

Forest Management Plan

Benbulbin Forest

Forest Code: SO01

Period Covered: 2011 to 2015

Version 2.1

District Manager

Eugene Griffin

Coillte
Lough Key

Boyle

Co. Roscommon

Tel.: 071-967027

Fax.:

Forest Manager

Brian Mc Garraghy

Coillte
Government Build

Cranmore Road

Sligo

Co. Sligo.

Tel.: 071-9162663

Fax.: 071-9143014

The logo for Coillte, featuring the word "coillte" in a bold, green, lowercase sans-serif font. The letters are slightly irregular, with a modern, rounded feel. The logo is set against a light green rectangular background.

What is this document?

The term "Forest Management Plan" (FMP) describes all the site-level plans for the land managed by Coillte. Each site level plan represents the best balance of the social, economic and environmental objectives sought by our shareholders and stakeholders. This document is a summary of the management plans for the forest in question and is designed to be used with Coillte's online mapviewer where you can view more detail on the location, nature and timing of felling and replanting :

www.coillte.ie/forests/plans/forest_management_plans/online_map_viewer/

The glossary of terms for Forest Management Plans would also be useful (see www.coillte.ie/forest_management_plans/glossary/)

Introduction

Benbulbin forest is situated in North Sligo straddled by Drumcliff Bay in the west and by Benbulbin mountain range in the east. Lissadell estate is located in the middle of the Forest with Drumcliff, Carney, Grange, Cliffoney, and Mullaghmore are some of the villages in the location. Gleniff or (Horseshoe) is a scenic area and an attraction to tourists. Also the River Duff winds its way through this property famous for its salmon fishing. The Forest is made up of 326 hectares of primary conifer forest with the main soil types being gleys and peaty gley and a small amount sandy clay. The topography is mountainous; Benbulbin, Benwisken, Truskmore mountains set in a Special Area of Conservation (SAC) and a Natural Heritage Areas (NHA) and some in high sensitivity areas. The N15 passes through this Forest and is the main road to south Donegal.

Nature Conservation

Approximately one third of the forest is being managed for conservation and biodiversity objectives and all forest operations will be carried out with the intention of maintaining and where possible enhancing those areas of the forest.

Recreation

Coillte operates a open forest policy and welcomes all visitors to the forest in the line of recreation code of uses. Lissadell has an attractive amenity area which over looks the beach area which has seating provided . It also has a forest walk which links up to the goose field.

Security

Illegal dumping is becoming a very prevalent issue especially in rural areas of this forest where the population is low, Coillte is striving to minimise these instances of antisocial behaviour and would welcome the assistance of the public in solving this increasing problem.

There has being a number of cases of animals trespassing, which cause expensive damage to our newly established crop and fences.

There have been some instances of fires in the past which can cause considerable damage.

Adjoining land use

Agriculture is the main adjoining land use in Benbulbin which is mainly sheep and cattle.

Other comments

This forest is located in a very scenic area of north Sligo. Benbulbin mountain is a landmark in this area as is the River Duff, Mullaghmore which has the castle and Lissadell House in Lissadell.

The forest has a lot of history in this area. Just on the border of Leitrim and Sligo lies Glencar Lake and is a most enchanting area. Beside Glencar Lake is Glencar Waterfall and it was here that the setting and charm of the area inspired W.B. Yeats to write "The Stolen Child".

WB Yeats is buried in Drumcliffe. The Gore Booths lived in Lissadell. Lord Mount Batton lived in Mullaghmore. There was mining carried out on top of Truskmore mountain in the seventies for barritus.

Coillte's practice is to sell, lease or develop a limited area of non-strategic land, for purposes other than forestry. Most sales are made in response to local demand and typically comprise house sites, isolated dwelling houses, sections of recently acquired farms, small outlying forest properties and gravel pits. The land in Forest Properties Ardnaglass (MU MO085), Ballyscannel, Kennellswood (MU MO060) may be sold or developed for non-forestry purposes during the lifetime of this plan. Although forest management staff will be happy to discuss what they know of the plans for these areas the actual sale, if it proceeds, will be subject to the consultation procedures as detailed in our Stakeholder Consultation Code of Practice

http://www.coillte.ie/community/consultation_policy/ (and Coillte's policy on removal of these lands from those covered by our SFM certificate

http://www.coillte.ie/businesses/land_development/property_management_policy/?no_cache=1&sword_list%5B%5D=POLICY

Forest management

Management Approach

The forest, like all of Coillte forests, is being managed under the principles of Sustainable Forest Management and is certified by the Forest Stewardship Council (FSC). Sustainable Forest Management principles ensure economic, social and environmental sustainability in the day to day management of forests.

The management focus is concerned with sustainable timber production and the reforestation of all clearfell areas in accordance with environmental guidelines. The main forest objectives are timber production at 71% and biodiversity at 29%, conservation and to increase broadleaf planting in some properties in next rotation. Large numbers of migrating birds spend the winter months in what is known locally as the goosefield in the Lissadell area. The protection of wildlife habitats and bird sanctuaries is very important.

Thinning and clearfell

There are approximately 80 hectares of clearfell planned for this period. There is also plans to thin approximately 160 hectares of the forest in this period of the plan. Historically the forest has been thinned where possible .

Site disturbance is part and parcel of clearfelling and restructuring of the forest, disturbance and inconvenience to the public will be kept to a minimum and within a few years for diversity of species will be re-established in restructuring of the forest areas and the forest cycle will continue.

Replanting

The majority of areas felled will be replanted. Areas designated for timber production will be planted primarily with spruce and larch. Broadleaves will be planted in areas which have been applied for under the Native Woodland Scheme. Other areas will be left unplanted to enhance the biodiversity value. Some areas will be managed mainly for biodiversity and conservation and where possible native broadleaves such as oak, ash, hazel, will be planted. Riparian zones, river edges in most cases will be left unplanted apart from small groups of broadleaves to promote biodiversity.

Current forest statistics

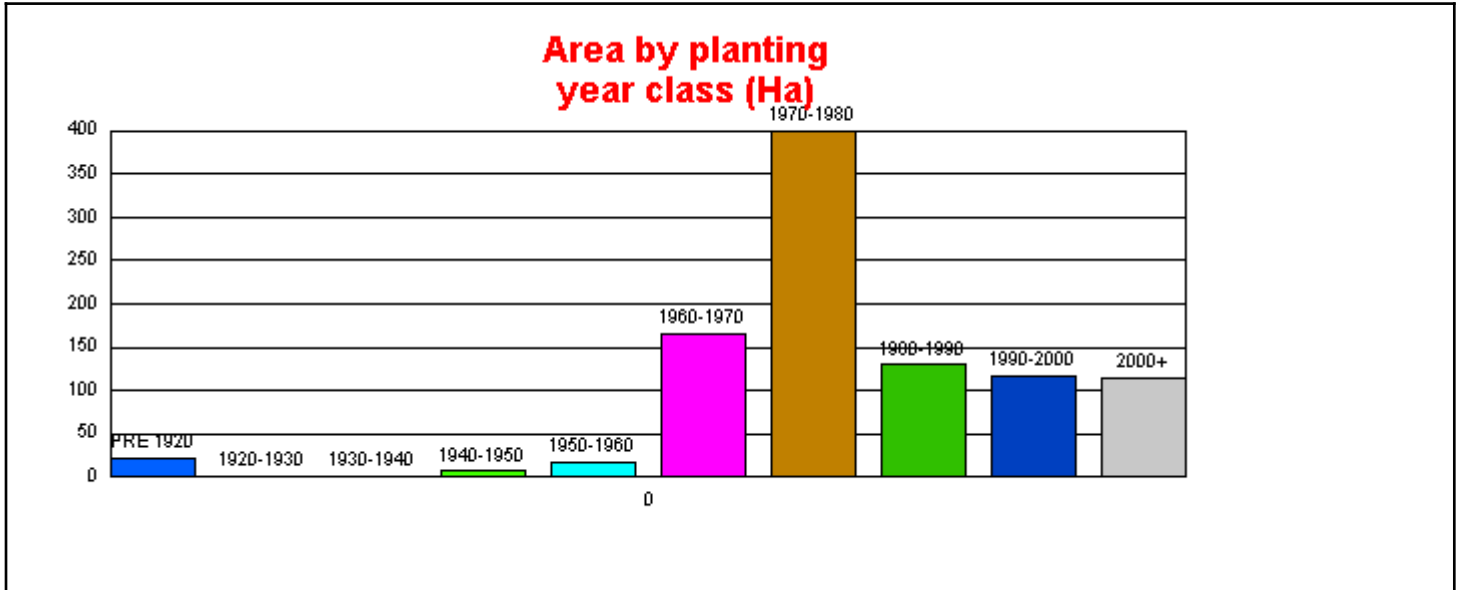
LAND USE TYPE	GROSS AREA (HA)
BHF	48
CHF	973
MHF	37
MISC	1
SCRUB	31
SWAMP	4
UNDEV	3
BAREMG	12
BAREPL	9
BAREUP	15
BURNED	3
FELLED	7
Total gross area (Ha)	1,143

Land use type by gross area



Bare marginal (YC < 14)	1.1%
Bare plantable	0.7%
Bare unplatable	1.3%
B'leaf which cannot grow to HF	2.7%
Broadleaf high forest	4.2%
Burned conifer or broadleaf	0.3%
Conifer (YC < 4)	0.3%
Conifer high forest	85.2%
Felled conifer or broadleaf	0.6%
Miscellaneous	0.1%
Mixed conifer & broadleaf HF	3.2%
Waterlogged area	0.4%
Total:	100.0%

Based on INV_04



Social & Environmental Impact Assessment

Coillte's Social and Environmental Impact Assessment (SEIA) is the means by which we document the potential threats to the forest and its environment from our activities or the activities of others and our approach to reducing the risk of damage.

We asked for submissions from the public at our pre-planning consultation stage and this is where each issue should be dealt with. In some cases we will not have been able to implement all suggestions in full but you should be able to see the reasons why, in the interests of balance, an alternative course of action was taken.

The item labelled 'DSP Ref' refers to a District Strategic Plan which sets in context how Company policy is implemented at ground-level in some of these areas. The District Strategic Plans for each District are found at :

http://www.coillte.ie/forests/plans/district_strategic_plans/

Topic:	Amenity/Recreation		
	<u>Topic consultation</u>	<u>DSP ref</u>	<u>Impact rating</u>
	Residence Lissadell area		MEDIUM
<u>Issue details</u>		<u>Risk mitigation</u>	
Poor up keep of entrances and forest walks.		Regular inspections and upkeep as necessary.	
Topic:	Archaeology		
	<u>Topic consultation</u>	<u>DSP ref</u>	<u>Impact rating</u>
	Archaeology sites in many properties.		MEDIUM
<u>Issue details</u>		<u>Risk mitigation</u>	
Damage to features.		Adhere to all Forest service Guidelines.	
Topic:	Landscape impact		
	<u>Topic consultation</u>	<u>DSP ref</u>	<u>Impact rating</u>
			MEDIUM
<u>Issue details</u>		<u>Risk mitigation</u>	
Large coupe felling would have a negative impact on landscape in scenic areas.		Large coupe felling to be minimised and restructuring and diversity of species for future landscapes.	
Topic:	Trespass		
	<u>Topic consultation</u>	<u>DSP ref</u>	<u>Impact rating</u>
	Local landowners		MEDIUM
<u>Issue details</u>		<u>Risk mitigation</u>	
Animal trespass, damage to new plantations.		Fencing -Liase with neighbouring landowners.	

<u>Topic:</u>	<u>Water quality</u>		
	<u>Topic consultation</u>	<u>DSP ref</u>	<u>Impact rating</u>
	Part of this forest, Gleniff in particular which is in the River Drewas catchment area and well known Salmon and Trout river. Water		MEDIUM
<u>Issue details</u>	monototing to be carried out on any active sites in this area.	<u>Risk mitigation</u>	
Danger of pollution and sedimentation of river as a result of harvesting		consultation with fisheries in place prior to any harvesting in this area and permission sought to proceed with harvesting	

Forest Management Plan Summary

Thinning

Thinning, whereby a portion of the trees are removed at successive stages prior to clearfell, is a desirable practice when aiming to grow quality timber. This table shows the maximum total area which may be scheduled for thinning during the period of this plan in each of the Coillte forest properties in this forest. This level of thinning would mark a significant increase over previous years and is purely an indicative, aspirational level. Please note that Coillte forest property names do not always follow townland names or boundaries.

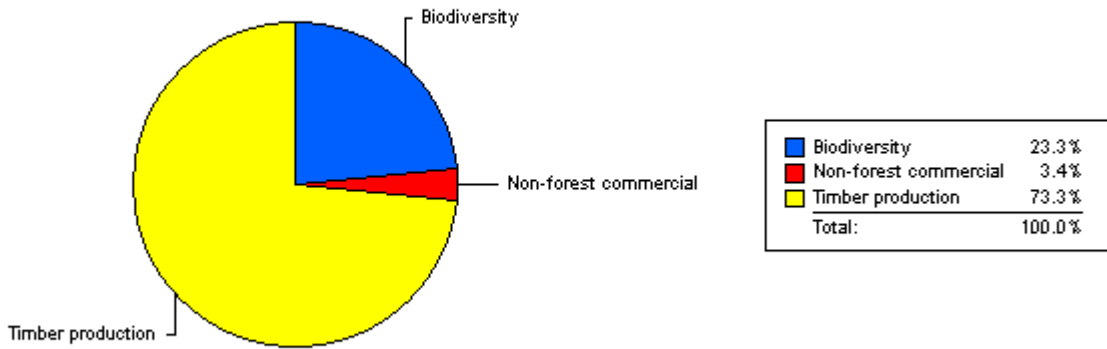
Potential thinning areas

<u>FOREST PROPERTY</u>	<u>THINNING AREA (HA)</u>
ARDNAGLASS	26
CARNDUFF	54
CASTLEGAL	18
CLOONERCO	15
COLLINSFORD	8
DRUMCLIFF NORTH	16
FORMOYLE	17
GLENIFF	108
GORTAROWEY	55
GORTNADRUNG	81
KILSELLAGH	45
LISSADELL	134
MULLAGHNANEANE	7
Total	583

Management Objective

Coillte's estate is managed on a multi-objective basis, where an attempt is made to balance the pursuit of economic returns, environmental protection and enhancement and social returns like landscape protection and employment. Rather than attempting to achieve a perfect balance on every site we recognise that some sites have a greater potential than others in pursuing different objectives. To this end, we nominate a principal objective for each site. This categorisation for this forest is outlined below.

Management Objective by Area

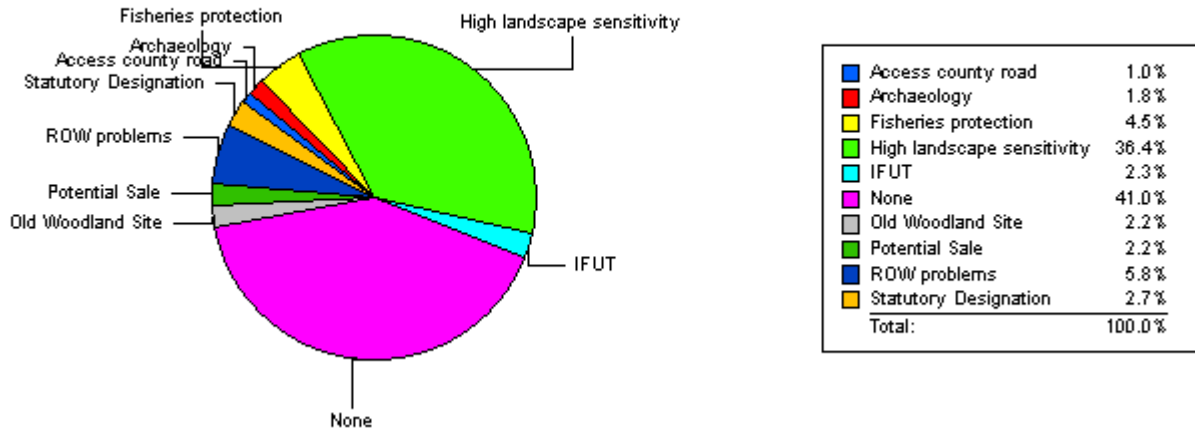


<u>Management Objective</u>	<u>Biodiversity sub-objective</u>	<u>AREA (HA)</u>
Biodiversity	Buffer zone (general)	33
	Habitat protection	233
Non-forest commercial		39
Timber production		838
Total		1,143

Constraint or secondary objective

This graph shows the forest area categorised by the principal constraint or, in many cases, secondary objective being pursued on each site.

Management Constraint by Area

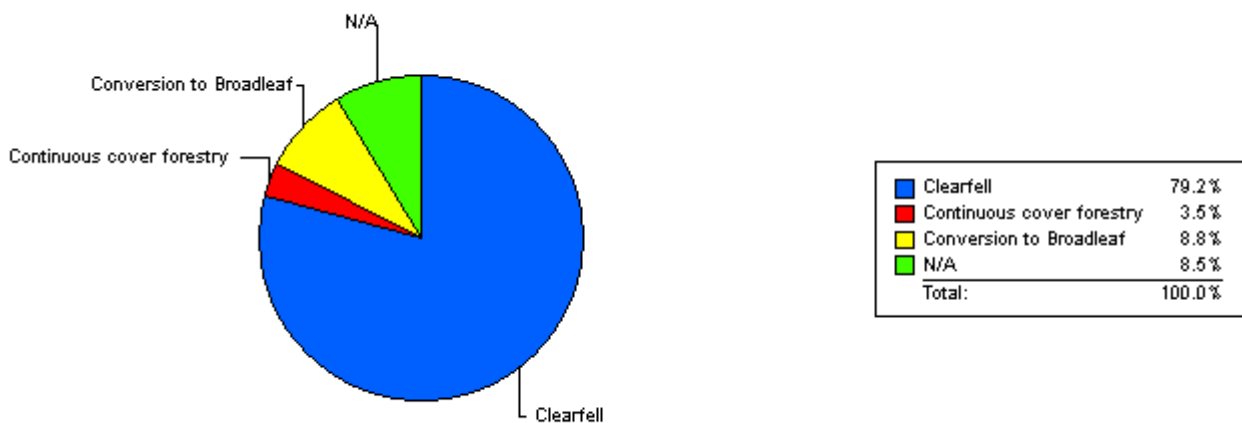


<u>MANAGEMENT CONSTRAINT</u>	<u>MANAGEMENT OBJECTIVE</u>	<u>AREA (HA)</u>
Access county road	Biodiversity	2
	Timber production	9
Archaeology	Timber production	21
	Biodiversity	33
Fisheries protection	Non-forest commercial	4
	Timber production	15
High landscape sensitivity	Biodiversity	76
	Timber production	340
IFUT	Biodiversity	22
	Non-forest commercial	4
None	Biodiversity	86
	Non-forest commercial	4
	Timber production	379
Old Woodland Site	Biodiversity	26
	Non-forest commercial	19
Potential Sale	Timber production	7
	Timber production	67
ROW problems	Biodiversity	22
	Non-forest commercial	8
Total		1,143

Silvicultural System

This graph shows the forest area categorised by the silvicultural system employed on each site.

Current Crop Silvicultural System by Area

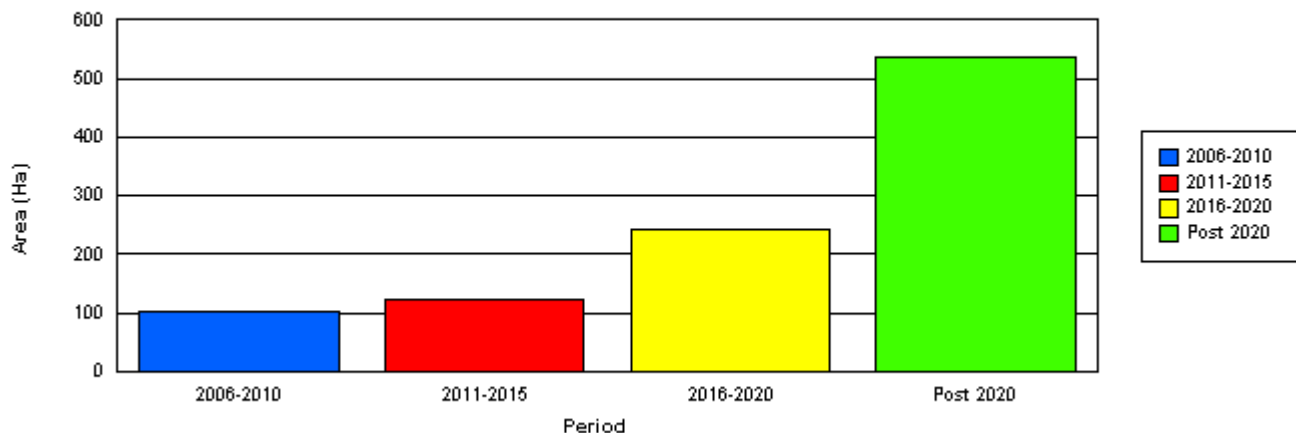


<u>SILVICULTURAL SYSTEM</u>	<u>MANAGEMENT OBJECTIVE</u>	<u>AREA (HA)</u>
Clearfell	Biodiversity	131
	Timber production	773
Continuous cover forestry	Biodiversity	17
	Timber production	22
Conversion to Broadleaf	Biodiversity	59
	Timber production	42
N/A	Biodiversity	59
	Non-forest commercial	39
<u>Total</u>		1,143

Felling areas

This graph shows the total area which is scheduled to be felled in each 5 year period shown. This is based on a summation of site-by-site plans where an indicative fell year is given.

Clearfell area by period and forest property



AREA (HA)

2006-2010

GLENIFF	58
GORTNADRUNG	12
LISSADELL	8
MULLAGHNANEANE	22
Period total:	101

2011-2015

ARDNAGLASS	42
CLOONERCO	5
GLENIFF	11
GORTNADRUNG	7
LISSADELL	56
Period total:	122

2016-2020

ARDNAGLASS	9
CARNDUFF	26
CASTLEGAL	18
CLOONERCO	17
FORMOYLE	5
GLENIFF	39
GORTAROWEY	45
GORTNADRUNG	12
KILSELLAGH	24
LISSADELL	43
MULLAGHNANEANE	4
Period total:	243

Post 2020

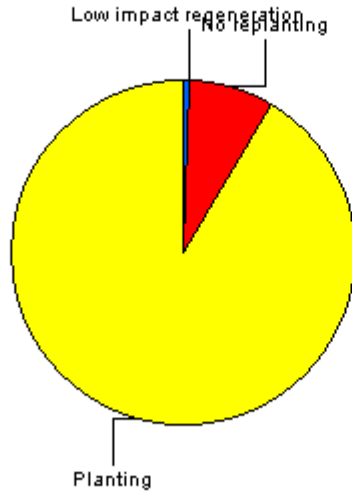
ARDNAGLASS	32
CARNDUFF	33
CASTLEGAL	9
CLOONERCO	8
COLLINSFORD	4
DRUMCLIFF NORTH	16

FORMOYLE	71
GLENIFF	158
GORTAROWEY	58
GORTNADRUNG	54
KILSELLAGH	21
LISSADELL	62
MULLAGHNANEANE	11
Period total:	<hr/> 537

Regeneration plans

This graph shows the forest area categorised by the method of restocking to be used for each site.

Regeneration Method by Currently Forested Area

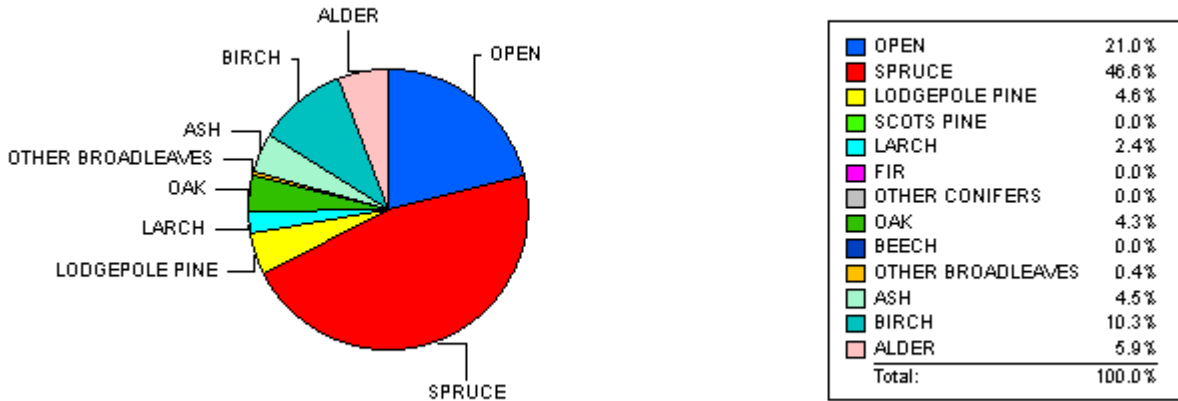


Low impact regeneration	0.5%
No replanting	8.1%
Planting	91.4%
Total:	100.0%

<u>REGENERATION METHOD</u>	<u>MANAGEMENT OBJECTIVE</u>	<u>AREA (HA)</u>
Low impact regeneration	Biodiversity	5
No replanting	Biodiversity	58
	Non-forest commercial	33
Planting	Biodiversity	186
	Timber production	838
Total		1,120

Restock 2011-2015

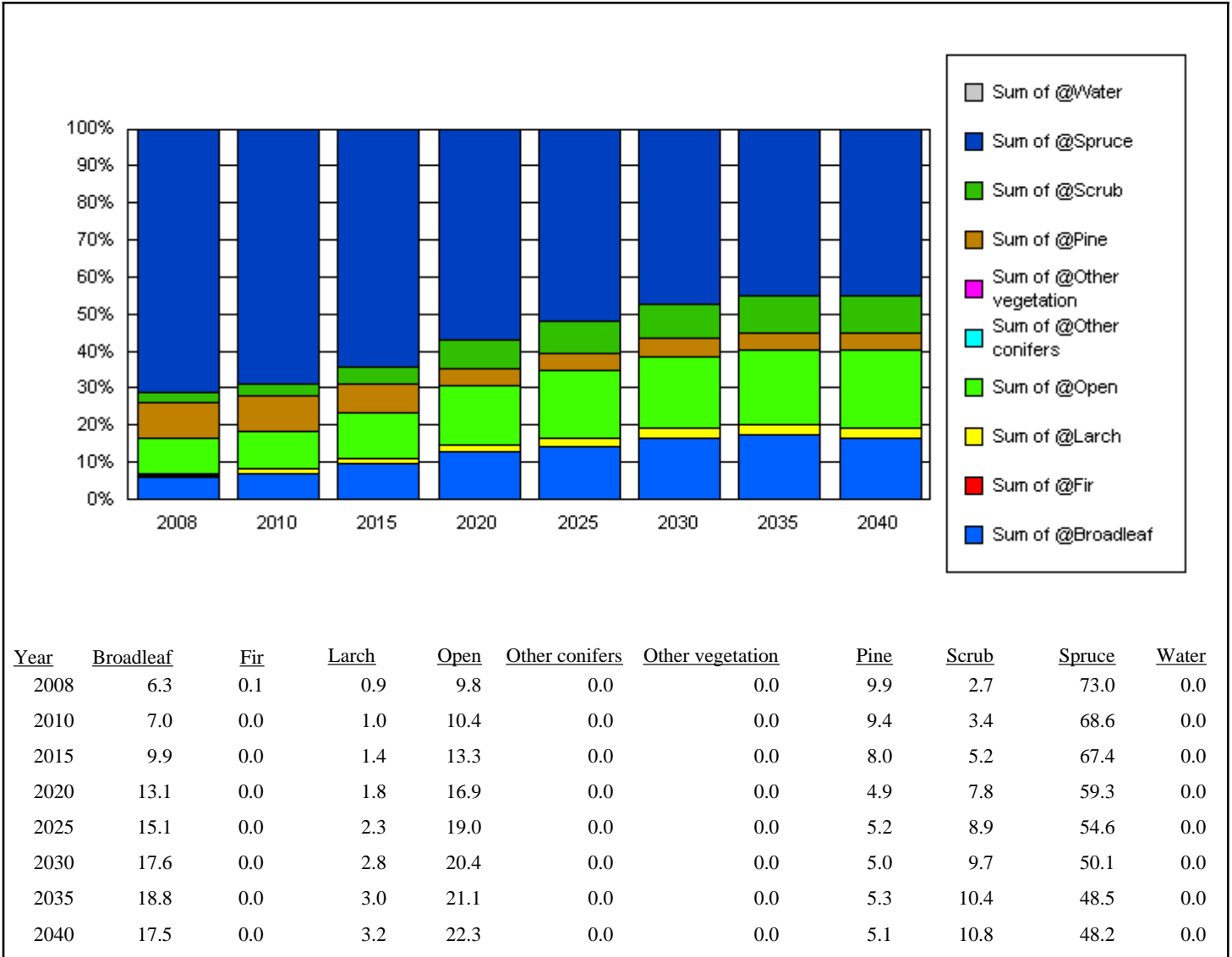
This graph shows the forest area categorised by the species being used in restocking each of the sites being felled during the period 2011-2015.



<u>OPEN</u>	25.6	<u>OAK</u>	5.3
<u>SPRUCE</u>	56.8	<u>BEECH</u>	0.0
<u>PINE</u>	5.6	<u>OTHER BROADLEAVES</u>	0.5
<u>SCOTS PINE</u>	0.0	<u>ASH</u>	5.4
<u>LARCH</u>	2.9	<u>BIRCH</u>	12.6
<u>FIR</u>	0.0	<u>ALDER</u>	7.2
<u>OTHER CONIFERS</u>	0.0	<u>TOTAL</u>	121.9

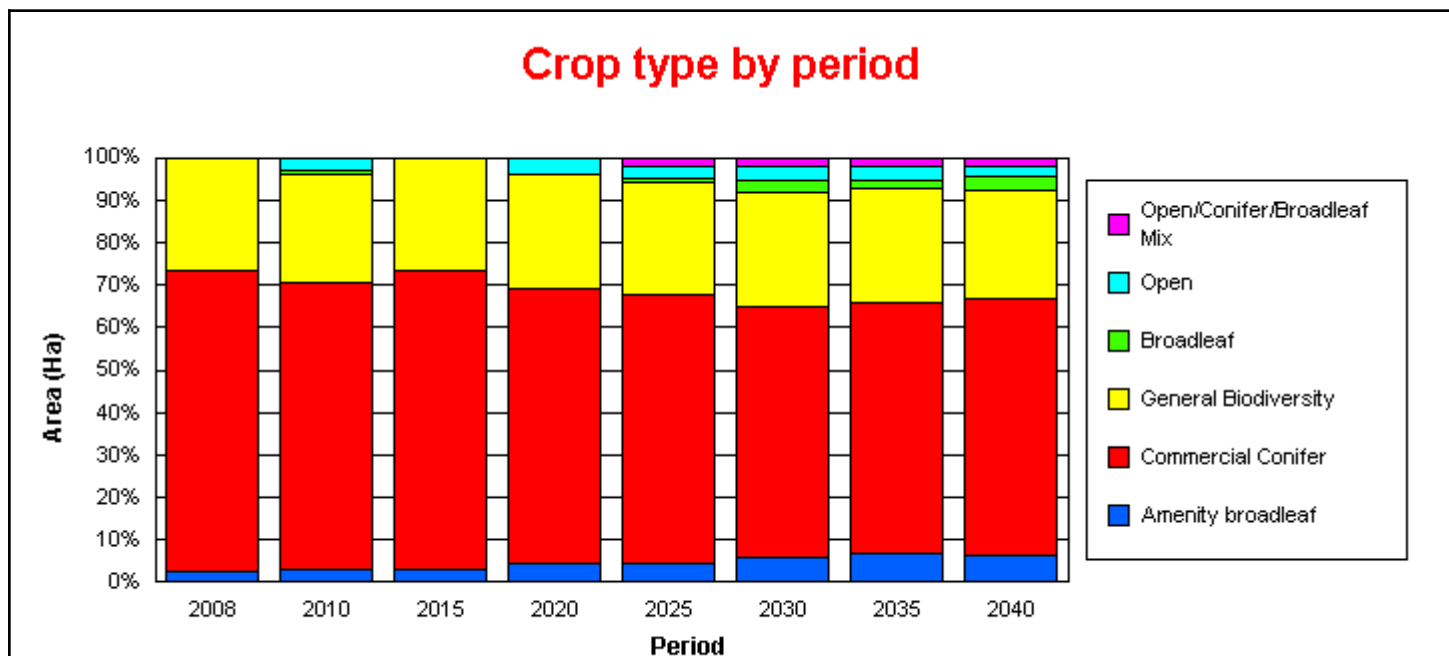
Species diversification

This graph shows how the total forest area occupied by different species groupings and open space will develop in this forest over time. This is calculated using the current inventory of what species is growing on each site, when the site will be felled, and what has been chosen as the successor crop in this Forest Management Plan.



Crop type diversification

Displayed below is a chart showing the development of "crop type" which is a site-by-site categorisation of each Management Unit. For example, a block of forest which is 70% conifer and 30% broadleaf will be reported as "Conifer/Broadleaf mix".



Crop type Area (Ha) in each period

	2008	2010	2015	2020	2025	2030	2035	2040
Amenity broadleaf	25.8	32.7	32.7	50.5	50.5	64.3	75.5	72.4
Broadleaf		8.3			9.3	34.7	25.4	42.8
Commercial Conifer	812.0	773.7	805.1	742.2	723.1	680.1	678.9	693.9
General Biodiversity	305.1	295.6	305.1	305.1	305.1	305.1	305.1	287.7
Open		32.5		45.0	34.2	38.0	37.4	25.4
Open/Conifer/Broadleaf Mix					20.6	20.6	20.6	20.6
Total	1,142.8	1,142.8	1,142.8	1,142.8	1,142.8	1,142.8	1,142.8	1,142.8

Rural broadband rollout

In January 2009 the Irish Government awarded the contract for the National Broadband Scheme to '3 Ireland'. This project aims to provide Ireland with universal broadband coverage by 2010. Coillte is in a position to facilitate this rollout by providing sites. Sites with the potential to contribute to this programme that are located in this forest may be found in the following District Electoral Divisions:

DED NAME

CLIFFONY SOUTH

LISSADILL WEST

