



Scoping a new forestry plan for forests and woodland in Down

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*Sustainability at the heart of a living, working, active landscape
valued by everyone*

Contents

Introduction

Forestry Planning
Participation and Engagement
Woodland Development
Forest Plans
Achievements
Scoping Topics

- 1 - Enhancing Landscapes
- 2 - Protecting Rivers and Lakes
- 3 - Enabling Enjoyment of Forests by Local People and Visitors
- 4 - Promoting Afforestation and Sustainable Forestry
- 5 - Supplying Sustainable Wood Products
- 6 - Regenerating Forest Land
- 7 - Growing Trees Sustainably
- 8 - Minimising the use of Pesticides and Fertilisers
- 9 - Targeting Invasive Species
- 10 - Protecting Habitats and Species
- 11 - Restoring Peatland Habitats

Appendices

Appendix I - Composition of Forest Service forests

Appendix II - Environmental Regulation, Designated Areas, and the Historic Environment

Appendix III - Strategy for Restoring Peatland Habitats

Introduction

This consultation is to enable all stakeholders to participate in the review of the Down Forestry Planning Area (FPA) at the earliest possible stage. This scoping consultation is being carried out to find out which of the topics identified in this document are relevant to you as a stakeholder. The consultation gives you the opportunity to say if you would like to engage with the Forestry Planning Team in relation to any opportunities identified in the document.

Forestry Planning

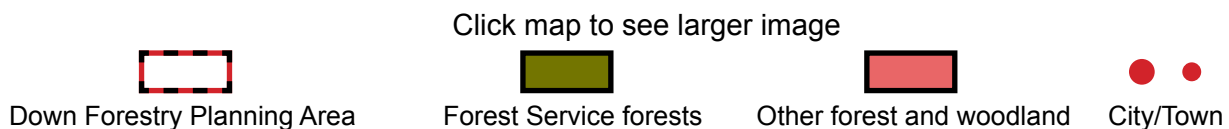
[Forestry planning](#) facilitates the delivery of the many different services our forests and woodlands provide such as sustainable wood production, carbon sequestration, biodiversity, and recreational opportunities. Reviewing forest plans ensures that they are up to date and that forests continue to meet the diverse and sometimes competing needs of people, wildlife and wood processing industries.

Down Forestry Planning Area

The Down FPA comprises all of County Down and part of County Antrim. The FPA includes all of Ards and North Down Borough Council, Belfast City Council, and Lisburn and Castlereagh City Council. The FPA also includes parts of Armagh City, Banbridge and Craigavon Borough Council, and Newry, Mourne and Down District Council.

The majority of Forest Service forests within the FPA are situated within Newry, Mourne and Down District Council. The distribution of forests and woodlands in Down FPA is recorded in the [Northern Ireland Woodland Register and Basemap](#), and is shown in Map 1. Forests and woodland are estimated to cover around 8,800 hectares (ha), which is approximately 11.0% of the FPA. Forest Service manages 58% (5,086 ha) of the forest area in the FPA.

Map 1: Forests and woodland in Down Forestry Planning Area (FPA)



Forests and woodland managed by Forest Service within the Down FPA are mainly within the Mourne AONB and are predominantly [coniferous](#). Forest Service also manages significant areas of [broadleaved](#) and [mixed woodlands](#) within the FPA, for example Hollymount and Castleward forests. The areas and composition of forests managed by Forest Service are shown in [Appendix I](#).

Forest Service forests are managed to meet a range of sustainable development objectives in line with the requirements of the [UK Forestry Standard](#), which is the UK Governments' statement on [sustainable forestry](#). Through its promotion of sustainable forestry, Forest Service contributes to the Department of Agriculture, Environment and Rural Affairs' (DAERA's) purpose of 'Sustainability at the heart of a living, working, active landscape valued by everyone'. Sustainable forest management supports the work of the Department for the Economy on energy policy, and the Strategic Investment Board in delivering a public sector energy strategy.



For forest design purposes and to reflect the range of landscape characters in the FPA Forest Service forests are grouped into three forest landscape units: Lagan Valley, North Down, and Strangford and Mourne.

Forests and woodlands in Down that are not managed by Forest Service are typically fragmented and broadleaved in character. The NI Woodland Register and Basemap indicates that these are comprised of more than 34,100 small broadleaved or mixed woodlands less than 1 ha in size. There are also a large number of mainly small coniferous plantations, up to 20 ha in area, located throughout the FPA.

There are a few larger areas of [broadleaved](#) and [mixed woodland](#), up to 96 ha in area, occurring mainly in the traditional estates such as Tobar Mhuire, Seaford, Finnebrogue, Ballywalter and Clandeboyne in the north and east of the FPA.

Regional Landscape Character Assessments (RLCAs) are geographical descriptions of the landscape that reflect the distinctiveness of different parts of Northern Ireland including the extent of forests and woodland. Down FPA includes parts of numerous RLCAs: South Antrim Hills and Six Mile Water RLCA, Belfast and Lagan Valley RLCA, Belfast Lough and Islandmagee RLCA, Down Drumlins and Holywood Hills RLCA, Strangford, Ards and Lecale RLCA, Newry Valley and Upper Bann RLCA and Mourne and Slieve Croob RLCA (which encompasses almost 80% (4,028ha) of Forest Service forests in the FPA).

Down FPA includes three Areas of Outstanding Natural Beauty (AONBs): Lagan Valley (encompassing Belvoir Park Forest), Strangford and Lecale (encompassing Mount Stewart, Castleward and Hollymount forests), and Mourne (encompassing all the forests within Slieve Croob RLCA and Narrow Water Forest).

Down FPA includes significant [native woodland](#) areas including [ancient](#) and long established woodland such as Rostrevor Oakwood and Mourne Park. The latter is one of the prime examples of estate woodland in Northern Ireland. Belvoir Park Forest contains many fine examples of veteran oak trees including the Belvoir Oak which is estimated to be 500 years old. It is one of a network of 70 ancient trees identified across the UK dedicated to The Queen in celebration of the Platinum Jubilee under the Queen's Green Canopy initiative.

A number of forests within the FPA have protected area designations, representing features of national and international importance. A number of important areas of [native](#) and [semi-natural woodland](#) are designated as [Special Areas of Conservation \(SAC\)](#), including Hollymount and Rostrevor Wood.

Hollymount SAC is recognised for both the alder woodland on floodplains and sessile oak woods. Rostrevor Wood SAC is a mature oak woodland known to be at least 250 years old and may be a remnant of the original forest which once covered the region.

Belvoir ASSI is of special scientific interest for its parkland and wood pasture habitat and associated species. The walled grounds were known as the Belvoir Demesne and remained wooded during the 18th and 19th centuries when most of the trees throughout Ireland were felled.

Bohill Nature Reserve consists of an area of deciduous woodland, comprising holly, oak, birch, rowan and hazel which have naturally regenerated since the site was clear felled in the past. This small reserve was established to protect the Holly Blue butterfly, once considered rare in County Down but now more widespread.

Designated areas adjacent to and on land managed by Forest Service are listed in Table 1 of [Appendix II](#).

Participation and Engagement

Forestry planning involves engaging with people whether as individuals or as representatives of stakeholder organisations. The purpose of the engagement is to ensure that a wide range of interests are considered including those of local communities and specialist interest groups.

Woodland Development

Forestry has had a significant impact on the social, environmental and economic development of Down for over 100 years. State forestry began in Down with the purchase of Hillsborough Forest in 1925. Forest expansion continued with the acquisition of Donard, Rostrevor, and Tollymore forests within a decade. Further acquisitions continued in traditional demesnes such as Belvoir and Castlewellan. Castlewellan Forest was acquired in 1968 and included the castle, lake and arboretum. The 1950s and 1960s saw a significant expansion of forestry particularly in the upland areas across Northern Ireland. Although the area



of new state owned planting has decreased every decade since then small annual increases in forest area occurred until the late 1990s.

The rate of increase in woodland area outside of state forestry since the beginning of the 20th Century is not well documented. Information available from an inventory of private woodland undertaken in 1975-79, and other Forest Service records, indicates that approximately 14% of the current non-Forest Service woodland area in the Down FPA is comprised of grant-aided planting since 2012. The remainder is divided between woodland referred to in the private woodland inventory, and woodland derived from scrub and woodland succession (as noted in reports of the [Northern Ireland Countryside Survey 1998 and 2007](#)).

Within recent years there has been renewed interest in woodland creation that has resulted in the creation of new woodland in areas such as Divis Mountain, Black Mountain and within the Mourne. This [afforestation](#) has been facilitated by DAERA funding through the 'Small Woodland Grant Scheme' and the 'Forest Expansion Scheme'. The work has been carried out by organisation such as Northern Ireland Water, the Woodland Trust and the National Trust.

Approximately 44% of forest and woodland in the Down FPA is described in the [Ancient Woodland Inventory](#) as woodland on sites which have been continuously wooded since at least 1830. Much of this woodland is easily accessible, including parts of Belvoir Park, Rostrevor, Hollymount and Bohill forests.

In 2021 the Woodland Trust bought 156 hectares of Mourne Park estate which includes 73 hectares of ancient woodland. The acquisition was partly funded by DAERA (£972,000) through the 'Environment Fund'. The Woodland Trust intend to protect and restore the ancient woodland and open the woodland for the public to visit. There will be opportunities for partnership work between Forest Service and the Woodland Trust to facilitate public access to the adjacent existing Mourne Forest which is managed by Forest Service.

Forestry remains a significant source of employment in the rural economy. The number of people directly employed by Forest Service has decreased significantly since the 1960s and 1970s after forests were established and due to mechanisation however, the wood processing sector in Northern Ireland continues to generate around £80 million per annum and sustains approximately 1,000 rural jobs. Increasingly forest based recreation is becoming an important source of employment.

Tollymore Forest was the first Forest Park in Northern Ireland when it opened in June 1955. This was followed in 1969 with the opening of Castlewellan Forest Park. Forests within the Down FPA have provided facilities for forest based recreation for many decades and are important to the tourism offering of the region.

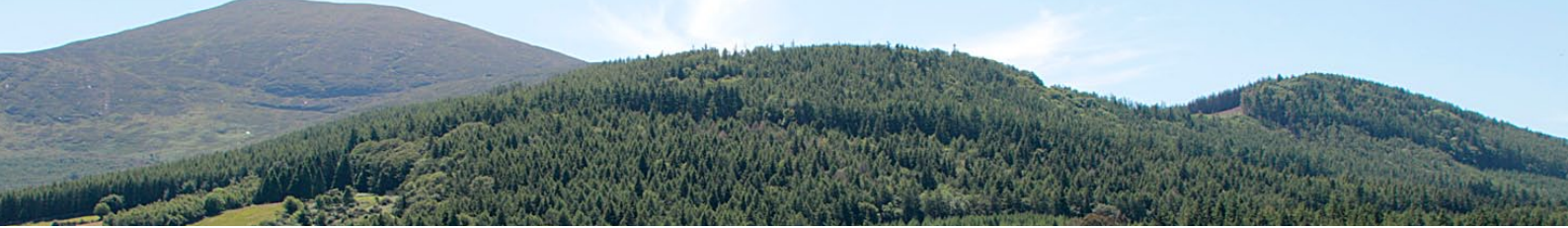
The last decade has seen significant investments in forest based recreation in partnership with councils. Investments have resulted in the creation of new cycle and walking trails, toilets, play areas, sculpture trails and other refurbished facilities. More details are listed under the 'Achievements' section of this document.

Forest Plans

Forest plans provide the direction for interventions that will affect the future appearance, composition, or design of forests. Forest plans show areas of felling (which are individually referred to as coupes), the regeneration of felled areas, management to retain areas under continuous woodland cover, and changes to the type of trees that grow in the forest.

Forest design aims to ensure that there is continuity of woodland for timber and wood products and the delivery of a range of non-timber benefits. These benefits include landscape improvement, water protection, places for people, and protection of habitats, including [ancient](#) and [native woodland](#).

Forest Service seeks greater involvement of people in the revision of its forest plans, which has taken place on a five yearly cycle for many decades. The forest management plan for Down forests was last reviewed in 2015 ([Down Management Plan 2015](#)). The Forestry Act (Northern Ireland) 2010 placed a duty on Forest Service to promote [afforestation](#) and [sustainable forestry](#), and therefore, Forest Service plans will in future include references to non-Forest Service forest and woodland.



Achievements

Achievements of the previous forest plan, 2015 – 2021, are highlighted in the box below.

1. Continued implementation of the forest design plan for 5,086 hectares of forest.
2. Produced an average of 18,000 cubic metres (equivalent to 600 lorry loads of timber) each year to supply the timber processing industry.
3. Regenerated 266 hectares of Forest Service forest land after clearfelling, and planted nearly 650,000 trees.
4. Grant aided the creation of 320 hectares of new woodland.
5. A programme of work to control invasive plant species was carried out in Belvoir, Castlewellan, Donard and Tollymore forests.
6. The Northern Ireland Forests Visitor Survey 2019 calculated that there were:
 - 245,000 annual visits to Belvoir Park Forest;
 - 276,000 annual visits to Castlewellan Forest;
 - 285,000 annual visits to Hillsborough Forest; and
 - 177,000 annual visits to Tollymore Forest.
7. In partnership with North Down and Ards Borough Council new or refurbished recreational facilities have been provided in the following forest:
 - Cairn Wood (Ballysallagh Forest) – development of improved walking trails, new toilet facilities and improved car parking.
8. In partnership with Lisburn and Castlereagh City Council new or refurbished recreational facilities have been provided in the following forest:
 - Hillsborough Forest – development of improved walking trails, play park, sculpture trail, toilet facilities and improved car parking.
9. In partnership with Newry, Mourne and Down District Council new or refurbished recreational facilities have been provided in the following forests:
 - Castlewellan Forest – refurbished glass houses. Improved accessible parking bays reserved for use by Blue Badge holders.
 - Corry Wood (Castlewellan Forest) – walking trails.
 - Drumkeeragh Forest – Improved walking trails, horse riding access and car parking.
 - Donard Forest - path improvements to access Slieve Donard.
 - Tievenadarragh (Bohill Forest) – walking trails and car park.
 - Rostrevor Forest – new cycle trails and new walking trails.
 - Tollymore Forest – new parking facilities for horse boxes. Refurbished ablution facilities for caravan and camping customers. Refurbished paths in the arboretum to facilitate those with less mobility. Improved accessible parking bays reserved for use by Blue Badge holders.
10. Agreed a Memorandum of Understanding with the National Trust in relation to a collaborative partnership.

Scoping Topics

Forestry planning opportunities are presented under 11 scoping topics which are intended to reflect the various areas of interest to stakeholders, these are as follows:

- Enhancing Landscapes
- Protecting Rivers and Lakes
- Enabling the Enjoyment of Forests by Local People and Visitors
- Promoting Afforestation and Sustainable Forestry
- Supplying Sustainable Wood Products
- Regenerating Forest Land
- Growing Trees Sustainably
- Minimising the Use of Pesticides and Fertilisers
- Targeting Invasive Species
- Protecting Habitats and Species
- Restoring Peatland Habitats

Appendices

A summary of the composition of Forest Service forests is provided in [Appendix I](#). Details of environmental regulation requirements, designated areas and historic monuments are provided in [Appendix II](#). The Forest Service's strategy for restoring peatland habitats is provided in [Appendix III](#).



1 - Enhancing Landscapes

“Through the appreciation and analysis of landscape context, forests and woodlands can be designed so that they make a positive contribution to the character of a local area, and in some areas create attractive new landscapes.”

UK Forestry Standard, 4th Edition (2017)

Down Forestry Planning Area (FPA) contains a varied range of landscapes. The north of the FPA features the Lough Neagh basin, the south Antrim hills and Lagan valley including Belvoir Park Forest on the edge of Belfast.

The extensive drumlin fields around the Newry and Bann river corridors form the western lowland section of the FPA. In the south, the distinctive granite hills of the Mourne and Slieve Croob, connected by a series of lower foothills, includes a significant proportion of the largest forests of the FPA.

The majority (80%) of Forest Service managed forests within the FPA are located in the upland Mourne and Slieve Croob [Regional Landscape Character Area \(RLCA\)](#) where forests account for 6% of the RLCA area. The forests within this RLCA include Drumkeeragh, Castlewellan, Tollymore, Donard, Mourne, Annalong and Rostrevor.

A broad drumlin belt of lowland pastures, gently falling to the east towards Strangford Lough, comprise the central lowlands of the FPA. Strangford and Lecale to the east provide a seascape landscape centred around Strangford Lough and includes several large wooded estates including Castleward, Mount Stewart and Ballywalter and several wooded islands within the Lough.

Forests and woodlands therefore contribute to the various features of the Down landscape, and can enhance the experience of visitors to the area. Foresters acknowledge that the visual impacts of forests are important and these can be improved by modifying the design of a forest to compliment the local landscape. Harsh visual impacts can be minimised by removing straight lines or softening hard edges, and by encouraging more tree planting.

The impact of the larch tree disease, *Phytophthora ramorum*, and the necessary removal of infected trees in forests such as Rostrevor and Mourne will undoubtedly have a significant impact on the landscape. The removal of diseased trees will be planned to minimise impacts on the landscape and recreational users of the forests.

Opportunity: Identify where the appearance of forests in the landscape can be improved by modifying the shape of felling boundaries and carefully designed regeneration of felled areas.

Opportunity: Consider the potential for softening ‘hard’ forest edges by encouraging the afforestation of neighbouring agricultural land subject to the landowners’ long-term intentions.

Activity: Undertake visual assessments of Forest Service forests from key viewpoints in the surrounding countryside to determine the potential influence forest management decisions could have on the landscape.

Activity: Apply [UK Forestry Standard](#) requirements and forest landscape design guidelines using Geographic Information Systems tools to undertake assessments and present options.



Outcomes	Benefits
<ul style="list-style-type: none">- Increased potential to demonstrate landscape improvements using the regeneration and design plans.- Illustrate forests' positive contribution to tourism in the Down FPA.- Stakeholders can contribute to forest design planning.	<ul style="list-style-type: none">- Illustrate forests' positive contribution to tourism in the Down FPA.

Forest landscape design opportunities in Rostrevor Forest

Click the image for a larger version

Click the image for a larger version

2 - Protecting Rivers and Lakes

“Forests and woodlands have a close relationship with our water resources, and forest management and water quality are closely linked. Sustainable forest management is essential to ensure the supply of good-quality fresh water, provide protection from natural hazards such as flooding or soil erosion and to protect the needs of aquatic species.”

[UK Forestry Standard, 4th Edition \(2017\)](#)

The majority of Forest Service forests in Down Forestry Planning Area (FPA) have a close connection to coastal waters, lakes and rivers. Many of the water bodies are important sources of drinking water.

The extensive coastline includes Belfast, Carlingford and Strangford Loughs. Larger fresh water bodies include Lough Neagh and Clea Lakes. Smaller water bodies include Portmore Lough, Lough Island Reavey, Castlewellan Lake, and Hillsborough and Park Lakes. The principle river systems are the Bann, Lagan and Quoile.

Important sources of drinking water, managed by NI Water, include Silent Valley, Spelga, Fofanny and Ben Crom reservoirs, and Annalong River.

There are a number of forested catchments of lakes and rivers within the Department of Agriculture, Environment and Rural Affairs (DAERA), public angling estate. This includes Castlewellan Lake which is regularly stocked with brown trout and rainbow trout, while Hillsborough Lake is stocked with rainbow trout.

For monitoring purposes, under regulations incorporating the [Water Framework Directive](#), the Down FPA lies in both the North Eastern River Basin District and Neagh Bann River Basin District. Monitoring undertaken by the Northern Ireland Environment Agency as part of the second cycle of the Water Framework Directive has indicated that the Kilkeel River is at risk of acidification. As trees are able to capture more acidifying pollutants from the atmosphere than shorter vegetation [afforestation](#) proposals in the catchment are subject to additional controls.

The key forest design activity to protect water in forests has been the creation of [buffer areas](#), comprising of open ground or [riparian woodland](#), between forestry land and water bodies. As the benefits of creating native [broadleaved woodland](#) adjacent to aquatic habitats have become more widely recognised the focus of forestry planning has shifted towards enabling the establishment of [riparian woodland](#). An action to create riparian woodland in Forest Service forests is included in the cross Departmental strategy '[Sustainable Water - A Long-Term Water Strategy for Northern Ireland](#)' (2016).

Forestry planning can avail of newly available datasets which use topographical and rainfall information to highlight areas most at risk of contributing to erosion and diffuse pollution. The mapping of these risk areas enables better positioning of water protection measures such as riparian woodland or other mechanisms to intercept and trap pollutants.

Opportunity: Identify the potential to increase the extent of riparian woodland by colonisation or planting.

Opportunity: Use new sources of information to review the internal design of forests.

Activity: Identify [water buffer areas](#) that have become colonised by [native woodland](#) and where [riparian woodland](#) establishment by planting is appropriate.

Activity: Use data to improve forestry planning, including the revision of planned [felling coupes](#), forest design plans and [forest regeneration](#) plans.



Outcomes	Benefits
<ul style="list-style-type: none">- Assurance that risk to the ecological condition of features due to forest operations will be appropriately managed.- Establishment of new native riparian woodland contributing to the Northern Ireland Long-Term Water Strategy target.	<ul style="list-style-type: none">- Significant contribution to biodiversity and to angling, arising from the promotion and practice of sustainable forestry.- Long-term protection of water quality resulting from increased extent of riparian woodland.



3 - Enabling Enjoyment of Forests by Local People and Visitors

“Access to woodlands is a public benefit that can improve people’s health and well-being.”

“Woodland visits help build an understanding and appreciation of the forest environment. Access to woodlands can be particularly beneficial for people from urban areas, people from disadvantaged social backgrounds, and people with disabilities...”

[UK Forestry Standard, 4th Edition \(2017\)](#)

The [Forestry Act \(Northern Ireland\) 2010](#) promotes and encourages the enjoyment and recreational use of Forest Service land by the public, including a right of pedestrian access, and promotes the social benefits of other woodland. Partnership arrangements between Forest Service and councils have been developed in keeping with the implementation of the Forest Service’s strategy to [Develop the Recreational and Social Use of Our Forests](#).

Forest Service continues to work closely with a number of partner organisations, including Newry, Mourne and Down District Council, Lisburn and Castlereagh City Council, North Down and Ards Borough Council and the National Trust, to provide recreation facilities in its forests. These projects deliver benefits both in terms of the well-being of local communities and by attracting visitors from further afield. Information regarding recreation facilities within Forest Service managed forests is available on the [NI Direct](#) website.

Forest Service manage a number of forests in the Down Forestry Planning Area (FPA) with high levels of visitor facilities that attract significant numbers of visitors.

Tollymore Forest Park, managed by Forest Service, offers outdoor activities such as camping and touring, walking, horse riding and orienteering. Notable features of the forest includes a wide range of tree species planted in the experimental forest plots while the arboretum is home to the original tree of the slow-growing spruce, *Picea abies* ‘Clanbrassiliana’. This slow growing tree originated nearby in about 1750 and is now the oldest tree in any arboretum in Ireland.

Castlewellan Forest Park covers 450 hectares of land lying north of the Mourne Mountains. Outdoor activities include camping and touring, walking, cycling, horse riding, fishing on the lake, canoeing and orienteering. Newry, Mourne and Down District Council have assumed development and management responsibility for recreation in Castlewellan Forest Park.

Hillsborough Forest was recorded as having the highest number of annual visitors of any forest in Northern Ireland in a visitor survey commissioned by Forest Service in 2019. It is a mixed coniferous and broadleaved forest planted within the walls of the Large Park, once part of Hillsborough Demesne. The trails, car park and recreational facilities are managed by Lisburn and Castlereagh City Council.

Cairn Wood, part of Ballysallagh Forest, is a popular mixed woodland that has recently had significant investments in car parking, new toilets and refreshed trails. The facilities are managed by North Down and Ards Borough Council.

To the south, Rostrevor Forest and the associated Kilbroney Park features riverside and woodland walks, scenic drive, camping and touring, café and children’s play area. Visitors can drive from sea level to the Cloghmore car park 230 metres above sea level to access views of the surrounding forest. There is an extensive network of mountain bike trails that attract both local and international cyclists.



Non-Forest Service woodlands in the Down FPA also provide a wide range of recreational opportunities. They include Redburn and Scrabo country parks which are managed by the Northern Ireland Environment Agency (NIEA).

Belfast City Council manages Barnett Demesne which includes an arboretum and a number of woodlands. The Council also manages Cave Hill Country Park that has picnic areas, woodland areas and species-rich grassland.

Colin Glen Forest Park, which is on the edge of Belfast and Lisburn, is managed by the Colin Glen Trust. The park comprises 80 hectares of scenic woodland, river, open grassland, waterfalls and wildflower areas.

The Woodland Trust manages Seymour Hill, Friends of Belvoir Wood, Glasswater Wood and Corrog Wood. It has taken ownership of 98 hectares next to Cave Hill Country Park, with plans to conserve and restore the site. In August 2022 the Woodland Trust opened 156 hectares of woodland to the public at Mourne Park.

Opportunity: Continue to discuss options for maintaining the existing provision of facilities, improving access to forests with councils and other partners and potential partners.

Activity: Liaise with councils and other partners such as the Woodland Trust and National Trust to increase the recreational use of forests.

Activity: Liaise with public bodies and neighbours to discourage activities presenting a risk to pedestrian users of forests.

Outcomes	Benefits
<ul style="list-style-type: none"> - Local people are able to make greater use of forests in their area. - Promoting recreational use of forests. - Delivering sustainable development in partnership with others. 	<ul style="list-style-type: none"> - Health and well-being. - Development of local businesses.



4 - Promoting Afforestation and Sustainable Forestry

“The General Duty placed on the Department of promoting afforestation and sustainable forestry by the Forestry Act refers to all forests in Northern Ireland, not only the Department’s forest land. The Department recognises the valuable contribution that forestry makes in achieving its vision of a thriving sustainable rural community. Through the Forest Service, it aims to ensure the sustainability of forests as an invaluable heritage, expansion of tree cover, management of forests in a way that increases biodiversity, enhances the landscape and assists in improving water quality”.

[A Delivery Plan for the Implementation of the Forestry Act \(Northern Ireland\) 2010](#)

“the most popular reason to support forestry in Northern Ireland with public money was ‘to provide places for wildlife to live’ with 70% of respondents in 2019 selecting this as a benefit. ‘To provide places for recreation’ (58%), ‘to provide places for families to play’ (56%) and ‘to provide places for relaxation and stress relief’ (56%) were also seen as important reasons to support forestry with public money.”

[Public Opinion of Forestry 2019, Northern Ireland](#)

It is Government policy to promote forest expansion. The importance of creating more forests is recognised by the NI Executive with ‘Forests for Our Future’ being one of the foundation programmes in its ‘Green Growth’ Strategy. The aim to plant 18 million trees over the next decade will help Northern Ireland to meet the UK Governments’ net-zero carbon target by 2050. Tree planting can also help contribute to a strong economy, a thriving environment and healthy, active communities.

The operation of forestry grant schemes and Felling Regulations provide opportunities for Forest Service to promote the delivery of [ecosystem services](#) from new and regenerated woodland, through the use of appropriate forest design and tree establishment techniques. During the past 5 years 35 hectares of new woodland have been grant aided by the Department within the Down Forestry Planning Area.

Research commissioned by Forest Service and prepared by Forest Research demonstrates how [afforestation](#) can contribute to flood alleviation by identifying priority areas for woodland creation to benefit flood risk management and mitigation. ([Opportunity mapping for woodland creation to reduce flood risk in Northern Ireland](#)).

Forestry planning will seek to identify opportunities for woodland expansion to deliver benefits that are complementary to those provided by Forest Service forests. These benefits can include contributing to the local landscape character and increasing connectivity between forests and woodlands in the landscape.

Information on the potential contribution of woodland to community development, and its capacity to deliver [ecosystem services](#), is integral to understanding the contribution of [sustainable forestry](#) to ‘*Sustainability at the heart of a living, working, active landscape valued by everyone*’. Consideration of non-forestry uses of land adjacent to forests can also be relevant to the Department’s purpose, and may lead to opportunities to realise both environmental and economic benefits.

Opportunity: Identify potential for promoting woodland expansion adjacent to Forest Service forests where appropriate.

Opportunity: Review the extent of non-Forest Service woodland in the Down Forestry Planning Area, and the range of pressures that could affect its sustainability.



Activity: Assess provision of **ecosystem services** by non-Forest Service woodland adjacent to forests.

Outcomes	Benefits
<ul style="list-style-type: none">- Landscape improvement through tree planting.- Baseline information on woodland management.	<ul style="list-style-type: none">- Woodland ecosystem services, benefitting people, the environment, and the economy.- Landscape scale woodland management.



5 - Supplying Sustainable Wood Products

Forest Service forests supplied “over 0.4 million cubic metres of timber for industrial use, and underpinned further economic activity by the wood processing sector, estimated at £60M-£80M.... sourcing more than 10% of timber supply from forest thinning hence improving the long-term resilience of forests on wind firm soils”.

[Forest Service Annual Report 2019 – 2020](#)

Timber harvesting operations are managed to avoid adverse environmental impacts, particularly preventing movement of sediment and pollutants into watercourses. During the period of the previous forest plan, 2015-2021, Down forests have produced an average of 18,000 cubic metres (equivalent to 600 lorry loads) of timber per year, split almost equally between [clearfelling](#) and [thinning](#).

To provide assurances of [sustainable management](#), Forest Service forests and management are subject to a periodic assessment and annual audits of compliance by an independent certification body. In the UK certification bodies use the [UK Woodland Assurance Standard](#) (UKWAS) to assess the management of Forest Service forests against the requirements of both the Forest Stewardship Council® (FSC)® (Licence code: FSC-C084232), and the [Programme for Endorsement of Forest Certification](#) (PEFC) (Licence code: PEFC/16-40-1924). As a result of FSC® and PEFC forest management and ensuing ‘chain of custody’ certification components, wood products derived from Forest Service forests can be marketed by processors using the logos of the FSC® and PEFC. The logos signify that wood products have come from responsibly managed forests.

Over time forest plans will seek to reduce the proportion of the total amount of timber produced by [clearfelling](#), and increase timber production from [thinning](#) of plantations that will eventually be clearfelled. Where site conditions are suitable plantations will be managed using [low impact silvicultural systems](#), LISS, in which [clearfelling](#) is avoided and [continuous forest cover](#) is maintained.

Opportunity: Review the timing and boundaries of planned felling, to complement landscape design and enhance water protection, using Geographic Information Systems (GIS) tools and datasets.

Opportunity: To optimise the supply of timber from [thinning](#) and use of LISS, including [continuous cover forestry](#).

Activity: Make use of advanced GIS tools and datasets to improve the design of [felling coupes](#).

Activity: Optimise [thinning](#) in Down forests, and enhance planning capability.

Activity: Develop and apply a rationale for identifying further areas where the use of LISS is appropriate.

Outcomes	Benefits
<ul style="list-style-type: none"> - Maintain supply of certified timber. - Improved knowledge of future timber availability. - Greater resilience of timber availability through the use of alternative silvicultural systems. 	<ul style="list-style-type: none"> - Sustainable economic activity in the rural landscape. - Industrial output of home produced wood products to construction, packaging, agriculture and energy markets. - Harvested wood products provide significant climate change mitigation benefits through carbon storage and substituting concrete and steel.

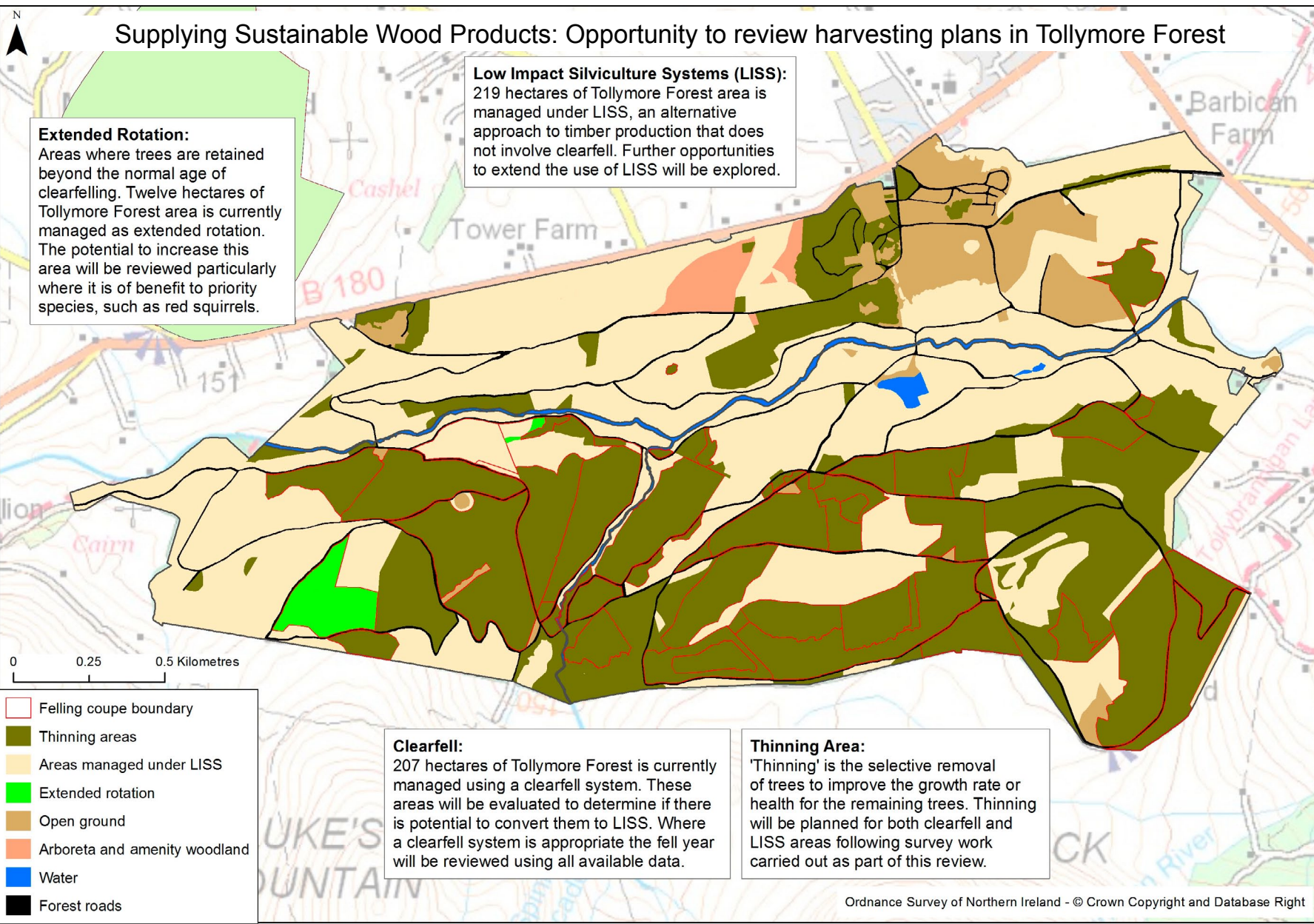
Supplying Sustainable Wood Products: Opportunity to review harvesting plans in Tollymore Forest

Extended Rotation:
 Areas where trees are retained beyond the normal age of clearfelling. Twelve hectares of Tollymore Forest area is currently managed as extended rotation. The potential to increase this area will be reviewed particularly where it is of benefit to priority species, such as red squirrels.

Low Impact Silviculture Systems (LISS):
 219 hectares of Tollymore Forest area is managed under LISS, an alternative approach to timber production that does not involve clearfell. Further opportunities to extend the use of LISS will be explored.

Clearfell:
 207 hectares of Tollymore Forest is currently managed using a clearfell system. These areas will be evaluated to determine if there is potential to convert them to LISS. Where a clearfell system is appropriate the fell year will be reviewed using all available data.

Thinning Area:
 'Thinning' is the selective removal of trees to improve the growth rate or health for the remaining trees. Thinning will be planned for both clearfell and LISS areas following survey work carried out as part of this review.



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6 - Regenerating Forest Land

“Forest regeneration is the act of renewing tree cover by establishing young trees naturally or artificially - generally, promptly after the previous stand or forest has been removed. The method, species, and density are chosen to meet the goal of the landowner.”

[Land use, Land-Use and Forestry Fact Sheet 4.12 Intergovernmental Panel on Climate Change](#)

Regeneration of forest land after felling (or occasionally after destruction by fire or disease) is an opportunity to improve the design of a forest to meet longer term objectives. These objectives include enhancing the landscape, protecting water, using a wider range of trees species, improving wildlife habitats and increasing the resilience of the forest. Felled areas may be replanted, or allowed to regenerate naturally from seed, or left unplanted to include more open ground in a forest. In some circumstances wood production can be increased by using improved planting material, for example, grown from seed harvested in seed orchards.

The development and improvement of forest design and regeneration plans are a significant forest management activity involving extensive engagement with government bodies, organisations, local people and other stakeholders. Forest design plans have resulted in the creation of additional [water buffer](#) areas some of which are suitable for establishing [new native woodland](#). Regeneration plans are created for non-Forest Service forests and woodland in conjunction with the regulation of felling.

Management of forests under some [low impact silvicultural systems \(LISS\)](#) involves making use of natural regeneration, where it occurs, and supplementary planting if required.

Opportunity: Review and revise forest design and forest regeneration plans to include more native [broadleaved trees](#) and open ground, and favour the use of a wider range of conifer species for regeneration where appropriate.

Opportunity: Revise felling and regeneration plans to increase age, species and structural diversity in forests.

Opportunity: Specify the use of more productive Sitka spruce (*Picea sitchensis*) planting material in regeneration plans where site conditions are suitable.

Activity: Assess the suitability of current and planned [water buffer](#) areas for the establishment of new [native woodland](#).

Activity: Identify areas suitable for use of alternative [conifer](#) species including Norway spruce (*Picea abies*), Douglas fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*).

Activity: Identify areas where wildlife habitat can be enhanced by planting a wider range of tree species.

Activity: Identify areas managed as [LISS](#) where supplementary underplanting is appropriate.

Outcomes	Benefits
<ul style="list-style-type: none"> - Regeneration plans identifying the establishment of native woodland adjacent to watercourses, and the appropriate use of alternative conifer species. 	<ul style="list-style-type: none"> - Forests which deliver better ecosystem services and have more natural capital. - Forests that are more resilient to the effects of disease, climate change and other pressures.



7 - Growing Trees Sustainably

“The essential consideration for the landowner or manager is to ensure that the forest thrives and is not degraded. This includes protecting young trees to make sure they become successfully established, and protecting the health of forests and woodlands, for example by ensuring they have the necessary resilience to cope with emerging threats and changing conditions – in particular climate change. It also involves maintaining levels of fertility and site potential for future rotations.”

[UK Forestry Standard, 4th Edition \(2017\)](#)

Growing trees sustainably involves monitoring the health and vitality of the forest, and responding appropriately to threats. Down forests are vulnerable to a similar range of threats occurring elsewhere in Northern Ireland. Harm to forest users and the environment arise from criminal or anti-social behaviour, the effects of fire, pests, diseases, wind and storm damage, and loss of soil fertility.

Tree diseases can also impact forest growth and development. The ongoing impact of ramorum disease (*Phytophthora ramorum*) on larches (*Larix* spp.) in forests remains a concern. This is currently particularly apparent in forests within Down Forestry Planning Area (FPA) such as Rostrevor Forest which is highly visible in the landscape and provides a wide range of recreational facilities. Due to the extent of *Phytophthora ramorum* in the EU, UK and Ireland it has recently been reclassified as a non-quarantine pest. Forest Service will continue to adopt a sustainable forest management and plant health focussed approach to remove infected trees and implement biosecurity measures to help minimise further spread of the disease.

In addition, it is apparent that the effects of ash dieback disease (*Hymenoscyphus fraxineus*) are becoming increasingly widespread in woodland and trees in the wider environment. Further information is available on the [DAERA website](#).

Areas recently planted with native and other **broadleaved** trees, including new riparian woodland, are particularly susceptible to damage by deer and from uncontrolled livestock grazing. Cattle, sheep, deer and feral goats are also able to hinder or prevent woodland development by natural colonisation and regeneration. Management of deer to prevent damage to young trees is routinely undertaken in a number of forests including Donard, Clandeboye, Drumkeeragh and Bohill forests

The risk of damage from many of these threats is managed by operational measures and contingency planning in conjunction with monitoring and regularly liaising with neighbours, partners and stakeholders.

Opportunity: Liaise with neighbours and statutory bodies in relation to controlling damage to woodlands, preventing deer poaching and other wildlife crime.

Opportunity: Review forest plans to prioritise the removal of infected larch trees to ensure sustainable forest management and reduce the risk of further spread of *Phytophthora ramorum*.

Activity: Collate and analyse monitoring information including assessments of tree growth and nutrition.

Activity: Review sustainable wood production plans to incorporate prioritised felling of diseased trees.

Activity: Liaise and collaborate with stakeholders and partners to manage the impact of tree diseases.



Outcomes	Benefits
<ul style="list-style-type: none">- Updated monitoring and contingency plans.- Prioritised removal of diseased larch trees and implementation of revised forest regeneration plans	<ul style="list-style-type: none">- Healthy, safe forests.- Protected natural environments.- More resilient forests.

8 - Minimising the use of Pesticides and Fertilisers

“The use of artificial pesticides and fertilisers is generally a last resort in practising sustainable forest management...Pesticides and fertilisers are expensive, and should only be deployed in a reactive way to protect trees when a problem has been identified or is highly likely. Their use on special sites such as ancient woodland is particularly discouraged.”

[UK Forestry Standard 4th Edition 2017](#)

Pesticide use in Forest Service forests is restricted by statutory regulation and the adoption of a specific integrated pest management strategy to minimise pesticide use. This strategy requires non-chemical control options to be considered and favoured wherever possible, for example, where there is risk of causing harm to people and the environment. In principle pesticides are used as a last resort, and the use of specific pesticides by the forestry industry is kept under constant review.

There are two main uses of chemical control for pests and diseases in forests. The first use is to protect forests from the fungal disease causing stem rot, *Heterobasidion annosum*, using a solution of urea applied to tree stumps after cutting. The second use is to protect trees replanted after felling from insect damage caused by the pine weevil (*Hylobius abietis*), on a proportion of sites during the initial 1 – 2 years. The preferred currently available option involves the use of a product containing a neonicotinoid substance (acetamiprid) applied off-site to trees before planting, and where necessary after planting. Control of invasive rhododendron (*Rhododendron ponticum*) and laurel (*Prunus laurocerasus*) is normally achieved using a glyphosate based herbicide in combination with cutting.

Environmental monitoring of water bodies carried out in recent years has identified both detections of pesticides and biological effects. Although forestry may not be the only source of pesticides it has not been conclusively ruled out by the Northern Ireland Environment Agency (NIEA) given the targeted use in forestry of some of the pesticides detected.

Fertilisers have been routinely used to enable woodland establishment and promote tree growth in upland forests, including in Down Forestry Planning Area, since the early 1960s until around 2000. Fertiliser use followed prescriptions for different tree species and site conditions that had been developed over many decades of research and monitoring. Since 2000 increasing areas of forest that had required fertiliser have been felled. Consequently it is increasingly likely that a proportion of regenerated areas will become deficient in nutrients and may again require fertiliser to maintain growth.

Opportunity: To contribute to the minimisation of pesticide use by planning the sequencing of felling years and increasing the area of forest managed under low impact silvicultural systems (LISS).

Activity: Environmental monitoring of forested catchments in conjunction with NIEA.

Outcomes	Benefits
- Pesticide use is minimised to the extent that residues are significantly below environmental monitoring thresholds.	- Economic activity in forests contributing to the health and well-being of local people.

9 - Targeting Invasive Species

“Here, as elsewhere in the world, invasive species are increasingly a serious threat to biodiversity and the benefits that healthy ecosystems provide to us... They are a risk to our unique flora and fauna, our economic interests such as forestry, fishing, and farming, our health, and our recreational interests.”

[An Invasive Alien Species Strategy for Northern Ireland \(2013\)](#)

A number of invasive non-native plant species occur in most forests with the potential to affect access, biodiversity, regeneration of forests and tree growth. The most widely occurring invasive plant species are rhododendron and laurel. Both are susceptible to *Phytophthora ramorum* (the cause of ‘ramorum disease’ of larch, and known in the USA as ‘sudden oak death’) and can act as hosts for the disease in a woodland. This can increase the amount of **inoculum** in an area.

Although there are fewer invasive non-native mammal species in forests than plants the impact on biodiversity and tree health of non-native mammal species can be significant. In particular, damage from the grey squirrel (*Sciurus carolinensis*) and introduced deer species can be locally significant.

Some invasive species are subject to regulation under the [Wildlife and Natural Environment Act \(Northern Ireland\) 2011](#), and the [Invasive Alien Species \(Enforcement and Permitting\) Order \(Northern Ireland\) 2019](#). Actions targeted against invasive species by public bodies are co-ordinated under the [Invasive Alien Species Implementation Plan](#). Effective action against invasive non-native species is generally very costly and is not undertaken without good justification, for instance removal from threatened protected habitats, **ancient woodland** sites and **riparian** areas.

Opportunity: Prioritise areas where control of rhododendron and laurel is required.

Opportunity: Prioritise areas where control of colonising woodland is required in protected habitats and riparian areas in Forest Service forests.

Activity: Collate and analyse data on the occurrence of invasive plant species in forests.

Activity: Assess extent of colonisation of protected habitats and **water buffer areas** by Sitka spruce and other **conifers**.

Outcomes	Benefits
<ul style="list-style-type: none"> - Decreasing area of forest land affected by invasive plant species. - Reduced threats to biodiversity and tree health. 	<ul style="list-style-type: none"> - Forests are more attractive. - Better access for angling.



10 - Protecting Habitats and Species

“Northern Ireland’s biodiversity plays a significant role within its economy. A healthy, properly-functioning natural environment is the foundation of sustained economic growth, prosperous communities and personal well-being.”

[Valuing Nature A Biodiversity Strategy for Northern Ireland to 2020.](#)

A quarter of the 76,000 ha of land managed by the Forest Service is designated for nature conservation. Designations include [Special Area of Conservation \(SAC\)](#), [Special Protection Area \(SPA\)](#), [Area of Special Scientific Interest \(ASSI\)](#), [Marine Nature Reserve \(MNR\)](#) and [National Nature Reserve \(NNR\)](#).

Designated areas in and adjacent to Down Forestry Planning Area (FPA) forests are listed in [Appendix II](#). As a competent authority Forest Service is required to undertake assessments of the potential impact of forestry on areas designated as either SAC or SPA. In the Down FPA this includes Strangford Lough SPA, Outer Ards SPA, Rostrevor Wood SAC, Hollymount SAC, and Eastern Mourne SAC.

In addition to identifying designated areas forest plans also identify areas in forests that correspond to priority habitats formerly described in the [EU Habitats Directive](#). These include native woodland, lowland wood pasture and parkland, species-rich grassland, bog and heathland.

Forest design plans identify areas for [native woodland](#) expansion and [natural reserves](#) which are areas where intervention is restricted. Forest design plans also identify current and planned open habitats. This includes areas which may currently be [afforested](#) and open ground along internal forest edges.

Forests and woodlands provide habitats for a number of rare and protected plants, invertebrates, birds and mammals, and support populations of wild deer which are managed to prevent damage to susceptible trees. Biodiversity of forests is also enhanced through management of deadwood habitat, and protecting ancient woodland remnant features, veteran trees, and other features of high biodiversity value from damage in the course of forest operations.

Other measures include extending the period of time between planting and [clearfelling](#) (extended rotation), and converting the management of areas to [low impact silvicultural systems](#) to maintain [continuous forest cover](#).

[Ancient semi-natural woodland](#) is particularly important as it provides a range of habitats which support a rich diversity of plants and animals compared to more recent woodland. However, it is very limited in extent and there are relatively few intact examples outside of protected areas. Such woodland can be found in or close to Forest Service forests such as Hollymount, Mourne and Rostrevor forests.

The use of [low impact silvicultural systems](#) in conifer stands is generally understood to be beneficial in terms of increasing biodiversity. Some raptor species, such as hen harrier, benefit from a mosaic of plantation ages resulting from managed clearfelling. Forest glades and unplanted breaks, or rides, are particularly important for nesting and foraging of forest edge dwelling raptor species. These species include buzzard, merlin, red kite, goshawk (*Accipiter gentilis*), kestrel (*Falco tinnunculus*) and raven (*Corvus corax*).

Forest operations are planned to avoid adverse effects on rare and vulnerable species. It is also important that people wishing to use forests for recreational purposes are aware of the needs of protected species, particularly easily disturbed breeding raptors.



Opportunity: Complete Habitats Regulations Assessments (HRAs) of revised forest plans in respect of SACs as appropriate.

Opportunity: Identify areas of open habitat where intervention is necessary to address potential loss of biodiversity, and maintain ecological connectivity.

Activity: Review potential effects of forest operations specified in forest plans.

Activity: Undertake assessments of the risk to open and parkland habitats from colonising by trees and other threats to biodiversity.

Outcomes	Benefits
- Contribution of forests to Northern Ireland biodiversity is maintained or increased.	- Opportunities for watching birds and wildlife in forests.

11 - Restoring Peatland Habitats

“Peatland covers 12% of the land area of Northern Ireland... It is a resource which is of enormous importance to the stability and general well-being of our environment, creating distinctive upland and lowland landscapes, conserving biodiversity, and affecting river catchment hydrology. Peatland is also valuable as an archival record of climatic and vegetational history and archaeological remains. Globally, peatland acts as a massive carbon store with implications for the ‘greenhouse effect’ ”.

Conserving Peatland In Northern Ireland: A Statement of Policy (1993)

Internationally, peatland habitats are threatened from human activities and climate change and are therefore considered areas of high conservation importance. Historically, in Northern Ireland, land with a peat depth of more than 50 cm was acquired on a large scale because it was considered to be suitable for [afforestation](#) without compromising agricultural production. These areas were planted with Sitka spruce (*Picea sitchensis*) and lodgepole pine (*Pinus contorta*) which are tolerant of exposure and wet soil conditions. However, as the areas acquired became more extensive and increasingly infertile it was found that greater inputs, in terms of cultivation, drainage and fertiliser, were needed to establish plantations and to maintain tree growth. This took place over large areas of Ireland and Scotland, and to a lesser extent, in Wales and northern England. Similar activity has also taken place in other European countries particularly in northern Sweden and Finland.

Growing trees which require repeated inputs of fertiliser is not consistent with [sustainable forestry](#), and requires forestry planners to specify species and [silvicultural systems](#) that require lower inputs. This limits options for productive forestry on the more infertile areas of peat which have a poor capacity to retain nutrients which are required for growth.

Restoring peatland areas, which have been highly modified to grow trees, safeguards the storage of carbon in soil, and enables the recovery of biodiversity associated with bog habitats. However, it also requires inputs in terms of tree removal or treatment of felled areas. Inputs can include removal of branches remaining from harvested trees, blocking of drains, burying of stumps, and ground-smoothing by tracked excavator. Conversion of forest to non-forest would result in a reduction in the wood production potential of forests, and, possibly, limit recreation opportunities. Therefore it is critical that potential restoration sites are identified and carefully considered. Forest Service has developed a new approach to prioritising the restoration of peatland habitats, which is provided in [Appendix III](#).

Afforested peat (>50 cm deep) comprises just 1% (52 ha) of the area of Forest Service forests in Down Forestry Planning Area. While there are a few small intact patches of blanket bog in the Mourne Mountains they provide one of the most extensive areas of upland heathland in Northern Ireland. There are also important remnant lowland raised bogs found around Ballygowan which retain small areas of peat and heather vegetation. Aghnadarragh Lough ASSI and SAC include examples of these bogs.

Opportunity: Identify and prioritise areas of peat more than 50 cm deep for restoration to open peatland habitat by applying the ‘Strategy for Restoring Peatland Habitats’.

Activity: Apply the process outlined in [Appendix III](#) for identifying and mapping potential candidate restoration areas based on peat depth, slope and topography.

Outcomes	Benefits
<ul style="list-style-type: none"> - Reduction in area of regeneration of upland forests and their timber production potential. - Change in upland forested landscapes. - Reconnection of remnant patches of isolated peatland. 	<ul style="list-style-type: none"> - Flood risk mitigation and carbon storage. - Improved NI greenhouse gas projection.

Appendix I

Composition of Forest Service forests

The areas and composition of Forest Service forests in Down Forestry Planning Area are shown by Forest Landscape Unit in Tables 1.1 and 1.2 below.

Table 1.1
Lagan Valley Landscape Unit

Forests	Area (Hectares)	Composition (%)			
		Broadleaf	Conifer	Mixed	Open ground + water
Belvoir	90	32	40	16	12
Hillsborough	193	23	52	10	15
Total Landscape Unit	283	26	48	12	14

Table 1.2
North Down and Strangford Landscape Unit

Forests	Area (Hectares)	Composition (%)			
		Broadleaf	Conifer	Mixed	Open ground + water
Ballysallagh	162	33	44	17	6
Clandeboye	101	70	13	11	6
Mount Stewart	97	34	53	10	3
Castleward	76	33	59	4	4
Hollymount	111	52	28	2	18
Total Landscape Unit	547	44	39	10	7

Table 1.3
Mourne Landscape Unit

Forests	Area (Hectares)	Composition (%)			
		Broadleaf	Conifer	Mixed	Open ground + water
Bohill	90	4	89	1	6
Drumkeeragh	200	5	88	2	5
Castlewellan	638	23	53	7	17
Tollymore	624	11	57	23	9
Donard	297	5	79	8	8
Annalong	342	4	52	1	43
Rostrevor	1676	3	63	1	33
Mourne	251	4	86	2	8
Narrow Water	138	14	60	18	8
Total Landscape Unit	4256	8	64	6	22

Appendix II

Environmental Regulation, Designated Areas, and the Historic Environment

1. Environmental Regulation

Afforestation, deforestation, forest road works and forest quarry works are subject to regulation under the [Environmental Impact Assessment \(Forestry\) Regulations \(Northern Ireland\) 2006](#), as amended under the [Environmental Impact Assessment \(Forestry\) \(Amendment\) Regulations \(Northern Ireland\) 2017](#). Thresholds beyond which projects must be screened are determined by the type of project and existence of a designation, as listed in Schedule 2 of the 2006 Regulations.

In areas designated as [Special Area of Conservation \(SAC\)](#) or [Special Protection Area \(SPA\)](#) management plans and, where necessary, operational plans in connection with forestry or recreational activities, are subject to regulation under the [Conservation \(Natural Habitats etc.\) \(Northern Ireland\) Regulations](#) (as amended), commonly referred to as the Habitats Regulations. Operational plans for forest management activities in [Areas of Special Scientific Interest \(ASSI\)](#) are subject to regulation under the [Environment Order \(Northern Ireland\)](#).

[Nature Reserves \(NR\)](#) and [National Nature Reserves \(NNR\)](#) are declared under the [Nature Conservation and Amenity Lands Order \(Northern Ireland\) 1985](#), and are managed in accordance with a management plan.

2. Designated areas

Forestry land is designated under the [Habitats Regulations](#), the [Environment Order](#), and/or the [Nature Conservation and Amenity Lands Order \(Northern Ireland\) 1985](#). Forestry land may also include Sites of Local Nature Conservation Importance (SLNCI), which are local areas designated by Councils under the [Strategic Planning Policy Statement \(SPPS\) for Northern Ireland](#), and [Retained Planning Policy \(PPS\) 2: Natural Heritage](#). Designated areas adjacent to and on land managed by Forest Service are shown in Table 1.

Table 1

Designated areas adjacent to and on land managed by Forest Service.

Designated site or area	Designation type	Forest adjacent or included within
Strangford Lough	SPA	Castleward
		Mount Stewart
Outer Ards	SPA	Clandeboyne
Clandeboyne Estate	SLNCI	Clandeboyne
Bohill Grasslands	SLNCI	Bohill
Western Mourne Habitat & Geology	SLNCI	Mourne
		Rostrevor
Rostrevor River	SLNCI	Rostrevor
Mullartown Moraine	SLNCI	Annalong
Belvoir	SLNCI	Belvoir
Shimna & Trassey Rivers	SLNCI	Tollymore
		Donard
White Water River	SLNCI	Mourne
Spelga Dam	SLNCI	Mourne
Hillsborough Park Lake	SLNCI	Hillsborough
Minnowburn	SLNCI	Belvoir
Castlewellan Lake	SLNCI	Castlewellan
Annalong River	SLNCI	Annalong
Whitespots	SLNCI	Clandeboyne
Kilbroney Park	SLNCI	Rostrevor
Portavoe Reservoir	SLNCI	Clandeboyne
Cairn Wood and Reservoir	SLNCI	Ballysallagh

Designated site or area	Designation type	Forest adjacent or included within
Purdy's Burn	SLNCI	Belvoir
Mourne Park	SLNCI	Mourne
Creighton's Green Reservoir	SLNCI	Ballysallagh
Spelga Dam Stream	SLNCI	Mourne
Downpatrick Marshes	SLNCI	Hollymount
Narrow Water Forest	SLNCI	Narrow Water
Rostrevor Wood	SAC	Rostrevor
Hollymount	SAC	Hollymount
Eastern Mournes	SAC	Annalong
		Donard
		Tollymore
Strangford Lough	Ramsar	Castleward
		Mount Stewart
Outer Ards	Ramsar	Clandeboye
Hollymount Forest	NR	Hollymount
Rostrevor Forest	NR	Rostrevor
Bohill Forest	NR	Bohill
Lagan Valley	AONB	Belvoir
Mourne	AONB	Mourne
		Rostrevor
		Annalong
		Narrow Water
		Donard
		Tollymore
		Castlewellan
		Drumkeeragh
Strangford and Lecale	AONB	Hollymount
		Castleward
		Mount Stewart
Hollymount	ASSI	Hollymount
Tullyratty	ASSI	Castleward
Whitespots	ASSI	Clandeboye
Eastern Mournes	ASSI	Annalong
		Donard
		Tollymore
Western Mournes and Kilfeaghan Upper	ASSI	Mourne
		Rostrevor
Castlewellan Lake	ASSI	Castlewellan
Kilbroney River	ASSI	Rostrevor
White Water River	ASSI	Mourne
Belvoir	ASSI	Belvoir
Rostrevor Wood	ASSI	Rostrevor
Shimna River	ASSI	Tollymore
		Donard
Strangford Lough	MNR	Mount Stewart
		Castleward

3. Forests and the Historic Environment

Forests and woodland often include historic sites, such as earthworks, ruined structures and buried archaeological features. These may be designated as state care or scheduled sites and monuments, or they may be non-scheduled. Features listed in the [Northern Ireland Sites and Monuments Record](#) (NISMR) that are located in forests or within 50m of forest boundaries are shown in Table 2. Some Forest Service forests include or are connected to areas of [historic parks, gardens and demesnes](#) including Mourne, Narrow Water, Tollymore, Castlewellan, Hillsborough, Castleward, Mount Stewart, Clandeboye and Belvoir Park.

Table 2

State-care, scheduled and non-scheduled historic sites and monuments located in or near forest boundary (within 50m).

Forest	Townland	Type	Protection	Location
Belvoir	Ballylenaghan	Motte: Belvoir Park Mound (Medieval)	Scheduled	In forest
	Ballylenaghan	A.P. site	Non-scheduled	Near forest
	Breda	Graveyard & site of Medieval Church: Bradach	Non-scheduled	Near forest
Castlewellan	Clarkill	Landscape feature - tree ring	Non-scheduled	In forest
	Clarkill	Non-antiquity	Non-scheduled	In forest
	Clarkill	A.P. site – rath (possible)	Non-scheduled	In forest
	Clarkill	Graveyard	Non-scheduled	In forest
	Clarkill	D-shaped enclosure - possible cemetery	Scheduled	In forest
	Clarkill	Non-antiquity: stone cross	Non-scheduled	In forest
	Clarkill	Inscribed stone, dated 1675	Non-scheduled	In forest
	Castlewellan	Enclosure	Non-scheduled	In forest
	Castlewellan	Stone structure	Non-scheduled	In forest
	Castlewellan	Enclosure	Non-scheduled	In forest
	Dundrinne	Souterrain	Non-scheduled	In forest
	Clonvaraghan	Cashel & souterrain with possible House Platform: Clonvaraghan Wood	Scheduled	In forest
Clandeboye	Conlig: Whitespots	Lead mine; engine house; shafts etc. (C19th)	Scheduled	Near forest
	Orlock	Burnt mound	Non-scheduled	Near forest
	Whitespots	Lead mine - chimney	Scheduled	Near forest
Donard	Murlough Upper	Non-antiquity	Non-scheduled	Near forest
Hillsborough	Large Park (Hillsborough)	Rath: Fox Fort	Non-scheduled	In forest
	Large Park (Hillsborough)	Enclosure	Non-scheduled	Near forest
	Large Park (Hillsborough)	Counterscarp rath	Non-scheduled	In forest
	Large Park (Hillsborough)	Counterscarp rath	Non-scheduled	In forest
Hollymount	Hollymount	A.P. site – double ditched cropmark	Non-scheduled	In forest
	Ringreagh	Medieval church & graveyard (unlocated): St. Mary Magdalene	Non-scheduled	Near forest

Forest	Townland	Type	Protection	Location
Mount Stewart	Mount Stewart	Medieval Church: Templecran	Non-scheduled	Near forest
	Mount Stewart	Motte: Moat Hill (Medieval)	Scheduled	In forest
	Mount Stewart	Multiple cist cairn (pre-historic; Bronze Age)	Descheduled	Near forest
	Mount Stewart	Rath: Fort Hill	Non-scheduled	In forest
Mourne	Ballyrogan or Mourne Park	Stone faced rath: Lisclava	Non-scheduled	In forest
	Aughrim	Penal Site	Non-scheduled	Near forest
	Stang	Booley huts: Deers' Meadow	Non-scheduled	In forest
Narrow Water	Narrow Water	Lithic scatter: possible lithic working site	Non-scheduled	Near forest
Tollymore	Tollymore Park	Cashel: White Fort	Scheduled	In forest
	Tollymore Park	Cairn: The King's Grave (pre-historic)	Non-scheduled	In forest
	Tollymore Park	Tree ring (modern)	Non-scheduled	In forest
Rostrevor	Rostrevor Mountains	Enclosure	Non-scheduled	In forest
	Ballintur	Rath	Non-scheduled	In forest
	Rostrevor Mountains	Enclosure	Non-scheduled	In forest
	Ballyedmond	Natural feature – glacial boulder: Cloghgarran	Non-scheduled	In forest
	Rostrevor Mountain	A.P. site – circular enclosure	Non-scheduled	In forest

Appendix III

Strategy for Restoring Peatland Habitats

1. Rationale

1.1 Northern Ireland Forestry Strategy

The Northern Ireland Forestry Strategy, '[Northern Ireland Forestry – A Strategy for Sustainability and Growth](#)' (2006) restates policy as:

- The sustainable management of existing woods and forests.
- A steady expansion of tree cover to increase the many diverse benefits that forests provide.

The strategy indicated that an amended Forestry Act would place a duty on the Department to promote [afforestation](#) and [sustainable forestry](#), which duly came into effect in 2010.

The Northern Ireland and UK Governments approach to sustainable forestry is set out in the [UK Forestry Standard](#) (UKFS), which is currently in its 4th edition (2017). The UKFS reiterates the legal requirement that “Appropriate protection and conservation must be afforded where sites, habitats and species are subject to the legal provisions of EU Directives and UK and country legislation”. In addition in Northern Ireland, the [Wildlife and Natural Environment Act \(Northern Ireland\) 2011](#) places a General Duty on every public body to ‘further the conservation of biodiversity so far as is consistent with the proper exercise of those functions [it exercises]’.

The [UKFS](#) includes a number of general forestry practice requirements and guidelines that are applicable to [afforested](#) peat or peatland habitats modified for afforestation.

The standard requires forest plans to take full account of a range of requirements and guidelines relating to forest design, biodiversity, water, soil, climate change and provides scope for undertaking peatland restoration projects to improve the delivery of [ecosystem services](#). The requirements that are most relevant to the topic of restoring peatland habitats are Forests and Biodiversity general forestry practice requirements 1 and 4:

- Forests and woodlands should be managed in such a way that conserves or enhances biodiversity; opportunities for enhancing biodiversity should be considered in forest management plans.
- Particular consideration should be given to conserving, enhancing or restoring priority habitats and species identified in the statutory lists of priority species and habitats for England, Scotland, Wales and Northern Ireland, through the delivery of country biodiversity strategies and local level plans.

Forests and Biodiversity Guidelines 24 and 26 refer specifically to restoration of habitats and degraded features:

- Consider practical opportunities to restore open habitats where their value could be reinstated and sustained.
- Ensure wetland features such as springs, flushes and bogs are protected, and take opportunities to restore degraded features.

The UKFS is also the basis of forestry practice for the independent [UK Woodland Assurance Standard \(UKWAS\)](#), which is used for voluntary independent certification. The relevant UKWAS sections include: 2. Management Planning, and 4. Natural, historical and cultural environment:

- 2.1 Long-term policy and objectives
- 2.2 Documentation

- 2.11 Conservation
- 2.13 Conversion
- 2.14 Implementation, amendment and revision of the plan
- 2.15 Monitoring
- 4.1 Statutory designated sites and protected species

1.2 Northern Ireland Biodiversity Strategy

The Northern Ireland Biodiversity Strategy, '[Valuing Nature - A Biodiversity Strategy for Northern Ireland to 2020](#)' (2015), refers to the importance of peaty soils and associated priority habitats, including blanket bog and lowland raised bogs, in providing [ecosystem services](#), such as clean water supplies, carbon storage, and recreation, and identifies forestry and other land management practices as potential threats to these services.

The strategy indicates that many ecosystems, such as peatlands, are in a relatively poor condition, and states the need to reverse the decline and work towards Favourable Conservation Status. It emphasises the importance of peatland soils and vegetation as a carbon store and suggests their value in sequestering carbon may become a particularly economically advantageous characteristic as carbon accounting becomes more important.

1.3 Review of forest design plans

The review stage of forestry planning involves re-examining management objectives, and the forest data on which they are based. Long-term objectives are presented in the form of design plans, which show planned boundaries between forest and open ground and planned felling and regeneration. Forest design plans meet the requirements of the UK Forestry Standard in relation to the proportions of tree species, the proportion managed as open ground, and overall area managed primarily for biodiversity. Adjustments to these proportions are made in the course of felling and regeneration, which can include the introduction of more open ground, and through specific programmes, including, for example, tree planting, and, removal of trees colonising open ground.

1.4 Stakeholder engagement

'Restoring Peatland Habitats' is one of 11 topics identified as a basis for engaging with stakeholders at the initial, scoping stage of forestry planning. Stakeholders responding to the Sperrin scoping consultation in 2018 indicated they were in favour of the restoration of [afforested](#) peatlands; responses from forest industry stakeholders suggested that peatland forestry was, in some cases, an unsustainable land use, while others indicated that restoration could generate environmental benefits, including carbon sequestration and flood risk mitigation.

Stakeholders will be given the opportunity to comment on proposals to review forest design plans via the forestry pages on the DAERA website. As planning proceeds proposals will be developed for all remaining forests by 2022.

1.5 Restoration potential

The rationale for restoration of blanket bog reflects the potential to achieve appropriate hydrological conditions, based on external peat depth and slope datasets. Proposals to convert afforested peatlands or peatlands modified by forestry practices to priority bog habitat will exclude sites that have become degraded due to peat cutting or erosion, intensively drained areas dominated by heather, areas colonised by native tree species, and areas that have developed into native wet woodland.

1.6 Sustainable wood production

The strategy should not affect the potential of forests to deliver sustainable wood production. Candidate restoration areas will mainly consist of areas that were previously identified as open ground in forest design plans and will be excluded from regeneration plans. Assessments undertaken in conjunction with forestry planning have indicated that peatland forests also include a proportion of uneconomic stands comprised of checked (where growth has ceased or stagnated), nutrient deficient or dying trees.

2. Prioritisation of candidate restoration areas

2.1 Site selection criteria

- Planned open ground (either current or in forest design plan).
- Adjacent and integral to designated areas*, or non-designated priority habitat.
- Peat depth $\geq 0.5\text{m}$ and slope $\leq 3^\circ$ over most of the area.
- Afforested areas which are uneconomic (failed, checked, nutrient deficient or dying) or unplanted areas modified by forestry operations and / or colonised with non-native species.

*SAC/ASSI, ASSI, NNR, LNR, and SLNCI

2.2 Prioritisation of restoration

Priority 1: Meeting all criteria: uneconomic stands, peatlands modified by forestry practices or areas colonised with non-native trees shown as open ground priority habitat in design plans, adjacent and integral to designated or non-designated priority habitat, and where peat depth $\geq 0.5\text{m}$ and slope $\leq 3^\circ$ over most of the area

Priority 2: Planned open ground, predominantly meeting remaining criteria; may include up to 30% productive stands (Sitka spruce General Yield Class (GYC) ≥ 10 or lodgepole pine GYC 8).

Priority 3: As for Priority 2, but does not fully meet peat depth and slope criterion.

3. Context of the Strategy and Implementation Plan

- The strategy for restoring peatland habitats in forests supports Northern Ireland strategies for forestry and biodiversity.
- It updates earlier Forest Service strategies and plans related to restoring peatland habitats.
- To prepare operational plans for bog restoration for Priority 1 areas.
- By 2022, to ensure all forestry planning areas have been reviewed to identify candidate peatland restoration sites.
- By 2030, to review the strategy and undertake a strategic review of candidate peatland restoration projects.

4. Review

The rationale and strategy will be subject to review as necessary in respect of:

- The potential to make adjustments to felling plans in response to significant changes to timber marketing conditions affecting poor quality and diseased lodgepole pine, and checked and nutrient deficient Sitka spruce stands.
- The requirement to undertake restoration of heathland habitats; this will be assessed as planning reviews take place.
- The development of a wider Forest Service strategy for the management of open priority habitats.
- New research and technical information

Map 1: Forests and woodland in Down Forestry Planning Area

