte aims to construct 66 km of new forest roads by 2025.

Factors affecting timber supply

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

- **Accessing timber crops** can be challenging with both internal (right-of-way issues, poor internal access) and external (right-of-way issues, the state and nature of county council roads/bridges etc.). To address the access issue a list of all difficult areas is currently compiled and these will be prioritised on the basis of timber supply and a plan put in place to address these issues by assigning relevant personnel. The BAU will consider the use of partnerships to help resolve/contribute to access difficulties on a site by site basis.
- **Meeting increasingly challenging environmental standards** requires Coillte to review its practices and assess the risks on a regular basis. Coillte has achieved sustainable forest management certification and is committed to ensure that there is continual professional development and refresher training for all staff, personnel and contractors to ensure a high environmental awareness and work standard is maintained. This will incorporate a wide range of training days and courses on all environmental issues and continued co-operation with all statutory stakeholders.
- The provision of a harvesting **infrastructure** that can respond to the environmental challenges will require ongoing training and monitoring of contractors and engaging in all relevant updates on developments in harvesting technology and machine capabilities. This is seen as a central requirement for all contractors wishing to operate in the South East Leinster BAU.
- Restrictions of carrying out operations in for example **Hen Harrier and merlin SPA's** within the nesting period.
- The **proportion of low production forests** in the South East Leinster BAU potentially could be an issue in meeting production targets Historically lands were planted in the 60's and 70's when there was a national push to establish forestry. Some of the lands planted during these periods were of a very poor quality and should in reality not have been planted. This has resulted in the production of poor quality timber with low productivity. There are some areas of this type planted in the BAU but the greater majority of these lands would be planted in the west of the country.
- Sometimes the **popularity of forests for recreation** affects our capacity to fell timber.

Farm partnerships

In relation to existing farm partnerships Coillte will:

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

Key Objective 4

In the South East Leinster BAU, Coillte aims to manages its 153 Farm Partnerships

Overall production targets in the South East Leinster BAU 2021-2025

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

South East Leinster BAU main Coillte production targets 2021 – 2025³

Annual Totals					
Year	2021	2022	2023	2024	2025
Establishment					
Planting (ha)	1650	1650	1875	1900	1200
Harvesting Programme					
Harvest categories (000m3)					
Thinnings	103	108	108	108	102
Regeneration felling (P,C,W) felling	404	407	409	405	412
Total	507	515	517	513	514
Felling area (ha)	824	872	878	857	820
Roading Programme					
Roading (km)					
New	16	13	13	12	12
Upgrading	11	11	11	11	11
Total	27	24	24	23	23

³ 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

3.3.1 Renewable Energy Projects

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

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

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

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

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

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

Proposed Coillte / Co Development projects on Coillte estate in BAU 4 – correct as at January 2021			
Name of Project	Location	Status	No. of wind turbines/(MW)
Croaghaun	Carlow	Planning submitted	7
Castlebanny	Kilkenny	Planning submitted	21
Total			28

Proposed third party planning permitted wind turbines on Coillte estate - correct as at January 2021			
Name of Wind Farm	Location	Status	No. of wind turbines
Pinewoods	Castlecomer Forest, Co. Kilkenny	Planning permitted	5
Ballymanus	Aughrim Forest, Co. Wicklow	Planning permitted	5
Kyle	Danesfort Forest, Co. Kilkenny	Planning permitted	1

Drehid	Hortland Forest, Co. Kildare	Planning permitted	4
Lisheen 3	Lisdowney Forest. Co. Kilkenny	Planning permitted	2
Total			17

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

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

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

Key Objective 5

In the South East BAU, Coillte aims to develop/facilitate the development of 7 renewable energy projects in the period to 2025 and will continue to investigate and pursue other opportunities in this area during that period

Biomass Production

Coillte will consider renewable heat supply opportunities as they arise.

3.3.2 Land Sales and Development

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

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

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

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

3.3.3 Licensed Use of Coillte Lands

Coillte allows permissive access to all of its lands for walking, except those areas closed from time to time for operational purposes. Cycling is allowed on trails and in areas specifically designated for cycling. And all other recreational activities are managed under a

licencing process. These activities can be undertaken groups or individuals for both recreational purposes and as a commercial activity. Examples of such activities are mountain-bike events, shooting, pony trekking, off-road driving, orienteering and others as requested. Fees may be applied to licenced events and activities.

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

3.3.3.1 Licensed Hunting

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

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

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

3.4 Community, Recreation and Tourism Proposals

Coillte's proposed recreation priorities for the South East Leinster BAU between 2021 and 2025 include:

- engaging with local community groups and where possible agreeing partnership arrangements for the maintenance and enhancement of existing facilities and possible development of new ones.
- managing and maintaining all existing recreation sites including waymarked ways to the highest standards.
- managing unauthorised usage of the recreation infrastructure in line with best management practice and security policy.
- sourcing funding and developing new infrastructure including 'access for all' on a based on needs identified in conjunction with stakeholders and funding agencies, and to enhance local tourism potential.

Key Objective 6

In the South East Leinster 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 recreation sites.**
- **Continue to support the aims of the Dublin Mountains Partnership.**
- **Continue to support the aims of the Wicklow Way Partnership.**
- **Work in partnership with the Wicklow Outdoor Recreation Committee to develop recreational facilities in the Wicklow area.**

3.5 Cultural Heritage and Archaeology Measures in the South East Leinster 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 such as that at Donadea Forest Park, Tintern, Ballygannon Millennium Forest and Glanmore for example 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 25% 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 South East Leinster BAU, Coillte aims to maintain and enhance the current level of broadleaves in the BAU, managed for biodiversity.

3.6.3 Biodiversity

At present 18% of the Coillte land area in the South East Leinster BAU is designated and managed for biodiversity.

- **Retention of Old Woodland Sites (OWS)** which have supported woodland cover since at least 1830 and which have particular importance as reservoirs of native biodiversity. The BAU has 6,166 ha identified as old woodland over numerous different locations. This represents 10% of the Coillte land in the BAU and 24% of the old woodland identified on Coillte's estate nationally. The management of these areas will be in line with Coillte's old woodland sites policy which includes assessing the value of any OWS before felling and high impact operations for designation as high nature value forests, and reviewing all sites that received a good rating from ecologists in the biodiversity survey in 2001-2005 for HCVF potential.

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

- **Continuing the introduction of riparian buffer zones** as part of the planning process along all permanent watercourses, typically these will consist of a 20m unplanted strip on either side of the watercourse and then broadleaf planting for 10m-20m behind the bare strip. Aquatic buffer zones are established primarily for water protection purposes, and not for timber production.

- **long term retention** of some stands of timber is practiced to enhance environmental, landscape and social benefits of our holdings. In the South East Leinster BAU the target for the period is to set aside 1% of the gross area of the BAU for long term retention. Scots pine is the only conifer tree regarded as a native species and it is our policy to retain them long term where it's possible and safe to do so.

- **Retaining dead wood** in all forests managed by Coillte, consistent with health and safety requirements. Ecologically, dead trees are as important as live ones in natural forest ecosystems. They are important structural elements in forest, providing a wide range of decay classes, which support a wide range of invertebrate and vertebrate animals and epiphytic and saprophytic plants and fungi. Dead and decaying wood can provide habitats for more than one-fifth of the woodland fauna. In the UK, 34% of scarce invertebrates depend upon dead wood. Dead and decaying wood also influences the flow rate and organic debris in forest streams and rivers. The intention is that the concentration of deadwood will be the highest in semi-natural woodlands (old woodland

sites and broadleaved stands) where large trees will be allowed to grow old and die off on site. On all sites being surveyed by inventory staff, deadwood stems are being recorded.

- Carrying out **survey and monitoring** of important species and habitats, and of water quality to ensure that we are making progress.
- Participating in **biodiversity action plans** for priority species and habitats in partnership with others.
- Long term **water quality improvement** through changes in practice and the reduction in use of chemicals
- **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 South East Leinster BAU, Coillte aims to review, manage and maintain the areas of biodiversity.

4. Sustainable Forest Management Policies and Proposals

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

4.1 Using Forest Design

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

A number of factors will be addressed when drawing up a landscape plan. Felling coupe size is one of the most important of these. As a general rule felling coupes adhere to Forest Service regulatory guidelines, at the time of publishing is a maximum of 25ha. To this extent, BAU team members have identified coupes which were greater than 25ha and redesigned/restructured these areas as necessary. There may be situations where felling coupes of greater than 25ha will be necessary, and these will be treated on an individual basis, with the appropriate assessment and consultation process carried out prior to any felling taking place. Other factors and constraints which need to be considered are; age and structural diversity, limited species selection, soil type, windthrow risk, elevation, deer abundance and buffer zone management. These factors are by no means exhaustive. For example, in recent times the disease *Phytophthora ramorum* has spread in certain locations in Ireland. The disease can kill Larch species, which was always considered a valuable species in terms of providing colour in a landscape. It will have an impact on species selection when planning landscape design.

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

4.2 Water Protection

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

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

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

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

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

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

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

A long term forest ecosystem monitoring plot, part of a national and EU network of tree health plots, has been located in Roundwood Forest since the early 1990s. Ongoing intensive surveys of forest health and the environmental factors thought to predispose trees to damage from biotic and abiotic sources is conducted and entails visual assessments of tree health with a host of other parameters such as soil and soil water surveys, air and rain water quality, tree deposition water quality, tree growth data, tree foliar chemistry, ground vegetation composition and meteorological data. The results are then analysed to determine which factors impact most significantly on forest health nationally and across Europe. This study is conducted in conjunction with the Forest Ecosystem Research Group of University College Dublin and coordinated internationally by the International Cooperative Programme Forests (ICP Forests) in collaboration with the Directorate- General for Environment of the European Commission.

Arising from the environmental sensitivity of the Wicklow Uplands, the BAU has facilitated over the last 10 years a number nationally funded Forests & Water Projects, such as HydroFor (led by UCD in conjunction with UCC & NUIG) and CROW (involving UCD and the Woodlands of Ireland). Ongoing studies include the UCD led, HydroSed project (2019 to 2023) will be looking at flow changes and sediment release from a range of forest operations and includes assessing the efficacy and performance of commonly used silt mitigation measures. The findings from this and other national research projects will test the efficacy of current best forest practices and guidance and suggest where they can be updated to take account of changes in forest practice over the last 20 years. The BAU are also supporting a short-term EPA lead project called REFORM (2019-2021) assessing how land use practices are influencing naturally acidic waters in the Wicklow Uplands..

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

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

4.3 Reducing Use of Chemicals

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

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

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

Fertilisers

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

4.4 Sharing our plans and consultation

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

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

Coillte's stakeholder engagement process on our Five Year Forest Plans

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

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

Some of the topics covered in our forest plans include the following: commercial planning, timber harvesting, timber sales, community facilities and benefits, environmental enhancement measures etc.

During the consultation process on these forest plans, Coillte actively engages with stakeholders, in the following ways:

- National newspaper adverts
- Regional newspaper adverts
- Consultation via Coillte's website
- Emails or letters to our listed stakeholders
- BAU annual consultation meetings
- Forest office meetings (by appointment) which allow further feedback

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

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

Incorporation of results of stakeholder engagement in this BAU

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

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

4.5 Monitoring and Evaluation

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

Appendix I - Summary of Archaeological Sites in South East Leinster BAU

BAU	Type of Monument	No. In BAU	SMRS Number *
B4	Armorial plaque	1	KD009-015003-
B4	Barrow - ring-barrow	5	DU024-005003-, DU024-007----, DU024-008----, DU024-010----, WX006-083004-
B4	Barrow - unclassified	2	DU024-031----, WX029-034----
B4	Battlefield	1	WX037-091----
B4	Bridge	1	KK014-014----
B4	Building	8	KK029-033002-, KK029-033003-, KK029-033004-, KK029-033005-, KK029-033006-, KK029-033007-, KK031-030005-, WI016-009006-
B4	Bullaun stone	1	WI024-026----
B4	Burial	2	WI029-026----, WX042-007002-
B4	Burial ground	1	WI016-006----
B4	Cairn - burial cairn	2	DU025-023001-, WX042-007001-
B4	Cairn - unclassified	13	DU021-047----, DU025-007003-, KK033-015----, KK040-019----, WI010-017----, WI016-009004-, WI016-009005-, WI029-025----, WI031-028----, WI042-032----, WX007-014----, WX016-013----, WX042-075----
B4	Castle - ringwork	1	WX026-012001-
B4	Castle - tower house	3	KD009-015001-, KK007-001001-, KK033-027001-
B4	Castle - unclassified	2	KK005-021----, KK031-028----
B4	Charcoal-making site	22	CW019-032----, WI023-018001-, WI023-018002-, WI023-018003-, WI023-018004-, WI023-018005-, WI023-018006-, WI023-018028-, WI023-018029-, WI023-018030-, WI023-018031-, WI023-018032-, WI023-018033-, WI023-018034-, WI023-018035-, WI023-018036-, WI023-018037-, WI023-018038-, WI023-018039-, WI023-018040-, WI023-029010-, WI024-034----
B4	Children's burial ground	1	WI016-009003-
B4	Church	5	KK022-019001-, WI013-052----, WI016-009----, WX026-019001-, WX036-012001-
B4	Cist	1	DU025-007002-
B4	Clochan	1	WI015-053----
B4	Cross - Wayside cross	1	WI023-022----
B4	Cross-inscribed pillar	1	WI016-005----
B4	Cross-inscribed stone	2	DU025-082----, WX036-012003-
B4	Cross-slab	1	WI005-113----
B4	Designed landscape - folly	1	KK033-027003-
B4	Earthwork	2	CW012-036----, KK007-001002-
B4	Ecclesiastical enclosure	5	KD018-014----, KK022-019002-, WI016-009002-, WI023-034----, WX036-012004-

B4	Enclosure	61	CW023-005----, CW026-009----, DU025-015----, DU025-020001-, DU025-020002-, DU025-021002-, DU025-026----, DU025-027001-, DU025-027002-, DU025-028001-, DU025-028003-, KK005-006----, KK005-018----, KK008-038----, KK008-086001-, KK008-086002-, KK008-105----, KK013-034----, KK013-131----, KK024-076----, KK027-082----, KK028-015----, KK028-033----, KK033-048----, KK035-103----, KK039-006----, WI005-040----, WI005-041001-, WI005-115001-, WI005-116----, WI005-117----, WI005-118----, WI007-037001-, WI007-037002-, WI012-015----, WI012-016----, WI012-017----, WI012-033----, WI012-034----, WI018-003----, WI022-002----, WI022-003----, WI024-002----, WI028-018----, WI029-023----, WI030-021----, WI031-029----, WI033-004----, WI034-007----, WI035-002----, WI035-003----, WI035-044----, WI038-002----, WI040-003----, WI042-018----, WI043-019----, WI044-010----, WX020-023002-, WX020-023003-, WX020-023004-, WX020-023007-
B4	Font	1	KD009-014006-
B4	Fulacht fia	4	DU026-138----, KK008-143----, KK023-050----, KK032-051----
B4	Graveyard	3	WI016-009001-, WX026-019002-, WX036-012002-
B4	Hillfort	3	WI008-015----, WI013-001----, WI027-010----
B4	House - 17th century	1	WX011-010---
B4	House - 18th/19th century	2	DU025-001003-, KK014-007----
B4	House - fortified house	1	KD009-015002-
B4	House - indeterminate date	5	WX026-012002-, WX026-012003-, WX026-012004-, WX026-012005-, WX026-012006-
B4	Hut site	12	KK029-032002-, KK033-049----, WI005-041002-, WI005-115002-, WI005-115003-, WI006-009----, WI006-010----, WI015-051----, WI015-051001-, WI015-052----, WI027-084----, WX002-040----
B4	Inscribed stone	1	DU025-023002-
B4	Kiln	1	WX007-031----
B4	Mass-rock	1	CW024-001----
B4	Megalithic structure	2	DU024-047003-, WI029-001----
B4	Megalithic tomb - passage tomb	10	DU024-005002-, DU024-034----, DU024-035----, DU024-046----, DU024-047001-, DU024-047002-, DU025-001001-, DU025-001002-, DU025-025----, WI005-092----
B4	Megalithic tomb - portal tomb	1	KK039-044----
B4	Megalithic tomb - wedge tomb	3	DU025-007001-, DU025-022----, KK035-114----
B4	Memorial stone	1	KK014-014001-
B4	Moated site	4	KK029-033001-, WX030-025----, WX036-057----, WX042-001----
B4	Monumental structure	1	WX037-083----
B4	Mound	3	WI006-011----, WI024-035----, WI035-001----

B4	Ogham stone	1	WI022-012----
B4	Redundant record	13	CW023-004----, CW025-008----, KK032-034----, KK035-028----, KK035-039----, WX001-006----, WX002-015----, WX002-020----, WX018-035----, WX018-036----, WX024-060----, WX035-036----, WX035-096----
B4	Ringfort - cashel	7	CW023-006----, CW024-025----, CW026-021----, WI003-009----, WI036-020----, WX002-012----, WX002-060----
B4	Ringfort - rath	23	KK008-001----, KK008-002----, KK010-023----, KK013-039----, KK032-029----, WI003-008----, WI012-014----, WI015-027----, WI015-028----, WI021-018----, WI027-030----, WI039-001----, WI039-027----, WI040-025----, WI042-040----, WI044-006----, WX001-005----, WX002-062----, WX006-030----, WX006-031----, WX007-017----, WX024-027----, WX024-028----
B4	Ringfort - unclassified	5	DU025-028002-, DU025-029001-, DU026-053----, WI007-077----, WI031-013----
B4	Ritual site - holy tree/bush	1	KK032-026----
B4	Ritual site - holy well	8	KD018-015----, KK006-002----, WI013-052001-, WI024-010----, WI034-035----, WX007-013----, WX036-036001-, WX037-003----
B4	Ritual site - holy/saint's stone	1	WX036-036002-
B4	Ritual site - pond	3	WX006-083001-, WX006-083002-, WX006-083003-
B4	Road - class 1 togher	3	KD012-004001-, KD027-001001-, TS036-051----
B4	Road - class 3 togher	2	KK008-151001-, KK008-151002-
B4	Road - road/trackway	2	WI016-009007-, WI017-001----
B4	Road - unclassified togher	1	KK012-081----
B4	Rock art	1	WX002-041----
B4	Rock art (present location)	1	CW024-056----
B4	Round tower	1	KK031-030001-
B4	Settlement cluster	2	WI006-017----, WI027-078003-
B4	Settlement deserted - medieval	1	WI005-009----
B4	Souterrain	1	WX001-008----
B4	Standing stone	7	CW023-006001-, DU025-021001-, WI016-022----, WI022-031----, WI023-035----, WX020-023001-, WX035-079----
B4	Stone circle	1	WI005-005----
B4	Stone row	1	KK033-005----
B4	Structure	2	KK036-040----, WI016-009008-
B4	Urn burial	1	KD037-024----

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

Appendix II - Habitats and Species in South East Leinster BAU

Special habitats in South East Leinster BAU

Main properties	Habitat quality	Management strategy	Management 2021-2025	Issues to be addressed
Upland Blanket Bog (PB2) and Wet Heath (HH3)				
Seahan	Good example of mosaic of upland blanket bog and wet heath.	Ensure that overgrazing and burning do not occur on open upland habitats.	Adhere to ecology report	Annual monitoring
Croghtenclogh	Moderate sized largely intact blanket bog. Associated with riparian salmonid habitat (Riven Dinnin) Possible SAC in future	Retain existing unplanted blanket bog habitat. Increase area of open blanket bog habitat at expense of conifers. Block drains. Follow SAC management guidelines.	Block off drains. Monitor area for water run-off.	Consultation with adjoining land owners re effect of blocked drains to their property.
Raised bog (PB1)				
Saunderscourt	Moderate sized area of native and mixed woodland associated with Annex I estuary and salt marsh habitats. Rare bird breeding site. OWS. SAC / NHA.	Maintain habitat.	Monitor only. Area not to be let for bird / game hunting.	Consultation with OPW.
Rich fen and flush (PF1)				
Foulkscourt	Moderate sized semi-natural habitat. Calcareous fen (annex 1) with rare plants. Associated with turlough and riparian habitat (River Gaule). Small area of wet woodland and conifers.	Retain fen habitat. Restore conifer woodland to WN4. Protect riparian zone.	Monitor through Section 4's and biodiversity management plan.	Adhere to Forest Service guidelines.
Upper salt marsh (CM2)				
Saunderscourt	Moderate sized area of native	Maintain habitat.	Monitor only. Area not to be let	Consultation with OPW.

	and mixed woodland associated with Annex I estuary and salt marsh habitats. Rare bird breeding site. OWS. SAC / NHA.		for bird / game hunting.	
Dry Siliceous Heath (HH1) and Exposed Siliceous Rock (ER1)				
Carrawaystick	Good example of a mosaic of dry heath and siliceous rocky outcrops	Leave as natural reserve	Adhere to ecology report	No issues

Protected or rare species in South East Leinster BAU

Main properties	Habitat quality	Management strategy	Management 2021-2025	Issues to be addressed
Freshwater pearl mussel				
Dereen, Auhavaud, Ballymurphy and Mountain/Aughna brisky, Inchirourke.	All properties within the various catchment areas.	To comply with all guidelines and directives	To comply with all guidelines and directives during any operations in the area	Be aware of current legislation
Bats				
Tintern	Forage site for whiskered bats from nearby Abbey.	Maintain suitable foraging habitat along woodland rides and edge.	Any thinning and clearfell to be carried out in spring or autumn.	Be aware of current legislation.
Beaufield	OWS with buildings. Brown long-eared bats and possibly Natterer's bat present.	Ensure bat access to buildings and comply with bat legislation.	Avoid any work or disturbance on building from May to August.	Be aware of current legislation.
Jenkinstown	Old stone building, ex quern, in yard.	Maintain and protect old stone building.	Monitor and maintain – Protect cultural features during all forest operations through MUSF and standard mitigations.	Be aware of current legislation.
Woodstock	Ice house on Poyntz road.	Maintain and protect Ice House – gate recently erected to protect bat roost.	Monitor and maintain – Protect cultural features during all forest operations	Be aware of current legislation.

			through MUSF and standard mitigations.	
Nightjar				
Ballyvalloo	Presence not confirmed	Nests on ground	Observe for presence of Nightjar	
Little Egret				
Saunderscourt	Moderate sized area of native and mixed woodland associated with Annex 1 estuary and salt marsh habitats. Breeding site – second largest colony in Ireland. OWS. SAC / NHA.	Avoid disturbance by forestry operations during breeding season.	Avoid all forest operations during nesting period. Total ban on all game or deer hunting in Saunderscourt Forest property.	Be aware of current legislation
Otter				
Wilton	Boro River. Sensitive catchment area. OWS.	Maintain riparian habitat.		Adhere to Forest Service guidelines.

Native and Mixed Woodlands in South East Leinster BAU

Main properties	Habitat quality	Management strategy	Management 2021-2025	Issues to be addressed
Oak-birch-holly woodland (WN1) Listed in EU Habitats Directive, Annex II				
Drummin	Extensive area with good WN1 and WN2 woodland. Good flora. SAC/NHA. Rare plants. OWS.	Restore to native woodland.	Normal forest management for next 5 years..	Adhere to water quality guidelines.
Ballyfad	Extensive area with mix of WD1, WN1 and WN2 woodland. Moderately good flora. OWS.	Restore to native woodland.	Retain as natural reserve. Remove any young beech on an on-going basis.	
Killinthomas	Core area (16ha) of good native woodland	Gradual restoration of remaining WD2 (c60 ha) native woodland		
Ballygannon	Extensive mosaic of high quality woodland with Avondale River. SAC/NHA. Millennium woodland site.	Maintain existing woodland types. Increase area of native WN1 woodland.	Retain sessile oak woodland as Natural Reserve.	Retain old Norway spruce as habitat for red squirrel.
Brown's Wood	Moderate sized mixed broadleaf woodland with some oak-birch-holly (WN1). Good flora. OWS.	Restore/increase area of WN1 woodland.	Non-intervention for next 5 years. Monitor for invasive species and remove if necessary.	Monitor through section 4's and biodiversity management plans.
Oak-ash-hazel woodland (WN2) Listed in EU Habitats Directive, Annex II				
Barnadown	Extensive area with mix of WD1, WN1 and WN2 woodland. Moderately good flora. OWS.	Moderate size oak-ash woodland with good natural regeneration overtaking conifers. OWS.	Retain/restore to WN2 woodland.	Remove conifers when thinning.
Camolin	Extensive area of diverse moderate quality woodland types. Millennium woodland. Good native woodland flora. OWS and Park.	Increase area of native WN1 and WN2 woodland..	Thin conifers in favour of natural regeneration of native broadleaves.	

Saunderscourt	Moderate sized area of native and mixed woodland associated with Annex I estuary and salt marsh habitats. Rare bird breeding site ows. SAC/NHA	Restore/maintain area of native woodland. Increase native WN2 woodland.	Coppice some of the Hazel on an on-going basis. Encourage the Ash/Oak.	
Park Wood	Moderate sized area of native woodland and replanted conifers. Good flora and natural regeneration of native broadleaf trees. OWS.	Restore to WN2.	No involvement in the next 5 years. Monitor for exotic species invasion.	
Seskin	Moderate size oak-ash woodland. Adjacent to native woodland at Lackan.	Retain existing oak-ash woodland. Increase native woodland habitat. Remove invasive non-native species.	Removal of invasive species – laurel, and regenerating beech.	Annual monitoring.
Glenmullen	Extensive area of mixed broadleaf and native woodland associated with sensitive catchment area and salmonid habitat (SAC). Good flora.	Retain semi-natural woodland and restore conifers to WN2. Protect riparian habitat.	Remove Douglas Fir in thinning.	Monitor through section 4's and biodiversity management plans.
Wet willow-alder-ash woodland (WN6) Listed in EU Habitats Directive, Annex II				
Loggan Lower	Extensive area of native woodland and conifer woodland associated with wetland. Mineral-rich sedge swamp habitat.	Restore sedge-rich swamp/wetland habitat. Sensitive removal of conifers on wet ground. Block appropriate drains.	Block drains in wet areas. Remove any SS in sedge swamp	Be aware of Forest Service guidelines.
Mixed broad-leaved woodland (WD1)				

Bahana	Extensive area of mixed woodland. OWS. Good flora. NHA. Associated with River Barrow SAC.	Maintain some mixed woodland. Restore native woodland. Protect riparian habitat.	Remove beech periodically	
Camolin	Extensive area of diverse moderate quality woodland types. Millennium woodland. Good native woodland flora. OWS and Park.	Manage OWS as per FS guidelines and ecologists plan		
Massey Estate	Extensive area of mixed woodland. OWS.	Maintain mixed woodland by removal of invasive non-native species.	Removal of invasive species.	Begin removing natural regenerating beech and invasive species..
Browns Wood	Moderate sized mixed broadleaf woodland with some oak-birch-holly (WN1). Good flora, OWS.	Restore increase area of WN1 woodland.	Non-intervention for the next 5 years.	Monitor through section 4's and biodiversity management plan.
Mixed broad-leaved/conifer woodland (WD2)				
Rostygah	Extensive area of good quality mixed woodland. Part NHA.	Increase area of mixed pine/broadleaf woodland. Restore some native woodland.	Work has already commenced in 2010 to increase the area of mixed broadleaf/pine woodland.	Monitor for natural regeneration of oak and other native species.
Mixed conifer Woodland (WD3)				
Ballymanus	Extensive area of good quality mixed woodland types. OWS.	Increase area of native WN1 woodland. Retain Scot's pine. Control deer.	Remove non-native conifers	Annual monitoring for non- native species.
Conifer woodland (WD4)				
Bahana	Extensive area of mixed woodland. OWS. Good flora. NHA. Associated with R. Barrow SAC.	Maintain some mixed woodland. Restore native woodland. Potential NWS. Protect riparian habitat.		

Coonogue	Moderate sized area of conifers. OWS. Part SAC and associated with riparian habitat and sensitive catchment area for pearl mussel.	Establish native woodland (WN1). Protect riparian habitat.	Restock with Oak. Stream to be kept in pristine condition	Adhere to FS guidelines and consult with O.P.W.
Drummin	Extensive area with good WN1 and WN2 woodland. Good flora. SAC/NHA. Rare plants. OWS	Restore to native woodland.	Normal forest operation to be carries out over next 5 years.	Adhere to felling licence requirements.
Camolin	Extensive area of diverse moderate quality woodland types. Millennium woodland. Good native woodland flora. OWS and Park.	Increase area of native WN1 and WN2 woodland.	Thin out conifers and encourage natural regeneration.	
Ballyboy	Extensive area of conifers. OWS. SAC.	Establish oak-birch-holly woodland.	Planned heavy thin of Sitka spruce and larch. Removal of non-native conifers.	Annual monitoring.
Fouls court	Moderate sized semi-natural habitat. Calcareous fen (annex 1) with rare plants. Associated with turlough and riparian habitat (River Gaule). Small area of wet woodland and conifers.	Retain fen habitat. Restore conifer woodland to WN4. Protect riparian zone.	Encourage hardwood regeneration along the 30m riparian corridor.	Adhere to forest service guidelines.

Croghtenclogh	Moderate sized conifer woodland and largely intact blanket bog. Associated with riparian salmonid habitat (River Dinnin). Possible SAC in future	Retain existing unplanted blanket bog habitat. Increase area of open blanket bog habitat at expense of conifers. Block drains. Follow SAC management guidelines. Protect riparian habitat.	Phase out conifers and non-natives over time through harvesting and establishment processes.	Monitor through section 4s and biodiversity management plans.
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Appendix III – Recreation Facilities in the BAU

Location	Description
Clogrennan, Carlow	<ul style="list-style-type: none"> • Layby • 1 National Looped walk • Picnic area
Kilbrannish, Carlow	<ul style="list-style-type: none"> • Car park • 2 National Looped walks • South Leinster Way • Picnic area
Rath Wood, Carlow/Wicklow	<ul style="list-style-type: none"> • Looped Walk • Duck pond • Neighbour Wood Scheme
Barnaslingan, Dublin	<ul style="list-style-type: none"> • Car park with automated gate • 2 Looped walks (one multi access) • Dublin Mountains Way • Permanent orienteering • Wheel-O orienteering • Watchable wildlife
Carrickgollogan, Dublin	<ul style="list-style-type: none"> • Car park • 2 Looped walks • Dublin Mountains Way • Permanent orienteering • Watchable wildlife
Cruagh Wood, Dublin	<ul style="list-style-type: none"> • Car park • Picnic area • Slí na Slainte looped walk • Mountain Access route & loop • Dublin Mountains Way • Watchable wildlife
Hell Fire Club, Dublin	<ul style="list-style-type: none"> • Car park with automated gate • 2 Looped walks • Permanent orienteering • Watchable wildlife
Massy's Estate, Dublin	<ul style="list-style-type: none"> • 2 Looped walks • Permanent orienteering
Slievethoul & Lugg, Dublin	<ul style="list-style-type: none"> • 2 Looped walks • Layby
Tibradden (Pine Forest), Dublin	<ul style="list-style-type: none"> • Car park • Mountain Access walk • Dublin Mountains Way • Wicklow Way • Watchable wildlife • ZipIt Aerial Trails
Kilmashogue, Dublin	<ul style="list-style-type: none"> • Car park • Wicklow Way
Tiknock/Ballyedmonduff, Dublin	<ul style="list-style-type: none"> • Car park • Mountain Access walk • Looped walk • Mountain Bike Trail • Dublin Mountains Way • Wicklow Way • Permanent orienteering • Viewing area • Watchable wildlife

Location	Description
Donadea Forest Park, Kildare	<ul style="list-style-type: none"> • Forest Park • Car park • Picnic areas • 3 looped Walks • Leisure cycling • Permanent orienteering • Café
Moore Abbey, Kildare	<ul style="list-style-type: none"> • Car park • Picnic area • 3 looped Walks
Mullaghreelan Wood, Kildare	<ul style="list-style-type: none"> • Car park • Picnic area • 2 looped Walks
Castlemorris, Kilkenny	<ul style="list-style-type: none"> • Car park • 2 looped walks
Coill na Fhaltaigh, Kilkenny	<ul style="list-style-type: none"> • Car park • 2 looped walks • Millenium forest
Jeninstown, Kilkenny	<ul style="list-style-type: none"> • Car park • 2 looped walks
Woodstock, Kilkenny	<ul style="list-style-type: none"> • Layby • Trails • South Leinster Way • Re-development in partnership with Kilkenny CoCo.
Camolin, Wexford	<ul style="list-style-type: none"> • Car park • Millennium Forest • Forest walks
Carrickbyrne Hill, Wexford	<ul style="list-style-type: none"> • Car park • Picnic area • 3 looped Walks
Coolmelagh, Wexford	<ul style="list-style-type: none"> • Car park • 2 looped walks
Shelmaliere / Forth Mountain, Wexford	<ul style="list-style-type: none"> • Car park • Forest walks
Tintern Abbey, Wexford	<ul style="list-style-type: none"> • Car park • Forest walks • Picnic area
Tara Hill, Wexford	<ul style="list-style-type: none"> • Lay by • Forest walks • Viewing area
Courtown, Wexford	<ul style="list-style-type: none"> • Car Park • Way marked trails
Avoca, Wicklow	<ul style="list-style-type: none"> • Car Park • Looped Walk.
Avondale Forest Park, Wicklow	<ul style="list-style-type: none"> • Forest Park • Car park • Picnic areas • looped Walks • Leisure cycling • Permanent orienteering • Playground • Café
Ballinafunshoge, Wicklow	<ul style="list-style-type: none"> • Car park • Walking trails • Wicklow Way

Location	Description
Ballinastoe, Wicklow	<ul style="list-style-type: none"> • Car park • Walking trails • Wicklow Way • Mountain Bike Trail • Mountain Bike hire & tuition
Ballygannon Wood, Wicklow	<ul style="list-style-type: none"> • Car park • Millennium Forest • 2 looped walks • Picnic area • Jubilee walk
Ballymoyle Hill, Wicklow	<ul style="list-style-type: none"> • Layby • Forest Walks • Views
Cloon / Curtlestown, Wicklow	<ul style="list-style-type: none"> • Car park • Walking trails • Wicklow Way
Crone Woods, Wicklow	<ul style="list-style-type: none"> • Car park • Looped walk • Wicklow Way • Mountain Access
Djouce Woods, Wicklow	<ul style="list-style-type: none"> • Car park • 2 Looped walks • Wicklow Way • Mountain Access
Drumgoff, Wicklow	<ul style="list-style-type: none"> • Car park • Forest walks • Wicklow Way • Mountain Access
Glenart Wood, Wicklow	<ul style="list-style-type: none"> • Car park • Looped walk
Kindletown Wood, Wicklow	<ul style="list-style-type: none"> • Car Park • Looped Walk
Lackan Wood, Wicklow	<ul style="list-style-type: none"> • Parking area • Wicklow Way
Roddenagh Wood, Wicklow	<ul style="list-style-type: none"> • Car Park • Looped Walk
Shay Elliot, Wicklow	<ul style="list-style-type: none"> • Car park • Forest walk to viewing area • Mountain Access
Shelton, Wicklow	<ul style="list-style-type: none"> • Car park • Millennium Forest • Forest walks
The Devil's Glen, Wicklow	<ul style="list-style-type: none"> • Car park • 2 Looped walks • Picnic area • Waterfall
Trooperstown, Wicklow	<ul style="list-style-type: none"> • Car park • Picnic area • Woodland walks
Newtownmountkennedy, Wicklow	<ul style="list-style-type: none"> • Woodland walk
Deputy's Pass, Wicklow	<ul style="list-style-type: none"> • Car Park • Woodland walk • Picnic area

Location	Description
Tinnakilly, Wicklow	<ul style="list-style-type: none"> Layby Looped walk

Appendix IV – Monitoring

Economic Parameters		
No.	Parameter	Measure
Establishment		
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	
Harvesting		
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)
Silvicultural Systems		
11	Alternative to Clearfell sites	number of LISS sites
12	Alternative to Clearfell area	area of LISS sites (hectares)
Forest Design		
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
Species Composition		
16	Primary species	% area of BAU
17	Secondary species	% area of BAU
18	Broadleaves	% area of BAU
19	Open Space	% area of BAU
Chemicals		
20	Chemical usage	Kgs active ingredient/ha
Land Transactions		
21	Area sold by BAU	hectares
22	Area acquired by BAU	hectares
Environmental Parameters		
No.	Parameter	Measure
Biodiversity		
23	Biodiversity area identified	% area of BAU
24	Biodiversity sites identified	number
25	Biodiversity management plans completed	number
26	Biodiversity features recorded	number

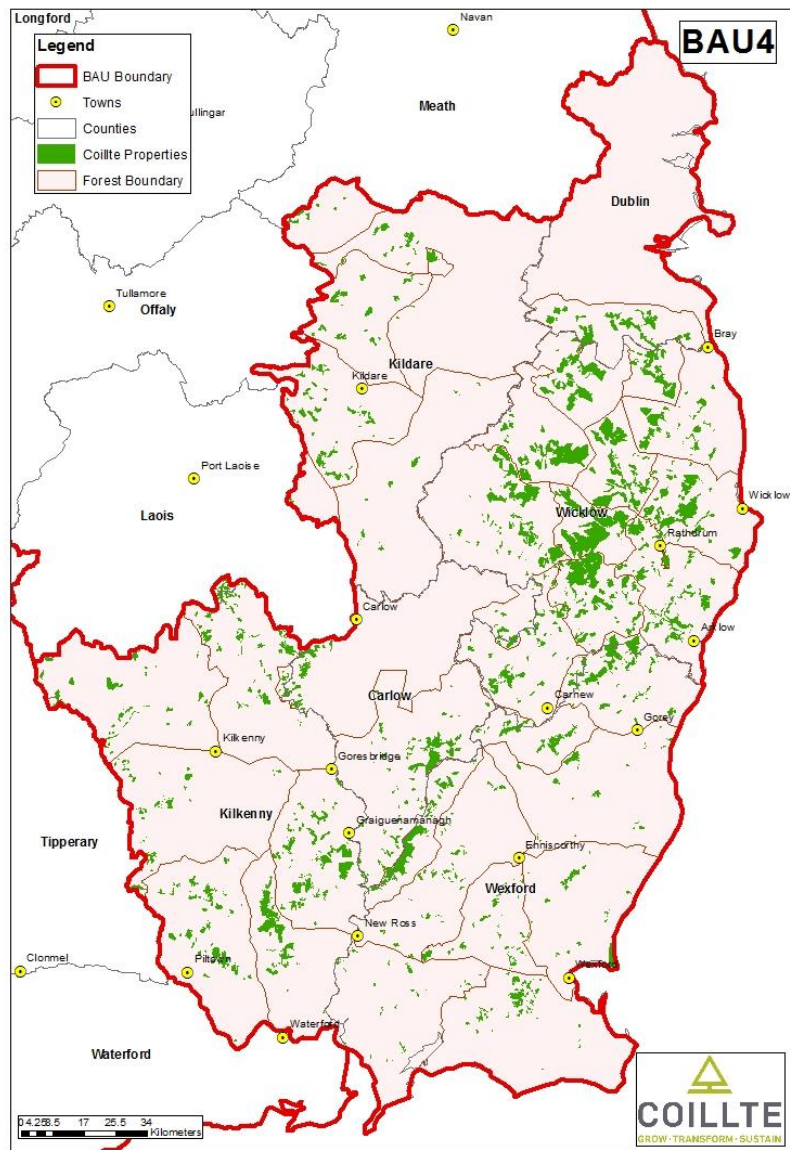
27	Long term retentions,	% area of BAU
28	Deadwood: Standing.	stems/ha in BAU
29	Deadwood: Fallen	stems/ha in BAU
30	Deadwood: Volume	total (m ³) in BAU
Water Monitoring		
31	Site Preparation,	no. of operations monitored
32	Aerial Fertilisation - Establishment	no. of operations monitored
33	Manual & 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
Forest Health		
38	BAU Forest Health Survey results	any damage recorded [y/n]
39	BAU Forest Health Survey:	any action required to be taken [y/n]
Abiotic Damage		
40	Fires – stocked area damaged	hectares
41	Fire break production	meters
42	Windthrow area	hectares
Deer Culls		
43	Current deer cull return figures	number culled
Social Parameters		
No.	Parameter	Measure
Cultural Heritage		
44	Protected archaeological monuments identified	number
45	Local features/folk heritage recorded on GIS	number
Recreation		
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
Complaints		
55	Complaints received	number registered
56	Complaints addressed	number signed off
Community		
57	Community partnerships	number
Health and Safety		
58	Notifiable accidents	number

Appendix V – Forest Details

Forest	Forest Gross Area (ha)	Clearfell Volume m ³					Thinning Volume m ³					Clearfell Area (ha)				
		2021	2022	2023	2024	2025	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
CW01 - Seskinrea	1,046	3,170	24,211	4,629	17,682	1,787	1,932	5,804	3,220	1,254	1,576	10	53	16	32	2
CW02 - Hackettstown	493	2,673	5,067	3,721	4,891	656	81	0	81	180	1,570	5	11	7	8	2
CW03 - Mount Leinster	2,343	12,154	13,823	18,884	21,437	15,322	2,143	2,540	571	2,485	256	25	25	39	39	30
DU01 - Dublin City	76,338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DU02 - South Dublin	2,032	318	1,269	9,275	0	0	3,091	2,293	3,667	3,108	2,605	1	3	20	0	0
KE01 - Rahin	244	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KE02 - Lullymore	872	258	6,994	179	0	0	0	0	0	0	0	1	14	0	0	0
KE03 - Clonmoyle	1,565	3,450	1,670	2,426	0	3,110	290	137	822	0	0	8	4	6	0	7
KE04 - Brackney	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KE05 - Monasterevin	333	2,992	0	706	0	0	0	125	0	99	0	6	0	1	0	0
KE06 - Donadea	243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KE07 - Hortland	591	2,569	4,867	4,165	0	0	0	0	0	0	0	5	9	7	0	0
KK01 - Lisdowney	1,342	8,683	2,037	1,698	35	0	3,282	896	4,606	1,571	977	21	5	3	0	0
KK02 - Castlecomer	1,976	10,158	38,682	4,902	12,824	18,648	3,874	5,187	6,548	5,418	5,970	27	79	11	29	46
KK03 - Danesfort	960	3,144	1,461	6,728	333	2,993	1,030	1,854	488	2,630	1,225	6	4	14	1	5
KK04 - Pilltown	1,838	1,988	5,174	3,748	19,372	9,995	2,388	820	1,055	3,890	3,974	4	12	7	50	24
KK05 - Mullinavat	1,893	4,484	7,086	4,556	6,806	22,898	3,661	8,238	7,011	6,057	9,272	8	28	17	16	46
KK06 - Woodstock	2,919	31,772	5,504	19,917	20,588	8,522	5,209	3,408	5,117	8,145	7,319	64	15	39	58	20
WW01 - Blessington	2,146	19,694	46,345	35,707	19,714	34,627	3,706	2,819	2,382	1,436	3,519	37	97	75	42	63
WW02 - Glencree	1,354	22,210	14,586	12,151	6,338	33,628	533	1,137	446	1,711	399	35	29	22	13	49
WW03 - Roundwood	1,558	3,817	3,228	11,849	19,423	9,514	3,078	1,630	3,145	3,230	5,130	7	6	24	31	15

WW04 - Glendalough	3,015	20,318	55,496	30,202	14,110	45,238	3,767	1,631	4,346	1,264	1,242	37	113	60	26	84
WW05 - Hollywood	2,626	17,601	14,594	7,948	19,904	4,831	4,702	8,147	5,116	7,635	6,816	35	28	19	28	9
WW06 - Glen of Imaal	3,341	44,096	25,829	44,960	49,142	36,835	5,416	4,314	8,176	6,079	6,429	87	56	88	97	74
WW07 - Glenmalure	3,780	58,455	50,387	29,300	57,394	49,688	3,679	4,149	2,512	2,626	1,313	118	99	57	103	93
WW08 - Glenealy	2,966	11,899	7,388	15,269	2,489	14,258	7,131	5,264	6,922	8,930	9,635	29	19	36	9	28
WW09 - Avonmore	2,683	21,555	10,773	29,228	21,046	15,119	7,669	5,313	6,162	4,775	3,576	48	27	67	62	27
WW10 - Aughrim	3,755	50,838	20,998	38,850	32,319	18,853	11,190	15,339	9,659	12,372	6,163	107	48	88	66	44
WW11 - Shillelagh	1,704	1,412	8,469	3,370	20,166	4,257	9,822	3,939	9,088	5,717	3,203	3	16	5	58	6
WW12 - Avondale	144	3,536	1,814	3,484	0	0	0	0	0	0	0	7	3	8	0	0
WX01 - Croghan	2,456	2,594	12,050	14,205	3,492	17,022	4,239	6,186	5,451	4,030	4,708	6	25	31	7	30
WX02 - Sliabh Bui	1,013	5,229	8,165	15,627	10,511	12,594	1,979	1,942	1,347	1,166	3,001	10	16	36	21	28
WX03 - Ballymore	612	2,222	175	4,442	274	3,338	325	83	639	385	672	6	0	9	0	5
WX04 - Ballycrystal	2,165	17,602	3,526	0	7,510	4,242	1,898	1,267	1,146	1,581	1,420	33	8	0	17	7
WX05 - Castleboro	746	2,089	2,813	18,965	3,362	2,631	964	2,880	1,027	3,402	957	5	8	47	8	13
WX06 - Bree Hill	806	370	0	3,783	8,429	7,104	317	1,364	713	1,125	2,884	1	0	8	18	24
WX07 - Kilbride	697	361	1,218	4,256	2,620	7,752	1,127	2,405	744	3,014	240	1	6	10	10	23
WX08 - Forth	1,021	8,779	259	284	2,976	2,874	3,738	5,340	4,517	2,523	4,994	19	1	1	8	9
WX09 - Tinnacarrick	424	1,265	958	0	0	3,444	424	1,639	1,239	343	1,227	2	5	0	0	7

Appendix VI – BAU Map



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