All Ireland Roundwood Production Forecast 2016-2035

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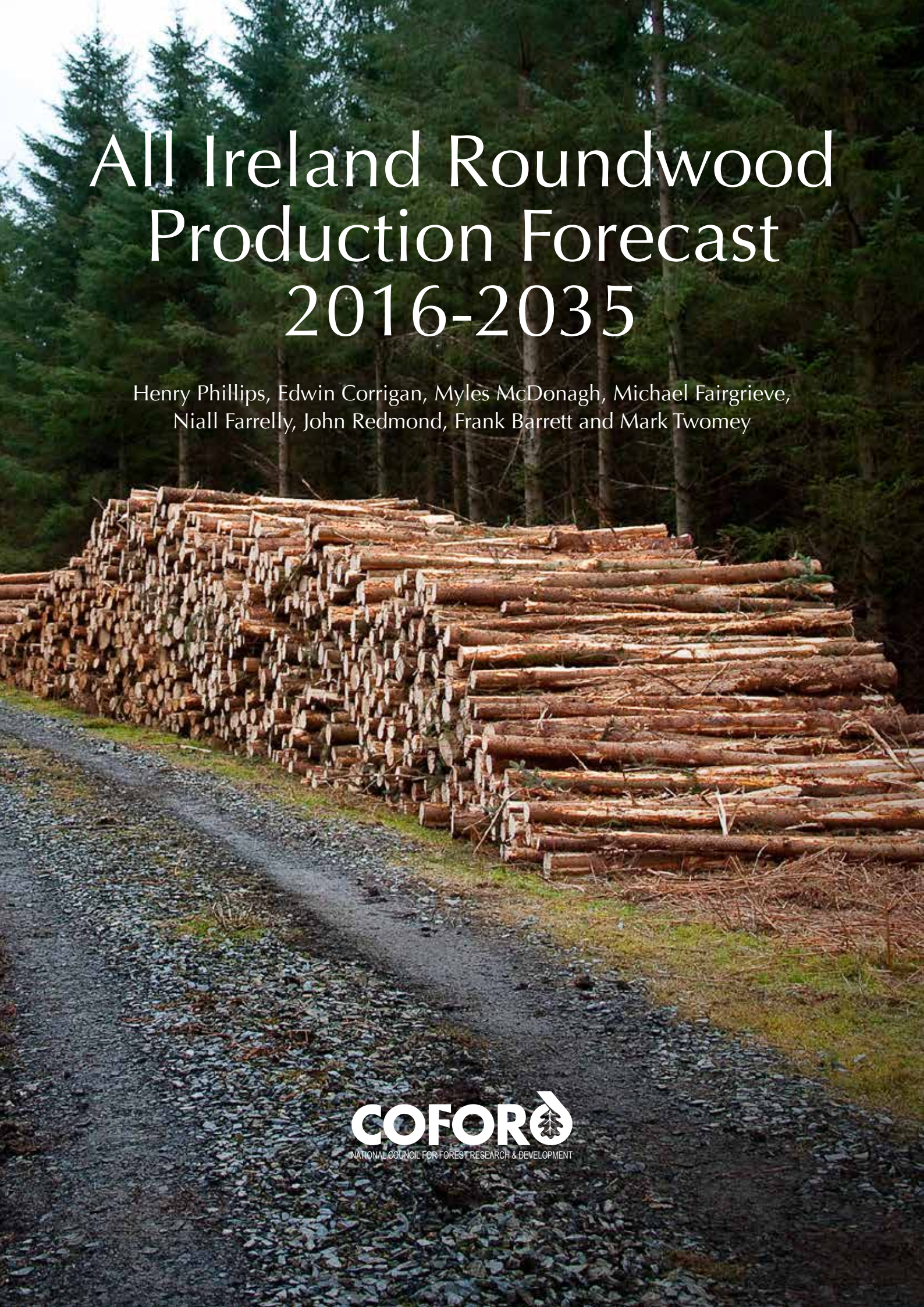

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AN COMHAIRLE NÁISÚNTA UM THAIGDE AGUS FORBAIRT FORAOISE

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Interpretation advice

Readers who intend using the forecast for planning or investment purposes are urged to thoroughly review the information provided. It may be advisable in certain cases to engage professional advice.

Foreword

Ireland's forest sector is a success story, built on the 10-fold expansion in forest cover achieved since the 1920s. The forest resource today employs over 12,000 people across the state, in activities ranging from planting and harvesting forests, to wood transport and processing. Forests also provide a wide range of public goods and services, not least recreation space for an expanding, and increasingly urban-based population. Given Ireland's low forest cover of 11%, compared with the level of 33% across Europe, there is room for expansion of the industry and the creation of additional sustainable and indigenous jobs.

Recent years have seen Ireland become a net exporter of sawn wood products for the first time in the history of the state, and probably dating back as far as the beginning of the 18th century. This is a manifestation of the benefits of the state having a longterm commitment to expanding Ireland's forest cover and resource.

Considerable scope now exists for further expansion in wood use and processing. This new All Ireland Roundwood Production Forecast anticipates that production on the island will increase from 4 million cubic metres in 2016 to close to 8 million by 2035. This doubling of output is set to come, in the main, from privately-owned, grant-aided forests in the Republic of Ireland.

The forecast is a collaborative effort involving Coillte, the Forest Service, the Northern Ireland Forest Service, Teagasc, as well as the Irish Farmers Association (IFA), the Irish Timber Council (ITC), and the Irish Timber Growers Association (ITGA). It has brought together improved forest resource information for private and state-owned forests, the introduction of new harvest planning procedures in Coillte, and a national productivity model for private sector forests, which has been developed by Teagasc.

Mobilising an additional 4 million cubic metres per year by the end of the forecast period will, of course, present a challenge to the sector. The issues have been well set out in the recommendations of COFORD Wood Mobilisation report issued last year. The Department is addressing a number of issues through the current Forestry Programme, including the critical element of state support for the building of new forest roads, training of harvester and forwarder operators, and support for voluntary forest certification initiatives. The recently introduced ITGA Wood Price Quarterly, supported by DAFM, also aims to support mobilisation by providing growers with the confidence to market their produce at a fair price. In addition to these measures COFORD has established a dedicated Group to work with my officials and the wider sector in progressing the recommendations made in the Wood Mobilisation report. I am confident the sector has the capacity to meet these challenges and avail of the opportunities that will arise from an increase in wood production.

In conclusion I want to thank all involved in developing the forecast and bringing the work to a successful conclusion. As well as supporting wood mobilisation, it provides a good yardstick for measuring progress in the forest sector over the coming decade and beyond.

Andrew Doyle TD
Minister of State for Forestry

October 2016

Executive summary

The forest processing and emerging wood energy sectors require forecast volumes at an all Ireland level, to underpin investment decisions. This document collates forecast volume data from a number of sources and presents them on an all Ireland basis. Forecast volumes are based on a range of assumptions, yield models, management regimes and forecast rules which may or may not be applicable at individual plantation level.

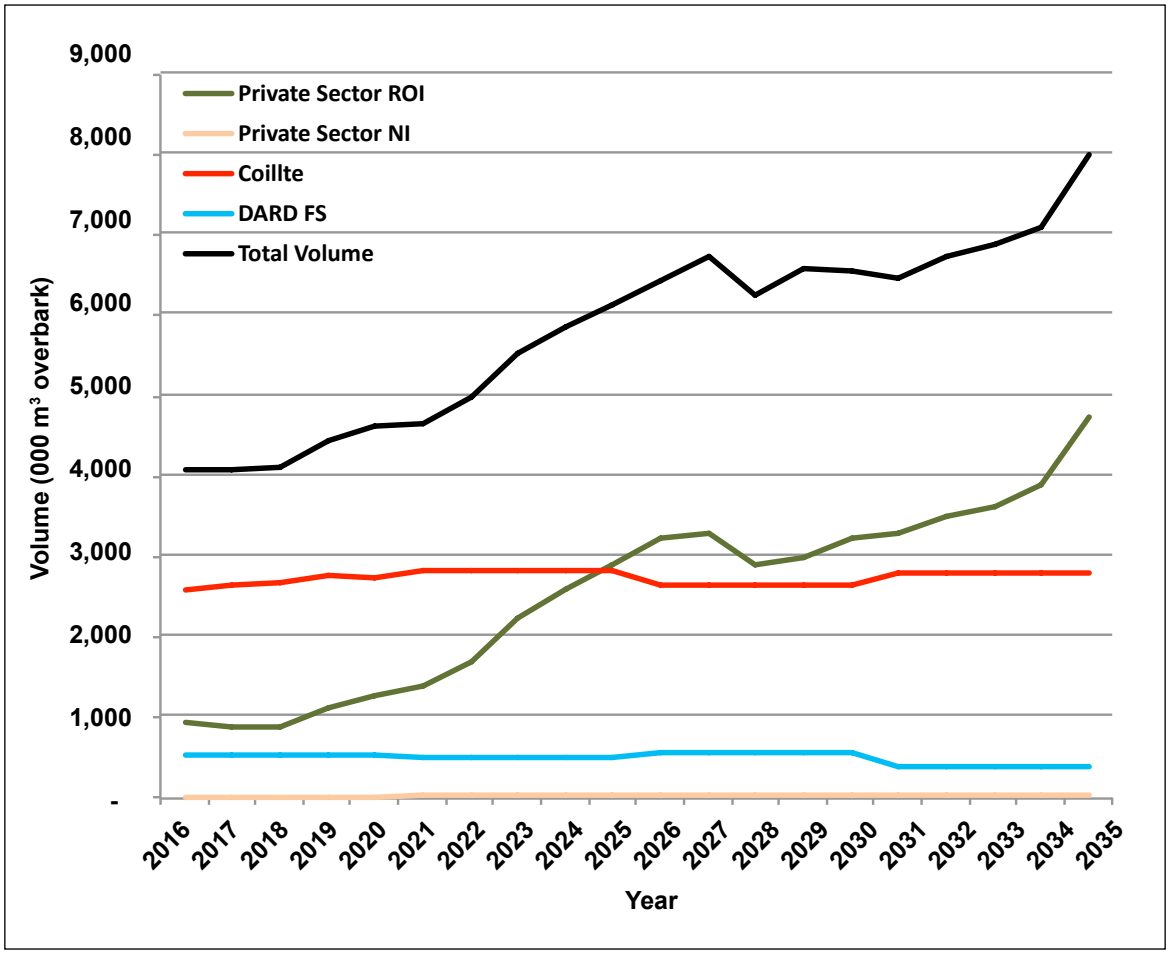
To aid in interpretation and planning, this document should be read in conjunction with the COFORD Wood Mobilisation report[1].

A forecast of roundwood production is a best estimate at a moment in time. There are many influencing factors which may result in a forecast not being achieved. These include catastrophic weather events, fluctuations in timber markets, changes in forest policy, and longterm impacts of climate change.

Outside of the forecast compilation, the Forest Service, under the auspices of the National Council for Forest Research and Development - COFORD - is putting in place a process to compare outturn with forecast volumes, with a view to informing future forecasts.

Three forecasts are presented in this report: (1) forecast of gross volume, (2) forecast of net realisable volume (NRV) which includes reductions for harvest loss, accessibility and crops unlikely to be harvested and (3) forecast of wood fibre availability.

A number of advances have been made since the last all Ireland forecast including: (a) improved forest resource information for private and state-owned forests, (b) the introduction of new harvest planning procedures in Coillte, (c) the use of forecasting optimisation software in the Republic of Ireland (ROI) and (d) a national yield class potential model for private sector forests.



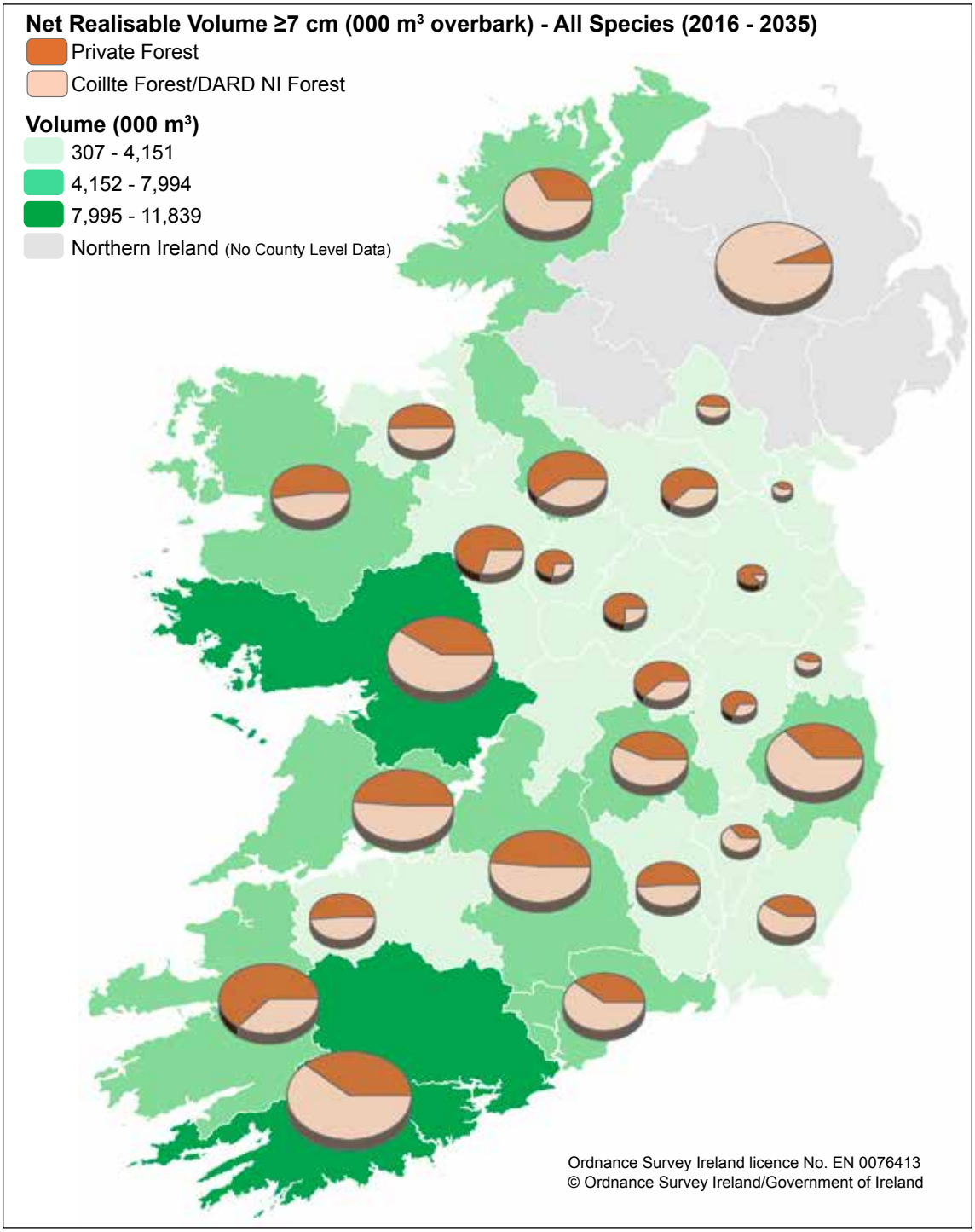
Forecast of total net realisable volume

[1] COFORD Wood Mobilisation Group. 2015. *Mobilising Ireland's forest resource*. COFORD, Dublin. Available at www.coford.ie.

A key feature of this forecast, in line with previous forecasts, is that roundwood supply will increase significantly over the next two decades, with almost all of the increase coming from privately-owned forests in the ROI and primarily in the larger size assortments.

The forecast NRV will increase from 3.95 million m^3 in 2016 to 7.86 million m^3 by 2035. Similar to the forecast for gross volume, there is a temporary decline in 2028 of the order of 0.37 million m^3 followed by an upward trend to the year 2035.

When compared with the 2011 forecast[2] over the common reporting period 2016-2028, there are relatively small differences in total volume - 66.55 million m^3 compared with the previous forecast estimate of 66.04 million m^3. However, there are year-on-year differences of up to +/-14% in forecast NRV, due principally to the private sector ROI forecast NRV.



[2] Phillips, H. 2011. *All Ireland Roundwood Production Forecast 2011-2028*. COFORD, Department of Agriculture, Fisheries and Food, Dublin. Available at www.coford.ie.

The greatest difference between the current and the 2011 forecast relates to the NRV by harvest type. Thinning volume is now forecast to account for just 22.04 million m^3 or 19% of total volume over the forecast period, with the balance of 91.66 million m^3 or 81% of volume coming from clearfells. When compared with the previous forecast over the period 2016-2028 there is a decline in thinning volume from 33% of total volume to 23%. In line with the decrease in thinning volume, there is a comparable drop in the area for thinning over the forecast period. Thinning area increases from an estimated 21,600 ha in 2016 to a peak of 34,100 ha in 2023 and then shows a steady decline to 22,400 ha in 2035.

Spruce (includes all spruce species) with a forecast NRV of 97.61 million m^3 or 85.9% of total volume over the period, dominates the forecast volumes. In the 2011 forecast it accounted for almost the same proportion (84%) of total volume. Lodgepole pine and other conifers account for 4.8% and 6.7% of total volume respectively, while broadleaves account for the balance of 2.9%, equivalent to 3.34 million m^3 over the period.

The potential wood fibre available for energy and other uses totals 58.1 million m^3 over the period of the forecast (Table 1). The volume increases steadily from 1.8 million m^3 in 2016 to 4.2 million m^3 in 2035. The increase is due to the increasing volume of downgrade and wood residues in line with the increasing volume availability as outlined in the NRV forecast.

Introduction

FORESTS GENERAL

The EU contains 5% of the world's forests with 157 million ha of forest and 20 million ha of other wooded land representing 42.3 % of the EU land area. Forest area in the EU has increased at an estimated rate of 0.4% per year since 1990, due to afforestation programmes, natural succession of vegetation and abandonment of farming. This is in contrast to the current global situation where the forest area continues to decline. The EU timber growing stock is estimated as being 24 billion m^3, of which some 21.7 billion m^3 is available for wood supply. Net annual increment is 620 million m^3, with fellings accounting for 470 million m^3 or 76% of increment[3].

Ireland, in contrast with the rest of the EU has a relatively low level of forest cover, with 11% in the Republic of Ireland (ROI) and 8% in Northern Ireland (NI). Current annual fellings total 3.5 million m^3 for the whole island[4]. Despite the low level of forest cover and current felling levels, Ireland has a strong and well-developed wood processing sector, and is a net exporter of timber and timber related products. This arises from a combination of relatively high timber growth rates and investment in processing technology.

Forests in Ireland are relatively young in comparison with other EU forests. The majority owe their origin to plantings over the past fifty years, with the greater part of the private sector in the ROI being planted over the past twenty-five years. Ownership is 53% state in the ROI and 55% state in NI, compared with an EU average of 40%. Forests are mainly coniferous: 69% in ROI and 59% in NI. Broadleaf forests account for 17% in the ROI and 29% in NI, with mixed forests making up the balance.

Forest growing stock and increment

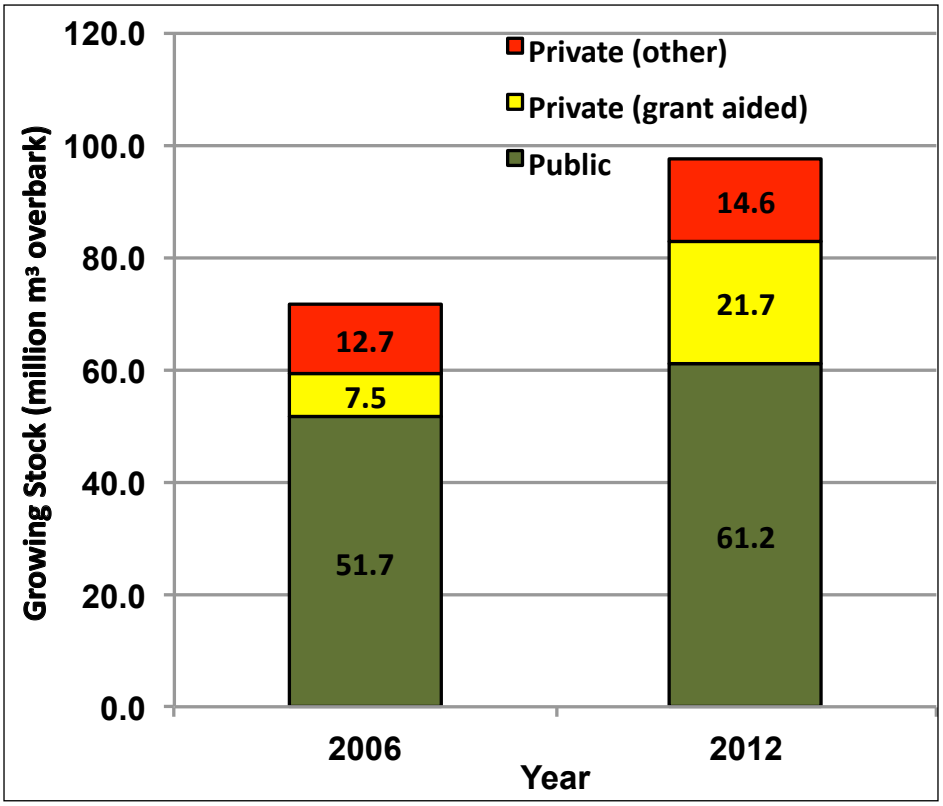


Figure 1: Growing stock, Republic of Ireland.

[3] FOREST EUROPE, UNECE and FAO 2011: *State of Europe's Forests 2011*. Status and Trends in Sustainable Forest Management in Europe

[4] Knaggs, G. and O'Driscoll E. 2015. *Woodflow and forest-based biomass energy use on the island of Ireland (2014)*. COFORD Connects, Processing/Products No.35 and Forest Service Annual Report 2014-2015 /www.dardni.gov.uk/sites/default/files/publications/dard/annual-report-14-15-final-1-july.pdf

The National Forest Inventory estimated the total standing growing stock in forests in the ROI as 97.48 million m^3 in 2012. This represents an increase of 25.62 million m^3 on the 2006 standing volume[5]. During the same period the growing stock has nearly tripled in the private (grant-aided) forests. Public forests contain nearly twice the growing stock of private forests, but the gap is decreasing rapidly as the younger private forests begin to mature.

Conifer species account for 81.8% of the growing stock volume with broadleaf species accounting for the balance of 18.2%. Sitka spruce is the main volume species, accounting for 59% of the total growing stock, followed by other pines at 9.7%. Counties in the west of Ireland have the highest proportion of growing stock, while Co Cork has the highest overall growing stock at 12.5 million m^3.

In Northern Ireland, the Department of Agriculture and Rural Development (DARD) Forest Service estimates the 2016 standing conifer volume as 12.1 million m^3, while the private sector standing volume (including all species) is estimated as 4.67 million m^3.

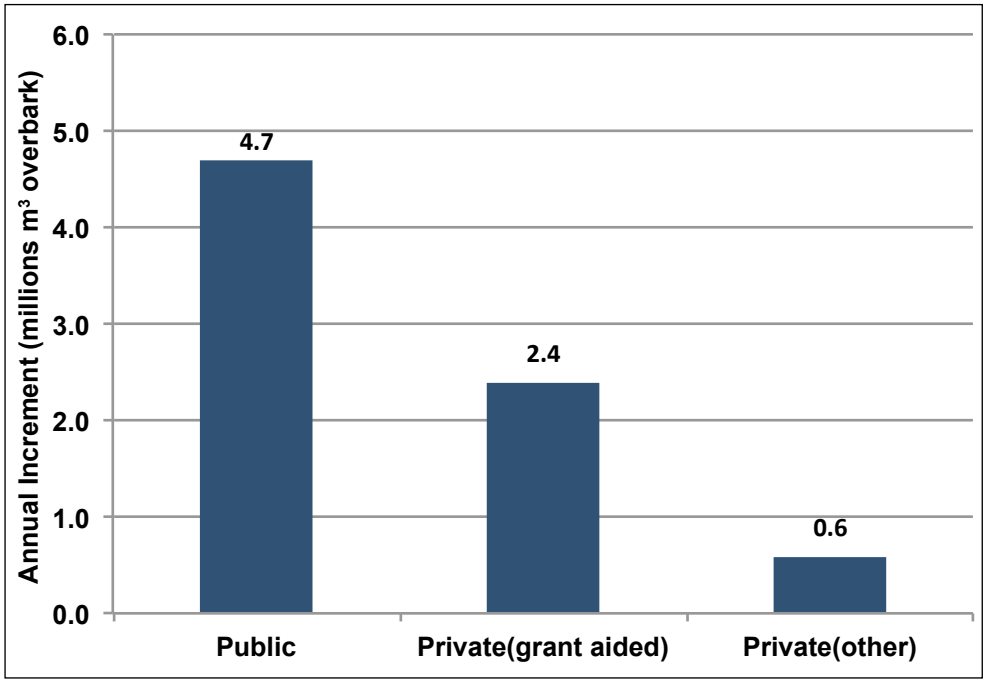


Figure 2: Annual volume increment, Republic of Ireland.

Nearly two-thirds of the increment was accounted for by public forests. Annual harvesting[6] (state plus private) for the period 2006-2012 inclusive averaged 2.65 million m^3.

Sitka spruce dominates volume increment in terms of species, comprising 70% of the annual volume increment, followed by other pines at 9%.

The DARD Forest Service standing conifer volume current annual increment is estimated as being 534,000 m^3. Compliance with forest certification requirements results in fellings being less than the current annual increment.

[5] Forest Service. 2013. National Forest Inventory – *Republic of Ireland – Results Covering the National Forest Inventory, 2009 to 2012*. Forest Service, Wexford.

[6] Gross volume, no deduction for harvesting losses.

FORECASTING

Forecasting is about predicting the future as accurately as possible, given all of the information available. Forecasts can be short-term, medium-term or long-term in nature, with the latter generally used for strategic planning. Typically forecasting comprises four basic steps - first defining the scope of the forecast and what the data will be used for; second gathering and validating the available information; third undertaking preliminary analysis to determine does the forecast data behave the way they should, are there gaps or outliers, and is there a reasonable explanation for the resulting trends and; fourth selecting/refining and fitting the predictive forecast model (Figure 3).

Forestry is no different than any other business in its requirement for accurate forecasts of production (resource availability) upon which to guide and inform policy, to base future investment decisions or plan the development of the sector and the necessary infrastructure. However, with such a long production cycle (rotation length) in comparison with other industries, production forecasts are by their nature long-term and repeated at regular intervals every five to ten years.

Roundwood production forecasts require (a) information on the forest resource e.g. species, age, productivity, soils, elevation, previous treatment, (b) information on the intention of owners in terms of silvicultural regime, rotation length, thinning frequency and intensity, (c) forest growth models which can forecast future volumes in line with owners' intentions and (d) a forecasting model which incorporates all of the required information and any underlying assumptions e.g. the sustainability of the forest resource, the replanting of felled crops, the rate at which increases or decreases in forecast production volumes are released to the market etc.

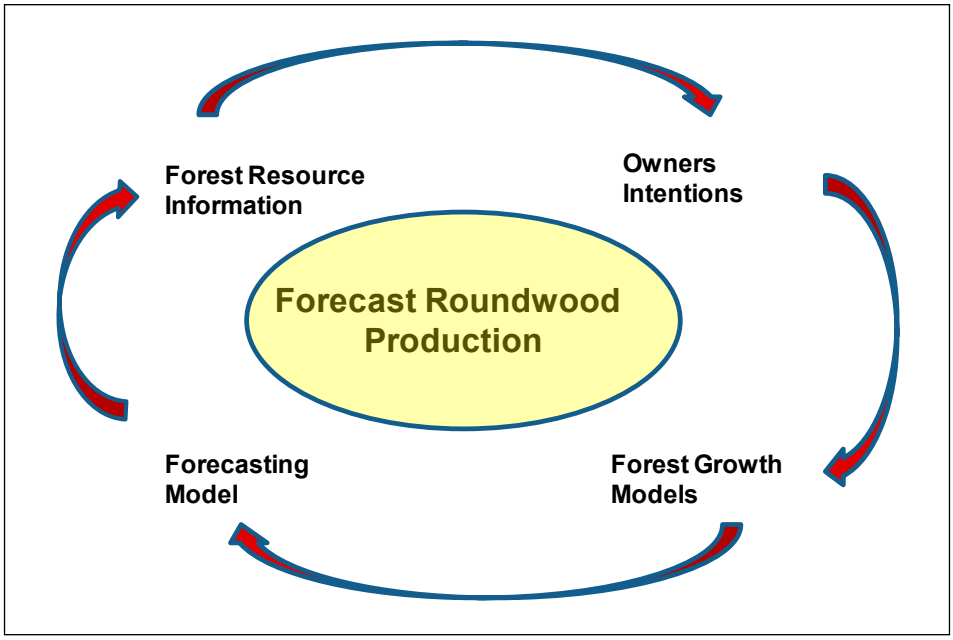


Figure 3: The elements of roundwood production forecasting.

The history of forecasting in Ireland is relatively short-lived, dating back to the second half of the last century. Forecasts for state-owned forests were originally computed by hand and were typically based on a combination of forest inventory information, forest ready reckoners, Forestry Commission yield models and a series of simplifying assumptions. With the introduction of computers, the computational aspects of forecasting were greatly improved; more complex and robust forecasting models were possible resulting in greater accuracy and reliability. Today forecasting is based on more complete inventory information, taking account of environmental considerations and forest management constraints, together with greatly improved and more flexible growth and yield models and more informed information on the intentions of owners, especially the private sector.

A forecast of roundwood production is a best estimate at a moment in time. There are many influencing factors which can result in the forecast not being achieved. Catastrophic events such as the storms which hit the south-west of the country in early 2014 can result in windblown or partially blown forest crops being harvested early and other crops having their harvest dates deferred, with a consequent impact on species and size assortment composition, thereby impacting on the forecast data for one or more years. Other short-term impacts can relate to fluctuations in the market for roundwood. Strong market demand and strong prices can leverage additional volume supplies to market, resulting in volumes greater than forecasted. The converse is equally true: when there is a downturn in markets for roundwood lesser volumes are sold and harvested, resulting in less volume than the forecast. Longer-term impacts on forecast volumes can arise for a number

of reasons, including climate change, the impacts of changes in forest policy, changes in the overall regulatory framework for forestry, and underlying assumptions not holding true: for example investment in forest roads and the capacity of the contracting resource to deal with increased thinning and clearfell volumes.

Ex post evaluation

As part of the ROI forecasting system, the Forest Service has initiated a process under the auspices of the National Council for Forest Research and Development (COFORD) to compare actual volume outturn with forecast volume. It will serve as feedback to improve future forecasts and will be published separately as a standalone document.

PURPOSE OF FORECAST

The purpose of this second all Ireland forecast is to:

a) Provide an agreed methodology and approach for estimating future roundwood availability;

b) Provide the forest and wood energy sector with an accurate forecast of roundwood and wood fibre availability;

c) Facilitate the mobilisation of state and private forest resources;

d) Inform policy and policy/ decision makers regarding future roundwood production; and

e) Underpin future investment in the timber processing and wood energy sectors.

Forecast mapping tool

The roundwood production forecast for the ROI has been developed and produced in the form of a GIS (Geographic Information System) database. The geographic information used to create the forecast is stored in layers (e.g. windspeed, yield class, access and elevation) and integrated with geographic software programs, including Remsoft, to allow new spatial information to be created, stored, manipulated, analysed, and visualised. The geospatial forecast database generated includes the location of forest properties stored in the form of a digital map and includes the roundwood forecasts from both private- and Coillte-owned forest areas. A web-based mapping tool will be developed to enable local or user-defined forecasts to be derived, as well as enabling the display of all forest areas. It is anticipated that this freely available tool will be online from mid October 2016 and will be of significant benefit for disseminating the results of the forecast.

Methodology

GENERAL

There are a number of significant changes between the current (2016) forecast and the previous (2011) forecast. These include:

1. The private sector ROI volumes now include those volumes from the exercise of harvesting rights purchased from Coillte by for example Irish Forestry Unit Trust (IForUT) and Davy Forestry Fund (DFF). Previously these volumes were included in the Coillte forecast volumes;

2. The forecast volumes from Coillte farm partnerships, IForUT and DFF harvesting rights were provided by Coillte using their forecast methodology due to the more comprehensive inventory information available for these areas;

3. The private sector ROI volumes for spruce and lodgepole pine are now based on GROWFOR yield models and not on Forestry Commission yield models;

4. Both Coillte and private sector ROI forecasts were compiled using a common software platform - Remsoft. The optimisation engine in Remsoft allows the user to define the objective to be optimised, the inputs to be used, the required outputs, and the operating constraints;

5. In the background, the forecasts were run for significantly longer periods (80 years) to ensure that the forecast did not result in depletion of the resource and that the forest estate was being sustainably managed;

6. The dataset for the private sector ROI forecast has been updated and significantly improved by the Forest Service. Yield class for Sitka spruce was assigned based on the methodology developed by Farrelly et al.[7], which provided a more reliable estimate of yield class. The dataset now provides a more comprehensive and accurate basis for forecasting future roundwood volume production; and

7. The wood fibre potential availability now excludes the tip to 7 cm volume (Tables 1 & 2) from clearfells which is captured in the estimate of harvesting residues (lop and top) from suitable clearfell sites. Two estimates are provided: one excluding Coillte small roundwood, with the other including this volume.

COILLTE

Since 2011 Coillte has been developing a new approach to the strategic and tactical planning of its forest resource using software produced by the Canadian firm Remsoft. Forest planning now has a 'top down' approach, whereby Group and Forest Division strategy can guide the development of plans down to the level of each forest stand. The system uses mathematical optimisation to devise harvest schedules.

The strategic forecast is based on the principle of maximising the value of the entire forest asset. This is based, in turn, on the sum of all future cash flows that can be generated by that asset expressed in present day terms. The harvest schedules that drive those cash flows are altered by the system for each of the 126,000 forest stands until the overall solution maximises value, subject to various constraints. An overview of the model structure is provided in Figure 4.

[7] Farrelly, N., Ni Dhubhain, A. and Nieuwenhuis, M. 2011. Modelling and mapping the potential productivity of Sitka spruce from site factors in Ireland. *Irish Forestry* 68 Nos 1&2.

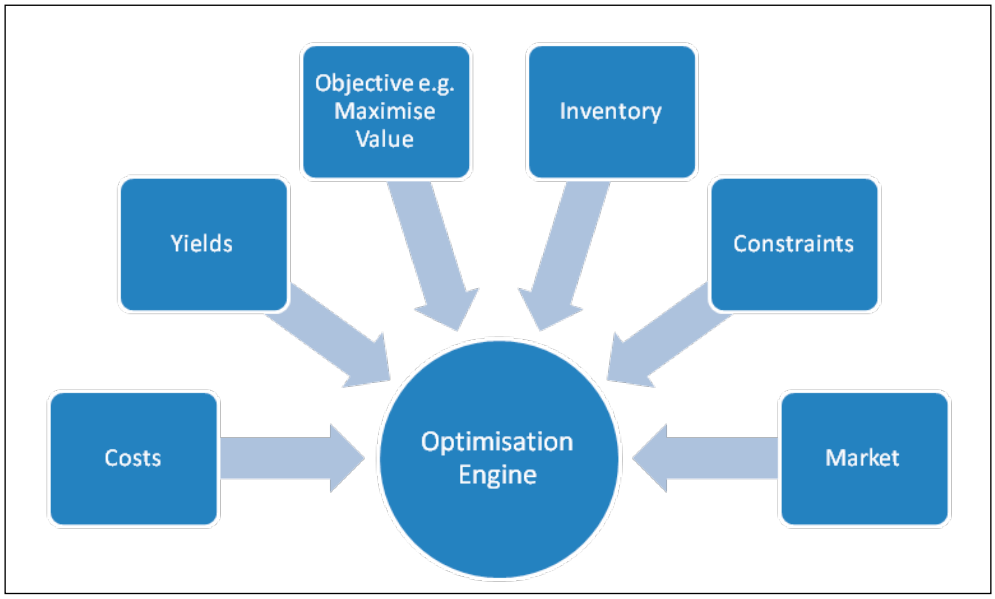


Figure 4: Inputs to the Coillte Remsoft forecast model.

Constraints include sustainability, evenness of volume production, avoidance of high intensity felling in amenity and biodiversity areas, etc. They are designed to provide for the long-term sustainability of the resource. They also simulate the effect of restrictions on felling design in terms of coupe size, 'green-up' and contiguity constraints. Adjustments to yield models are made to bring volume estimates, net of harvest loss, closer to those actually achieved.
The model can account for a number of economic, spatial and temporal factors in the decision problem, such as:

- That the felling operation may be more expensive per unit of roundwood in crops of smaller average tree size.
- That thinning may be more expensive than clearfelling, on a like-for-like average tree size basis.
- That the positive impacts that thinning can bring in terms of improved average tree size, can be weighed against the increased windthrow risk that thinning may cause.
- That total volumes of all products scheduled in any one year can be tracked, and that haulage costs to, and capacities at, each potential customer are included in the analysis.
- That the increase in value which may accrue from retaining a stand for one extra year before clearfell, can be weighed against the time value of money

These are some of the factors encompassed by the management model that was used to create the Coillte contribution to Forecast 2016. It includes many more factors than those used in the 2011 forecast.

While the new forest management model provides added accuracy, it also serves to highlight the influence of a wide number of factors on the actual harvesting outcome. The following factors have been shown to significantly affect the behaviour of the model and the volume which is forecast:

a) Product conversion patterns;

b) Harvesting loss estimates;

c) Discount rate;

d) Roundwood prices;

e) Roundwood demand levels; and

f) Costs (e.g. access, haul, harvest, restock).

The current forecast incorporates far more inputs than before but they are still best estimates and subject to change over the lifetime of the forecast. In an effort to address some of the uncertainty around the forecast Coillte now produces its central 'most likely' scenario, together with two scenarios with lower and upper bounds of +/- 2% and +/- 5%, respectively. They are based on observation of a number of scenarios executed using the Remsoft forest management model.

Excluded from the Coillte forecast are areas and crops deemed uneconomic or subject to certain management or environmental constraints. Potential volumes equivalent to approximately 7% of the average annual forecast are not included in the forecast. These volumes are physically present on the estate but are excluded from the forecast for reasons such as location, low productivity, chronic access etc. Figure 5 details the proportion of the total annual volume excluded for the predominant constraints.

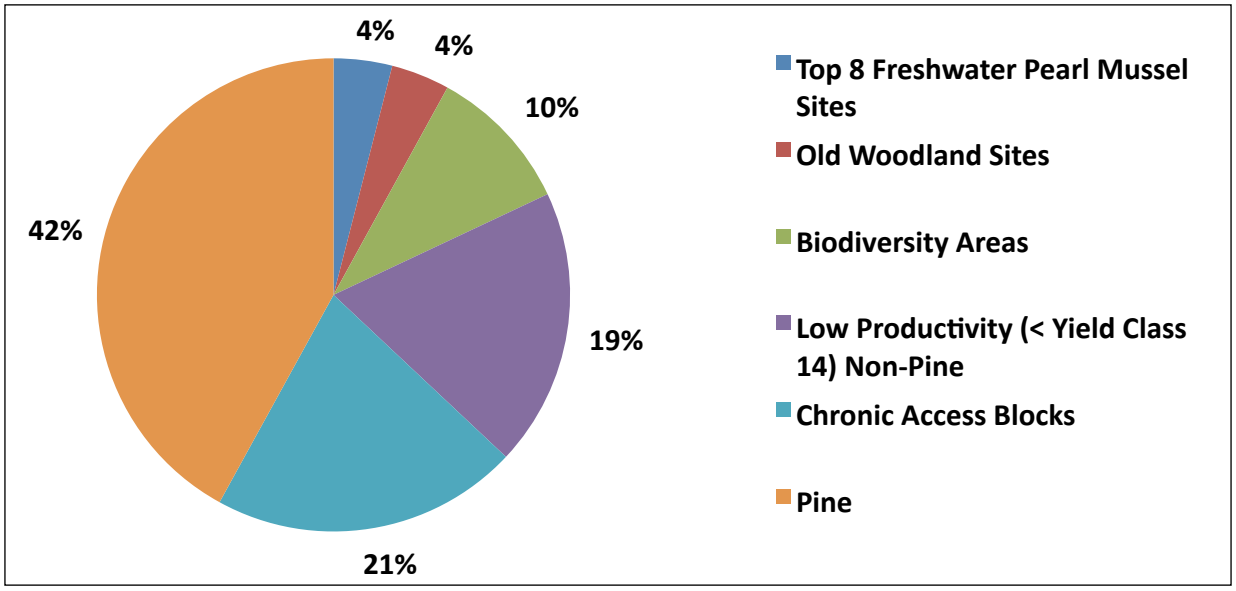


Figure 5: Volumes excluded from the Coillte forecast.

A separate *Remsoft* model was used to forecast broadleaf volumes.

PRIVATE SECTOR REPUBLIC OF IRELAND

Through the co-operation of Coillte, the private sector forecast was also generated using Remsoft software. A management model was developed for the private forest resource and included:

a) Objective function;

b) Thinning rules (minimum area, yield class, stability, frequency, intensity etc.);

c) Rotation lengths;

d) Clearfell rules (tree size and +/- recommended rotation);

e) Treatment of FIPS categories[8];

f) Volume yields;

g) Volume reduction factors; and

h) Replacement crops and yield class.

[8] The 1998 Forest Inventory and Planning System (FIPS) forest type categories in the private sector account for circa 72,000 ha. Only limited attribute data are available for these areas apart from general forest classification e.g. mature other broadleaves (37,362 ha), mixed forest mature (14,036 ha), young other broadleaves (5,483 ha), mature oak (3,968 ha) and mature spruce (2,928 ha). Management regimes were assigned to each category, ranging from long-term retention to standard forest management.

The objective was to maximise roundwood volume production over the course of an 80-year planning period, subject to a number of constraints including limits on the increase or decrease in volume production year on year, a limit on the maximum volume production in any one year and sustainability of productivity. The objective function was decided upon by the Roundwood Production Forecasting Group, based on the analysis of a number of possible alternative objective functions and scenarios. The model, as in the previous forecast, does not include potential volume production from afforestation over the forecast period. This will be relatively small and confined to early thinnings.

Rotation lengths and thinning rules were based on a combination of (a) a survey of forest companies and forestry consultants working in the private sector and (b) the views of the Roundwood Production Forecast Group. The rotation lengths were shorter than those used in the 2011 forecast, while the number of thinnings was reduced. The thinning intensity was reduced with a thinning cycle of four years for the majority of crops. The reduced rotation length assumption has a significant impact on the timing of forecast volumes compared with the 2011 forecast, especially over the second half of the forecast period. On average, rotation lengths for spruce were reduced by five years based on an average weighted yield class of 20 for the private estate, with the reduction being greater for the higher yield classes (Figure 6).

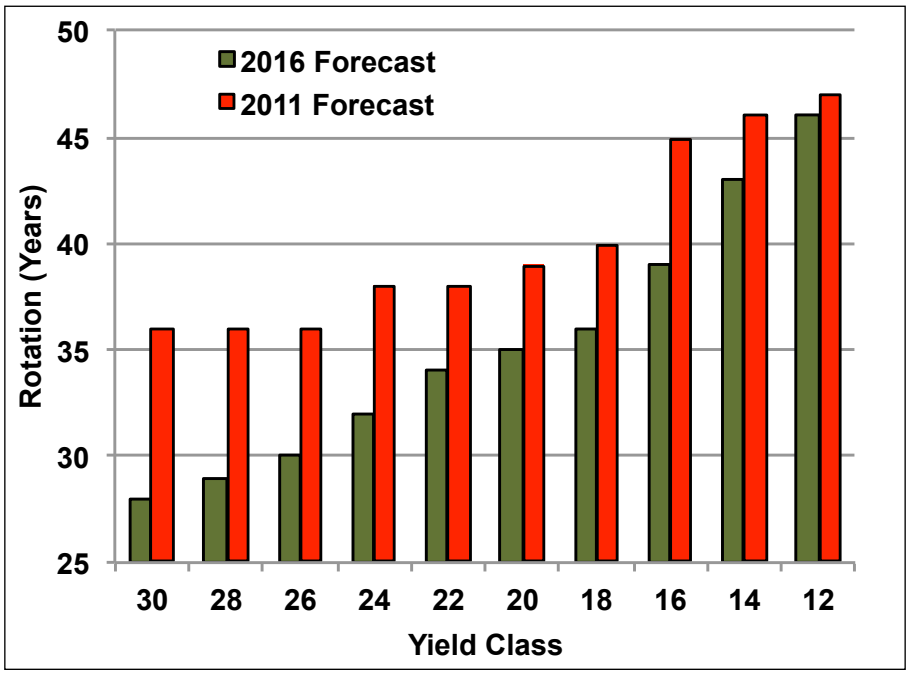


Figure 6: Rotation lengths assumed in the 2011 and 2016 forecasts.

The thinning intensity assumed in the current forecast was on average 70% of the 2011 level. It also impacted on forecast volumes, reducing thinning volume, but increasing the clearfell volume.

The model does not impose restrictions on the size of clearfells or take into consideration any possible felling implications arising from designated area status. However, due to a combination of the smaller average forest size in the private estate and the model-imposed constraints on annual harvest volumes, the impact is not likely to be as significant as for state forests.

NORTHERN IRELAND

Department of Agriculture and Rural Development Forest Service

In Northern Ireland, production forecasting within the Department of Agriculture and Rural Development (DARD) Forest Service (FS) estate is based on an ongoing programme of forest stand inventory measurement combined with aspects of wider forest management planning requirements. This information, as well as informing softwood availability forecasts is also required to verify sustainable forest management and to form the basis of forestry asset valuations for accounting purposes. The policy for sustainable forest management is delivered as a requirement under the Forestry Act (Northern Ireland) 2010, and is assessed for compliance with the UK Forestry Standard by independent audit against the UK Woodland Assurance Standard[9] (UKWAS).

[9] UKWAS is an independent certification standard for verifying sustainable woodland management in the United Kingdom; it is not a certification scheme but, uniquely, it is designed as a single national certification standard for common use by international forest certification schemes operating in the UK.

During the spring and autumn of 2015 a total of 399 inventory plots were re-measured to assess volume production and site productivity (yield class). Production forecasts are based on this survey data and use Forestry Commission growth models and assortment tables to provide forecast estimates of roundwood volume by reporting categories.

Analysis of the data confirms the likelihood that, after 2030, timber availability will decline to around 75% of current levels. At the same time, the DARD FS forests are being increasingly challenged by poor nutrition and disease, so that future forest growth may become more difficult to predict. An element of this estimated forecast decline can be countered by managing stand rotation lengths and thereby increasing the volume available for harvest from thinning and low impact silvicultural systems[10] (LISS).

DARD FS intends to continue to bring roundwood to market at current levels during the period 2016-2020. This programme provides a manageable income derived from current sales contract values and results in an affordable re-establishment obligation. It requires reasonable infrastructure maintenance to support and generates a competitive level of demand from the all Ireland wood processing sector.

Targets for roundwood production figures will be set annually in compliance with strategic objectives identified in and met through annual Business Plans targets. Strategic objectives and future timber marketing are subject to successive government policies, priorities and approvals.

Private forestry sector in Northern Ireland

The private forestry sector forecast of softwood availability is based upon historical DARD Forest Service establishment and management grant data. Private forest establishment over recent decades in Northern Ireland has been predominately broadleaved and in small fragmented blocks of less than 1.0 ha. Other lands becoming classified as forest have arisen from scrubland or neglected farmland and tend towards broadleaved scrub species.

To estimate private sector softwood availability, management models were developed by DARD Forest Service for conifer stands and components which assumed rotation lengths, thinning interventions and intensities, clearfell recoveries and re-establishment objectives.

Removals from private sector woodland is monitored in Northern Ireland and reported annually in Forestry Statistics[11].

[10] Silvicultural systems including group selection, shelterwood or under-planting, small coupe felling, coppice or coppice-with-standards, minimum intervention and single tree selection systems which are suitable for windfirm conifer woodlands and most broadleaved woodlands. http://ukwas.org.uk/the-standard/glossary-of-terms

[11] http://www.forestry.gov.uk/website/forstats2015.nsf/LUContents/E37A28A54709AD0480257322004CEB6C.

Results

FORECAST OF GROSS VOLUME

The private sector ROI and Coillte forecast data were combined to provide an overall forecast of gross volume. Due to the computational method used to estimate the forecast production data in Northern Ireland, it was not possible to provide a forecast estimate of gross volume.

The gross volume for the 7-13 cm, 14-19 cm and 20 cm+ size assortment categories totals 113.03 million m^3 over the forecast period. Volume increases from 3.75 million m^3 in 2016 to 6.59 million m^3 in 2027 followed by a decrease of 0.54 million m^3 in 2028 and then an increase in volume up to 2035 when 8.11 million m^3 is reached (Figure 7). Including the tip-7 cm size assortment, which totals 4.99 million m^3 over the forecast period, would increase these figures by 0.25 million m^3/year on average.

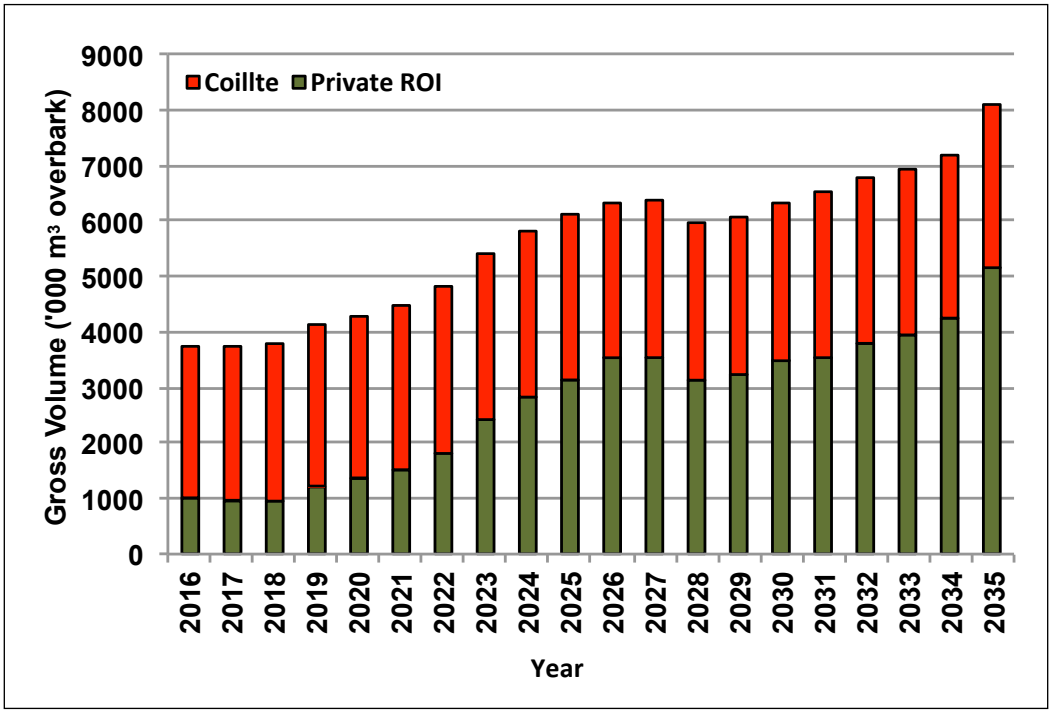


Figure 7: Forecast of gross volume production, Republic of Ireland, 2016-2035.

Gross volumes from the 2011 and current forecast over the common forecasting period 2016-2028 are broadly similar with 65.76 million m^3 from the 2011 forecast, compared with the current forecast of 65.15 million m^3 which is 0.9% less. It is not possible to compare private sector ROI or Coillte data due to the differences in volume composition.

FORECAST NET REALISABLE VOLUME (NRV)

A number of adjustments were made to the forecast of gross volume to estimate the NRV (Figure 8). The gross volumes were reduced to take account of losses during harvesting and other relevant factors to provide an estimate of the net volume. The size of the harvest loss varied with harvest type and species, being greater for first and second thinnings and for lodgepole pine. Coillte used its in-house reduction factors based on their ongoing analysis of standing volume compared with invoiced volume. In Coillte's new approach to forecasting, reductions in volume due to inaccessible and non-viable areas were made when compiling the gross volume forecast. Reductions for harvest loss were then made to produce estimate of NRV. The ROI private sector volumes were adjusted using the reduction factors in the private sector forecast 2009-2028[12]. The two sets of reduction factors are very similar. It should be pointed out that harvest losses may reduce over time due to improvements in technology and/or harvesting practices. No reduction in harvest losses was assumed and the factors were applied equally to all years within the forecast period.

[12] Phillips, H., Redmond, J., Mac Siurtain, M. and Nemesova, A. 2009. *Roundwood production from private sector forests 2009-2028*. A geospatial forecast. COFORD, Dublin.

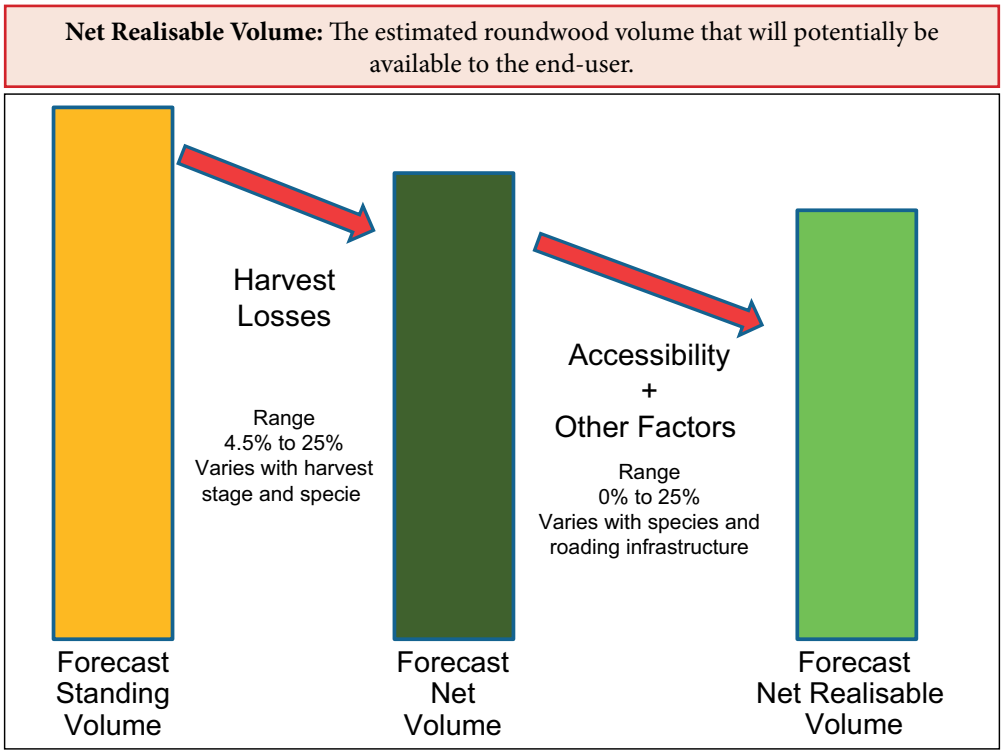


Figure 8: Arriving at net realisable volume.

The forecast NRV totals 113.7 million m^3 over the forecast period. NRV increases from 3.95 million m^3 in 2016 to 7.86 million m^3 by 2035 (Figure 9). Similar to the forecast for gross volume, there is a temporary decline in 2028 of the order of 0.37 million m^3 followed by an upward trend to the year 2035.

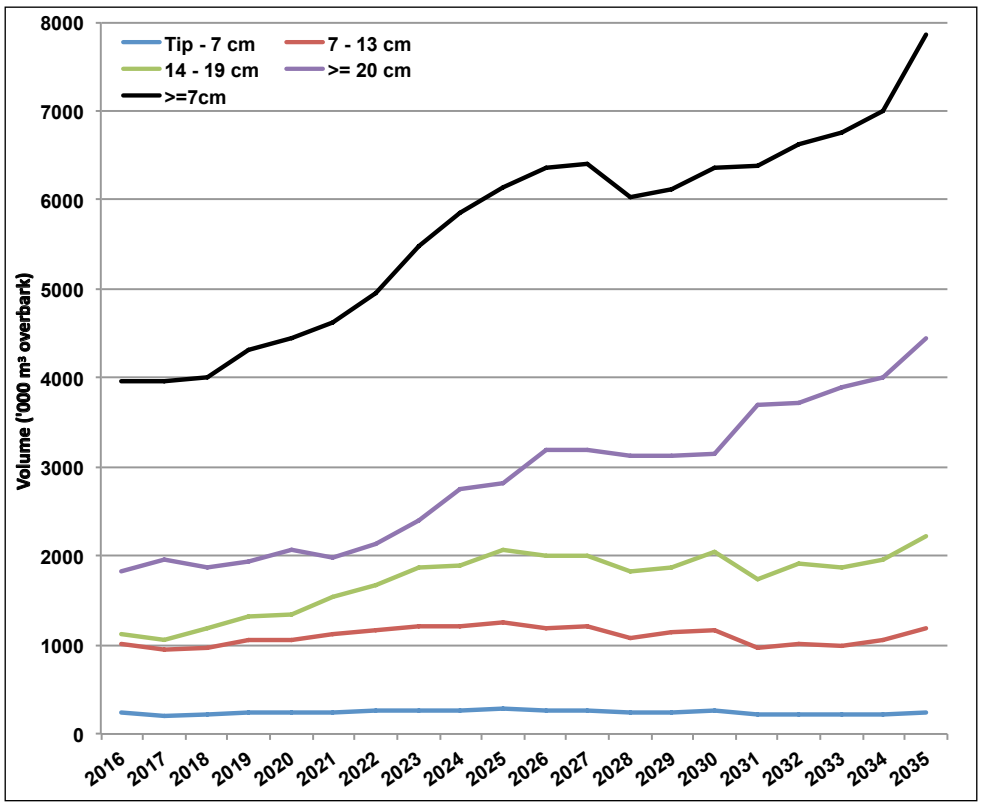
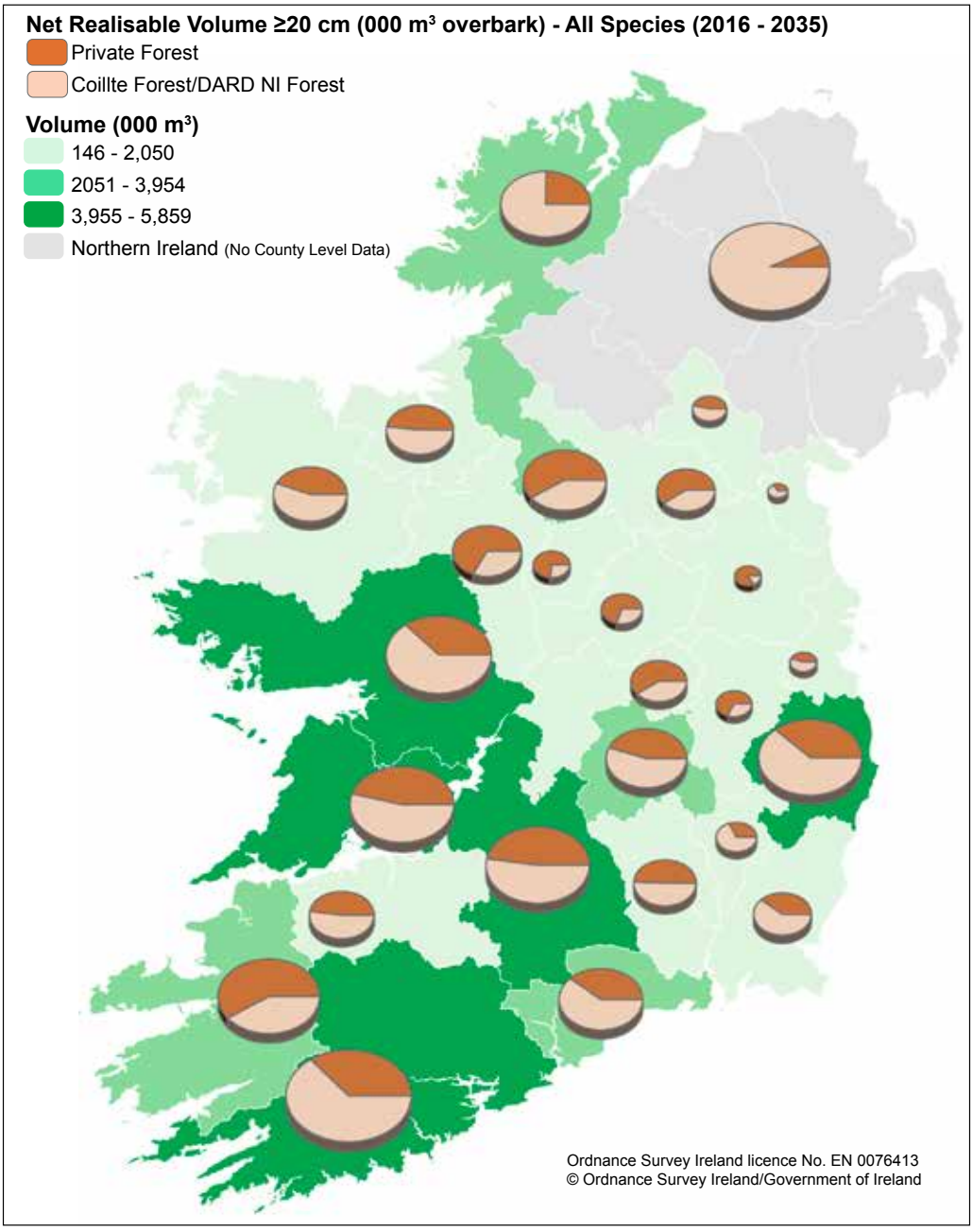


Figure 9: Forecast of NRV by ownership category (excluding Coillte broadleaf volume).

When compared with the previous forecast over the common reporting period 2016 - 2028, there are relatively small differences in total volume - 66.55 million m³ compared with the previous forecast estimate of 66.04 million m³. However there are differences year on year of up to +/-14% in forecast NRV due principally to the shape of the private sector ROI forecast NRV curve.

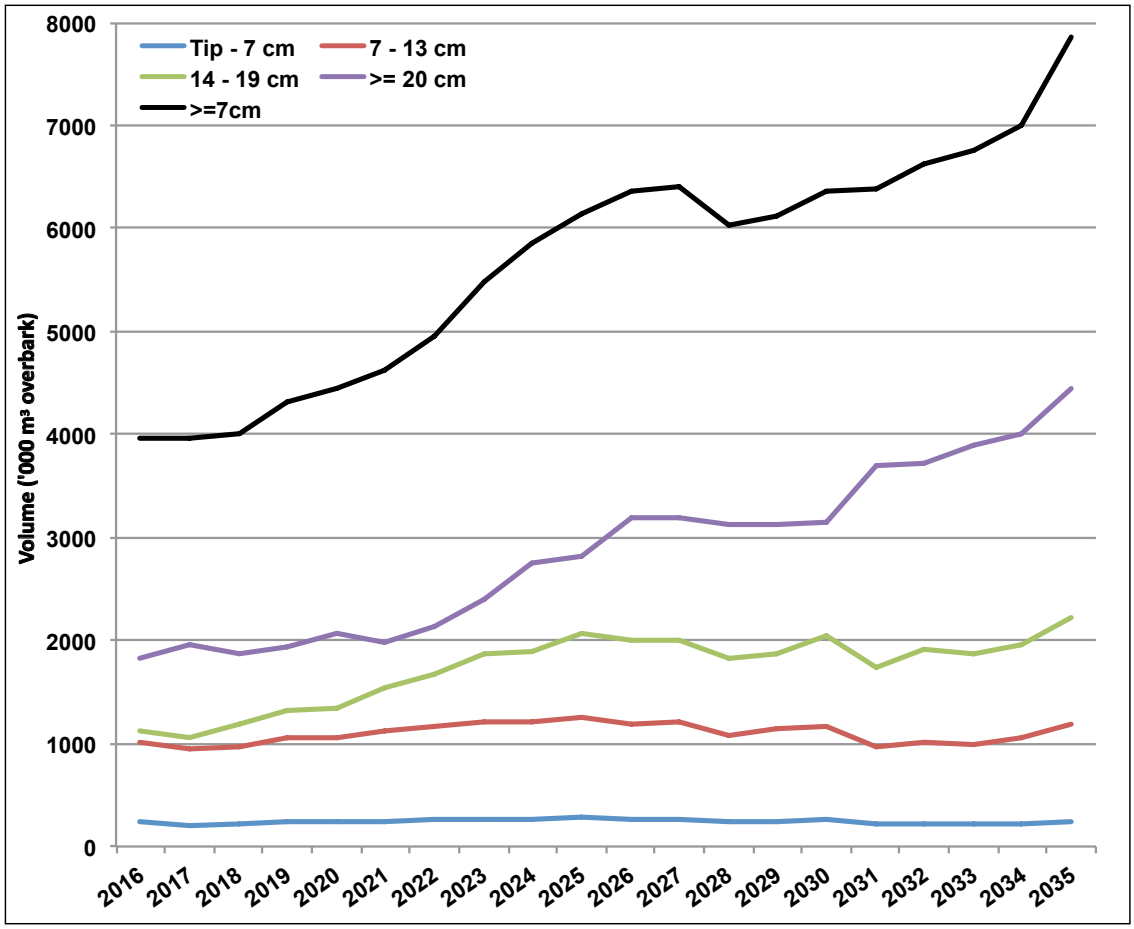
Due to the differences in the composition of the private sector ROI and Coillte forecast volumes, it is not possible to compare the NRV values from both forecasts. It is possible to directly compare the figures for Northern Ireland, and overall while there is a small increase of the order of 1%, the private sector shows an increase and the DARD FS a small decrease of 80,000 m³ over the forecast period.

The forecast NRV for the size assortment categories tip to 7 cm[13] and 7 to 13 cm are relatively flat over the forecast period (Figure 10 b). The NRV in the 14 to 19 cm category increases steadily for the first ten years from 1.13 million m³ to 2.07 million m³ by 2027, and then remains relatively flat for the remainder of the forecast apart from the final year when it increases to 2.22 million m³. In contrast, the 20 cm+ category increases quite slowly for the first six to seven years followed by a steady increase from 2 million m³ to 4.46 million m³ by the end of the forecast period.



(a)

[13] The volume tip to 7 cm is that associated with the total NRV. An estimate of harvestable volume in the tip to 7 cm assortment is provided in Tables 1 and 2.



(b)

Figure 10 (a): Cumulative volume production 2016-2035 for private and Coillte forest ROI, and state and private forest NI, by county and for Northern Ireland and (b): Forecast of NRV by size assortment (excluding Coillte broadleaf volume).

Forecast NRV by Species Group

Broadleaf volume forecast data are not available for Northern Ireland. Spruce, which includes all spruce species, with an estimated forecast NRV of 97.61 million m^3 or 85.9% of total volumes over the forecast period dominates the forecast volumes as was the case in the previous forecast where it accounted for 84% of total volume (Figure 11). Lodgepole pine and other conifers account for 4.8% and 6.7% of total volume respectively while broadleaves account for the remaining balance of 2.9% equivalent to 3.34 million m^3 over the forecast period. Although Coillte volumes now include a broadleaf forecast, the volume is relatively small accounting for only 9.6% of the total NRV broadleaf forecast.

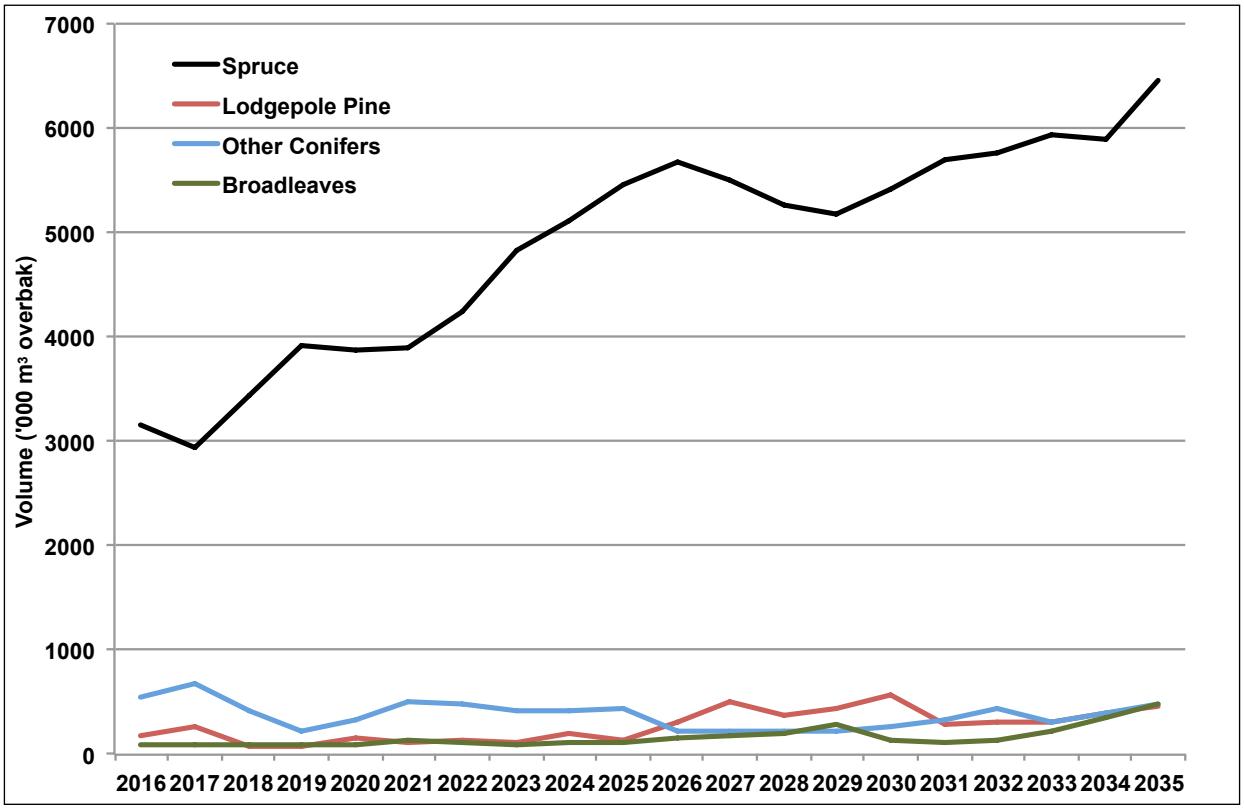


Figure 11: Forecast of NRV by species group (includes Coillte broadleaf volume).

Forecast NRV by Harvest Type

The greatest difference between this forecast and the 2011 forecast relates to the NRV by harvest type. Thinning volume is now forecast to account for just 22.04 million m^3 or 19% of total volume over the forecast period with the balance of 91.66 million m^3 or 81% of volume coming from clearfells (Figure 12). Over the first eight years thinning volumes account for 24 to 27% of total volume, but thereafter decline steadily to just 11% in 2035. When compared with the previous forecast over the period 2016-2028 there is a decline in thinning volume from 33% of total volume to 23%. The decrease in the contribution of thinnings to total volume is attributable mainly to the private sector ROI, where thinning volumes although increasing over the first half of the forecast, represent a smaller proportion of total volume annually, falling from a high of 54% in 2019 to 7% at the end of the forecast period.

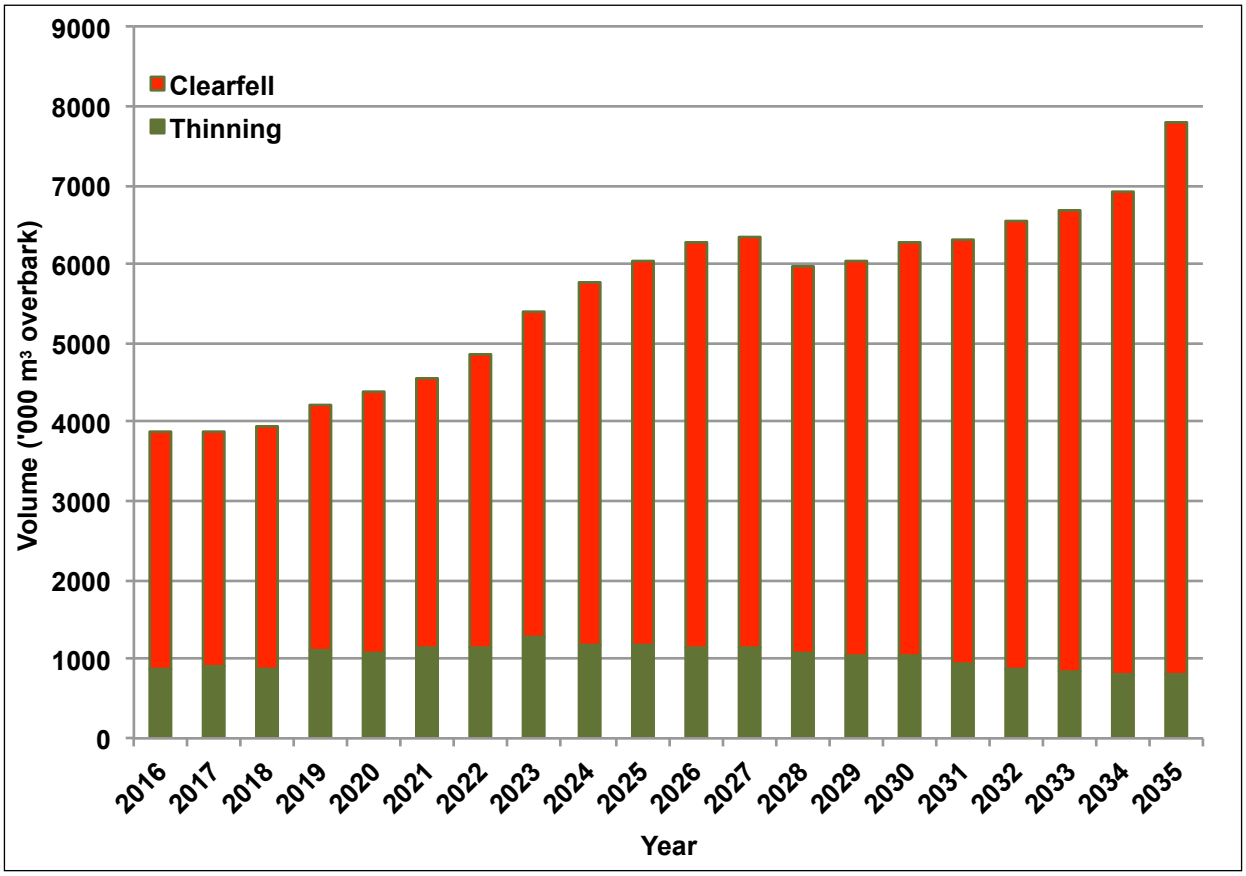


Figure 12: Forecast of NRV by harvest type.

Forecast NRV by Harvest Area

In line with the decrease in thinning volume, there is a comparable drop in the area for thinning over the forecast period. Thinning area increases from an estimated 21,600 ha in 2016 to a peak of 34,100 ha in 2023 and then shows a steady decline to 22,400 ha in 2035 (Figure 13). Clearfell area increases steadily over the forecast period from 7,600 ha in 2016 to a peak of 18,700 ha in 2035. When compared with the previous forecast over the period 2016 - 2028 there is a decline in thinning area of 32% and a decline in clearfell area of the order of 6%.

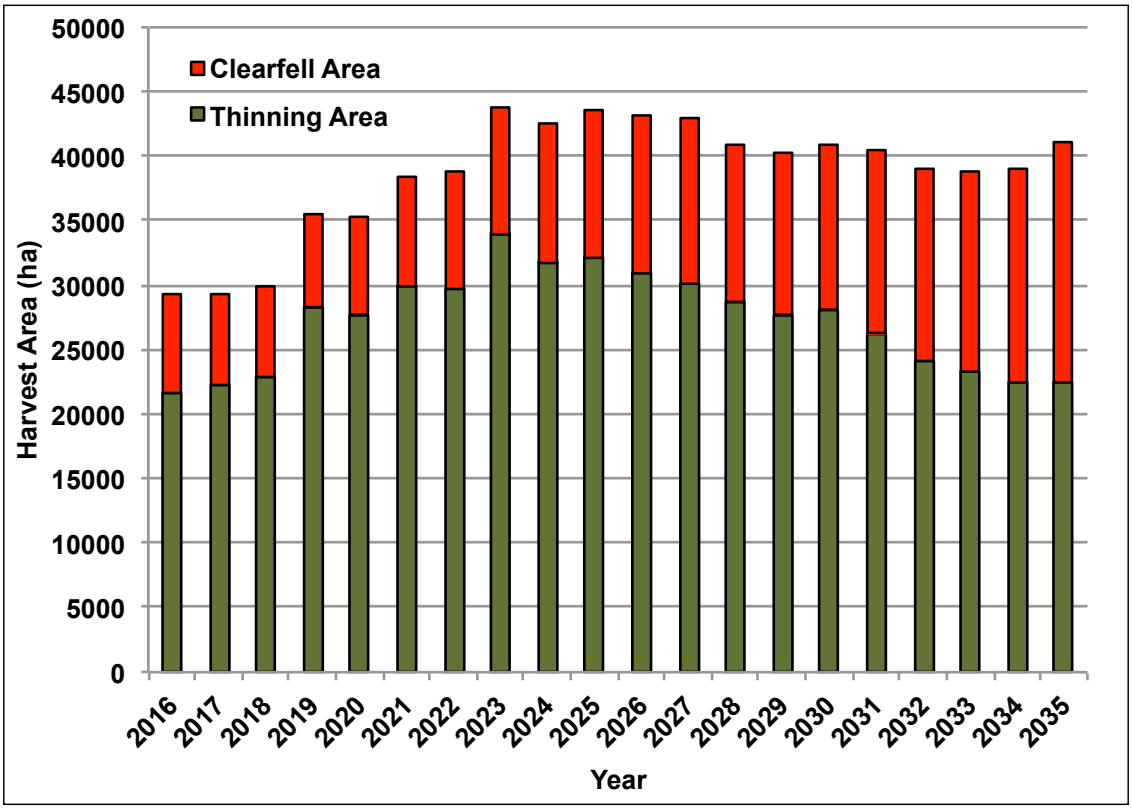


Figure 13: Forecast of harvest area by harvest type.

FORECAST OF WOOD FIBRE AVAILABILITY ROI

The future development of the emerging wood energy sector is dependent on a sustainable and increasing supply of raw material, including small roundwood and wood residues from the processing sector.

To date there has been little information provided within the ROI on the availability or otherwise of roundwood and wood residues for energy, apart from the inclusion of a wood energy assortment in the private sector forecast 2009-2028[14] and the addendum to the previous all Ireland forecast.

There are three main sources of raw material for wood energy – small roundwood, wood residues from the processing sector and post consumer recovered wood (PCRW). Additional raw material is potentially available through the harvesting of tree tips (tip – 7 cm) and through the harvesting of lop and top (including branches and some harvest loss material) on suitable sites.

In compiling the estimate of potentially available material in the Republic of Ireland, a number of assumptions were made of which the main ones were:

- Wood volumes comprise the private sector ROI and Coillte only;
- The woodbased panel roundwood demand as defined in the wood mobilisation report[15] will be met through a combination of small roundwood and wood residues from the sawmilling sector. In Table 1 Coillte small roundwood has been assigned to the woodbased panels sector and has been excluded from the table;
- An increasing volume of small roundwood from thinnings in the private sector will potentially be available for wood energy and for wood panels;
- An increasing volume of downgrade material from the larger size assortments in the private sector will be available for wood energy and wood panels;
- An increasing volume of wood residues from the processing sector will be available for wood energy and wood panels;

[14] Phillips, H., Redmond, J., Mac Siurtain, M. and Nemesova, A. 2009. *Roundwood production from private sector forests 2009-2028. A geospatial forecast*. COFORD, Dublin.

[15] COFORD Wood Mobilisation Group. 2015. *Mobilising Ireland's forest resource*. COFORD, Dublin.

- Harvesting residues of the order of 80 green tonnes per ha will potentially be harvestable from the clearfell of spruce sites on mineral soils with a minimum yield class of 18 and a minimum harvest area of 4 ha;
- The tip – 7 cm category is confined to potential harvesting on thinning sites and assumes that 30% of this material is economically recoverable;
- The availability of PCRW, although strongly linked with the activity in the construction sector, will remain at current levels; and
- The total volume includes raw material which can be used for other purposes other than energy e.g. animal bedding and stake production.

Based on the qualifying assumptions above, the potential wood fibre available for energy, woodbased panels and other uses totals 58.1 million m^3 over the period of the forecast (Table 1). The volume increases steadily from 1.8 million m^3 in 2016 to 4.2 million m^3 in 2035. The increase is due to the increasing volume of downgrade and wood residues in line with the increasing volume availability in the NRV forecast.

Table 1: Forecast of wood fibre potentially available in the Republic of Ireland (000 m^3 equivalent, excluding Coillte small roundwood).

Year	Tip - 7cm Thinnings	Roundwood 7 - 13cm	Downgrade + Wood Residues	Harvesting Residues Clearfells	PCRW	Total	Energy Content Millions (GJ)
2016	26	423	1,125	39	210	1,822	12.57
2017	26	406	1,161	22	210	1,825	12.60
2018	26	425	1,169	54	210	1,883	12.99
2019	32	502	1,264	62	210	2,071	14.29
2020	31	522	1,342	67	210	2,171	14.98
2021	33	555	1,371	63	210	2,233	15.41
2022	33	601	1,502	107	210	2,453	16.92
2023	37	648	1,739	151	210	2,785	19.22
2024	34	649	1,919	199	210	3,011	20.77
2025	34	686	2,043	225	210	3,199	22.07
2026	33	701	2,174	279	210	3,397	23.44
2027	33	728	2,182	201	210	3,355	23.15
2028	31	605	2,061	242	210	3,149	21.73
2029	30	654	2,078	139	210	3,111	21.47
2030	30	695	2,178	173	210	3,286	22.68
2031	27	567	2,370	224	210	3,398	23.45
2032	25	617	2,462	162	210	3,477	23.99
2033	24	602	2,529	223	210	3,588	24.76
2034	24	648	2,629	181	210	3,692	25.47
2035	23	792	2,980	181	210	4,186	28.88
Totals	594	12,024	38,280	2,992	4,200	58,091	400.83

If the supply of Coillte small roundwood to woodbased panels is left open, then total potential wood fibre for energy, panels and other uses reaches 71.38 million m^3 (Table 2).

Table 2: Forecast of total wood fibre potentially available in ROI (000 m^3 equivalent)

Year	Tip - 7cm Thinnings	Roundwood 7 - 13cm	Downgrade + Wood Residues	Harvesting Residues Clearfells	PCRW	Total	Energy Content Millions (GJ)
2016	28	916	1,334	39	210	2,526	17.43
2017	28	855	1,361	22	210	2,477	17.09
2018	28	866	1,391	54	210	2,549	17.59
2019	35	963	1,503	62	210	2,774	19.14
2020	34	963	1,589	67	210	2,863	19.75
2021	36	1,023	1,602	63	210	2,934	20.24
2022	36	1,068	1,743	107	210	3,164	21.83
2023	39	1,121	1,988	151	210	3,510	24.22
2024	37	1,158	2,138	199	210	3,741	25.81
2025	37	1,145	2,271	225	210	3,889	26.83
2026	36	1,088	2,386	279	210	3,999	27.59
2027	36	1,118	2,513	201	210	4,078	28.14
2028	34	1,038	2,314	242	210	3,838	26.48
2029	33	1,083	2,462	139	210	3,927	27.10
2030	33	1,101	2,441	173	210	3,957	27.31
2031	30	916	2,558	224	210	3,937	27.17
2032	28	967	2,671	162	210	4,038	27.86
2033	27	960	2,748	223	210	4,168	28.76
2034	26	1,001	2,836	181	210	4,254	29.36
2035	26	1,135	3,206	181	210	4,758	32.83
Totals	644	20,488	43,055	2,992	4,200	71,379	492.51

Table 3: Annual forecast of gross volume (000 m^3 overbark).

	Private Sector ROI				Private Sector NI				Coillte				DARD FS				Totals			
Year	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +
2016	62	414	242	355					171	623	771	1,344					233	1,037	1,013	1,700
2017	57	394	193	351					144	569	746	1,493					200	963	938	1,843
2018	60	416	236	307					170	556	827	1,462					229	972	1,063	1,769
2019	89	513	368	327					171	576	855	1,505					260	1,089	1,224	1,832
2020	86	527	407	433					168	543	826	1,543					254	1,070	1,233	1,976
2021	86	560	490	446					165	604	1,012	1,399					251	1,164	1,502	1,844
2022	99	604	607	617					165	604	1,012	1,399					263	1,208	1,620	2,016
2023	117	658	836	924					165	604	1,012	1,399					282	1,262	1,848	2,322
2024	115	656	858	1,303					165	604	1,012	1,399					280	1,260	1,871	2,702
2025	118	698	1,058	1,373					165	604	1,012	1,399					283	1,302	2,070	2,771
2026	128	726	1,143	1,646					141	508	845	1,457					269	1,233	1,988	3,103
2027	127	755	1,138	1,668					141	508	845	1,457					268	1,263	1,984	3,125
2028	104	613	948	1,596					141	508	845	1,457					245	1,121	1,793	3,053
2029	107	673	986	1,582					141	508	845	1,457					248	1,181	1,832	3,039
2030	119	710	1,184	1,605					141	508	845	1,457					260	1,218	2,029	3,062
2031	100	587	974	2,002					124	440	798	1,724					224	1,026	1,773	3,726
2032	107	633	1,153	2,022					124	440	798	1,724					231	1,073	1,951	3,746
2033	103	628	1,114	2,213					124	440	798	1,724					226	1,067	1,912	3,938
2034	112	664	1,215	2,356					124	440	798	1,724					236	1,104	2,013	4,080
2035	132	832	1,498	2,820					124	440	798	1,724					256	1,271	2,296	4,544
Totals	2,027	12,260	16,650	25,945	-	-	-	-	2,971	10,627	17,304	30,247	-	-	-	-	4,998	22,887	33,954	56,192

Notes:
1. Gross volume data not available for Northern Ireland due to forecast computational methodology
2. Private ROI includes broadleaves and conifers
3. Coillte excludes broadleaves

Table 4: Annual forecast of Net Realisable Volume (000 m^3 overbark).

	Private Sector ROI				Private Sector NI				Coillte				DARD FS				Totals			
Year	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +	Tip - 7cm	7-13 cm	14-19 cm	20cm +
2016	60	368	219	328	1	2	4	8	150	548	695	1,262	21	90	210	220	231	1,008	1,128	1,818
2017	55	356	174	329	1	2	4	8	126	499	669	1,399	21	90	210	220	203	948	1,057	1,956
2018	59	375	212	281	1	2	4	8	149	493	757	1,362	21	90	210	220	229	961	1,183	1,871
2019	76	451	334	298	1	2	4	8	150	510	783	1,401	21	90	210	220	248	1,053	1,331	1,926
2020	78	473	372	401	1	2	4	8	148	481	754	1,438	21	90	210	220	247	1,046	1,340	2,067
2021	80	501	446	412	1	4	8	16	145	538	924	1,294	20	70	170	250	246	1,114	1,548	1,972
2022	91	547	560	564	1	4	8	16	145	538	924	1,294	20	70	170	250	257	1,159	1,662	2,124
2023	106	595	766	842	1	4	8	16	145	538	924	1,294	20	70	170	250	272	1,207	1,868	2,403
2024	103	595	782	1,194	1	4	8	16	145	538	924	1,294	20	70	170	250	269	1,207	1,885	2,754
2025	109	632	969	1,260	1	4	8	16	145	538	924	1,294	20	70	170	250	275	1,244	2,071	2,820
2026	117	656	1,048	1,508	2	7	13	28	124	449	764	1,347	22	70	180	300	266	1,181	2,005	3,183
2027	120	683	1,049	1,523	2	7	13	28	124	449	764	1,347	22	70	180	300	269	1,209	2,006	3,198
2028	99	560	863	1,461	2	7	13	28	124	449	764	1,347	22	70	180	300	247	1,085	1,820	3,136
2029	99	609	905	1,455	2	7	13	28	124	449	764	1,347	22	70	180	300	248	1,134	1,862	3,130
2030	110	650	1,084	1,479	2	7	13	28	124	449	764	1,347	22	70	180	300	258	1,176	2,041	3,154
2031	94	528	890	1,837	2	6	12	24	110	390	724	1,603	15	40	110	230	221	964	1,736	3,695
2032	99	578	1,062	1,853	2	6	12	24	110	390	724	1,603	15	40	110	230	226	1,015	1,908	3,710
2033	95	563	1,018	2,033	2	6	12	24	110	390	724	1,603	15	40	110	230	222	1,000	1,864	3,890
2034	103	609	1,104	2,151	2	6	12	24	110	390	724	1,603	15	40	110	230	230	1,045	1,950	4,008
2035	123	753	1,376	2,595	2	6	12	24	110	390	724	1,603	15	40	110	230	250	1,189	2,222	4,452
Totals	1,876	11,083	15,232	23,803	26	95	185	380	2,621	9,418	15,721	28,082	388	1,350	3,350	5,000	4,912	21,945	34,488	57,266

Notes:
1. Private ROI includes broadleaves and conifers
2. Tip - 7 cm for Northern Ireland is inferred based on ROI average data
3. Coillte data excludes broadleaves
4. Tip - 7 cm category is the volume associated with the NRV >= 7 cm. An estimate of harvestable volume is provided in Tables 1 and 2.

Table 5: Annual forecast of Net Realisable Volume by species group (000 m^3 overbark).

	Private Sector ROI				Private Sector NI				Coillte				DARD FS				Totals			
Year	Spruce	Lodgepole Pine	Other Conifers	Blvds	Spruce	Lodgepole Pine	Other Conifers	Blvds	Spruce	Lodgepole Pine	Other Conifers	Blvds	Spruce	Lodgepole Pine	Other Conifers	Blvds	Spruce	Lodgepole Pine	Other Conifers	Blvds
2016	525	42	265	84	6	-	8		2,137	119	251	11	480	20	20		3,149	181	544	94
2017	467	33	286	74	6	-	8		1,978	215	378	11	480	20	20		2,931	268	692	85
2018	571	61	156	80	6	-	8		2,387	-	226	13	480	20	20		3,444	81	411	92
2019	850	60	94	79	6	-	8		2,581	-	113	13	480	20	20		3,917	80	234	92
2020	861	88	214	83	6	-	8		2,537	53	83	13	480	20	20		3,883	161	326	97
2021	1,026	79	134	119	13	-	15		2,425	19	313	14	430	10	40		3,895	108	502	133
2022	1,365	100	114	92	13	-	15		2,425	19	313	13	430	10	40		4,233	129	481	106
2023	1,956	95	61	90	13	-	15		2,425	19	313	13	430	10	40		4,825	124	428	104
2024	2,242	173	57	98	13	-	15		2,425	19	313	15	430	10	40		5,111	202	424	114
2025	2,582	105	72	102	13	-	15		2,425	19	313	16	430	10	40		5,450	134	440	118
2026	2,876	115	69	153	18	-	30		2,276	196	88	16	510	10	30		5,680	320	217	169
2027	2,708	299	81	167	18	-	30		2,276	196	88	16	510	10	30		5,512	504	229	183
2028	2,452	171	71	189	18	-	30		2,276	196	88	18	510	10	30		5,256	377	219	208
2029	2,365	246	81	277	18	-	30		2,276	196	88	18	510	10	30		5,169	452	229	295
2030	2,609	365	125	115	18	-	30		2,276	196	88	19	510	10	30		5,413	570	272	135
2031	2,860	111	199	87	12	-	30		2,490	160	66	20	340	10	40		5,702	280	335	106
2032	2,915	146	311	121	12	-	30		2,490	160	66	20	340	10	40		5,757	316	447	140
2033	3,103	134	173	204	12	-	30		2,490	160	66	20	340	10	40		5,945	303	309	224
2034	3,052	218	263	331	12	-	30		2,490	160	66	20	340	10	40		5,894	388	399	350
2035	3,605	292	356	471	12	-	30		2,490	160	66	20	340	10	40		6,448	461	492	490
Totals	**40,989**	**2,932**	**3,180**	**3,017**	**245**	**-**	**415**	**-**	**47,580**	**2,258**	**3,384**	**319**	**8,800**	**250**	**650**	**-**	**97,614**	**5,440**	**7,629**	**3,336**

Note: 1. Broadleaf data not available for Northern Ireland

Table 6: Annual forecast of Net Realisable Volume by harvest type (000 m^3 overbark).

	Private Sector ROI				Private Sector NI		Coillte		DARD FS		Totals	
Year	1st Thin	2nd Thin	3rd + Sub	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell
2016	261	55	109	490	2	12	511	1,994	30	490	968	2,986
2017	248	65	109	436	2	12	525	2,042	30	490	980	2,981
2018	251	55	117	445	2	12	513	2,100	30	490	968	3,046
2019	215	253	156	458	2	12	529	2,165	30	490	1,185	3,125
2020	218	261	112	656	2	12	526	2,147	30	490	1,149	3,305
2021	212	259	116	772	4	24	611	2,146	30	450	1,232	3,392
2022	220	256	108	1,087	4	24	611	2,146	30	450	1,228	3,707
2023	191	231	277	1,503	4	24	611	2,146	30	450	1,345	4,123
2024	154	216	238	1,963	4	24	611	2,146	30	450	1,253	4,583
2025	142	226	248	2,245	4	24	611	2,146	30	450	1,261	4,865
2026	135	231	243	2,602	5	43	583	1,976	20	530	1,218	5,152
2027	125	204	274	2,652	5	43	583	1,976	20	530	1,211	5,202
2028	97	165	282	2,340	5	43	583	1,976	20	530	1,151	4,890
2029	105	142	258	2,464	5	43	583	1,976	20	530	1,113	5,014
2030	106	129	272	2,706	5	43	583	1,976	20	530	1,115	5,256
2031	101	130	238	2,787	5	37	523	2,194	20	370	1,017	5,388
2032	90	94	211	3,098	5	37	523	2,194	20	370	943	5,699
2033	75	95	202	3,242	5	37	523	2,194	20	370	920	5,843
2034	52	105	192	3,515	5	37	523	2,194	20	370	898	6,116
2035	41	106	190	4,386	5	37	523	2,194	20	370	886	6,987
Totals	3,040	3,279	3,950	39,848	80	580	11,191	42,031	500	9,200	22,040	91,659

Notes:
1. Private ROI includes broadleaves
2. Breakdown by thinning number not available for Coillte or Northern Ireland
3. Coillte excludes broadleaves

Table 7: Annual forecast of harvest area by harvest type (ha).

	Private Sector ROI				NI Private Sector		Coillte		DARD FS		Totals	
Year	1st Thin	2nd Thin	3rd + Sub	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell	Thinnings	Clearfell
2016	6,201	1,286	1,139	905	50	30	12,211	5,627	740	1,020	21,627	7,582
2017	5,942	1,502	1,105	770	50	30	12,851	5,297	740	1,020	22,190	7,117
2018	6,187	1,324	1,441	837	50	30	13,160	5,109	750	1,020	22,911	6,996
2019	5,250	5,786	2,323	880	50	30	14,071	5,438	750	1,020	28,229	7,368
2020	5,579	6,030	1,289	1,239	50	30	13,981	5,389	750	1,020	27,679	7,678
2021	5,314	5,988	1,457	1,547	100	60	16,448	5,863	650	940	29,958	8,410
2022	5,506	6,013	1,055	2,093	100	60	16,448	5,863	650	940	29,772	8,956
2023	4,804	5,499	6,603	2,871	100	60	16,448	5,863	650	940	34,104	9,734
2024	3,785	5,230	5,531	4,038	100	60	16,448	5,863	650	940	31,744	10,901
2025	3,554	5,527	5,980	4,393	100	60	16,448	5,863	650	940	32,259	11,256
2026	3,314	5,605	6,095	5,266	125	107	15,125	5,800	600	1,110	30,865	12,283
2027	2,961	4,935	6,429	5,772	125	107	15,125	5,800	600	1,110	30,175	12,789
2028	2,242	3,852	6,824	5,085	125	107	15,125	5,800	600	1,110	28,768	12,102
2029	2,346	3,377	6,105	5,680	125	107	15,125	5,800	600	1,110	27,678	12,697
2030	2,503	3,065	6,684	5,875	125	107	15,125	5,800	600	1,110	28,102	12,892
2031	2,375	3,030	5,592	5,867	125	92	14,634	7,512	530	750	26,285	14,221
2032	2,124	2,135	4,560	6,561	125	92	14,634	7,512	530	750	24,108	14,915
2033	1,754	2,067	4,209	7,104	125	92	14,634	7,512	530	750	23,320	15,458
2034	1,266	2,334	3,641	8,152	125	92	14,634	7,512	530	750	22,530	16,506
2035	1,021	2,445	3,687	10,398	125	92	14,634	7,512	530	750	22,443	18,752
Totals	74,027	77,031	81,750	85,332	2,000	1,445	297,312	122,736	12,630	19,100	544,749	228,613

Notes:
1. Private ROI include broadleaves
2. Breakdown by thinning number not available for Coillte or Northern Ireland
3. Data for ROI are based on net harvest area

Table 8: Annual forecast of Net Realisable volume by county and Northern Ireland (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	5	25	3	28	6	59	11	40	9	27	7	43	25	43	21	43	31	43	46	43
Cavan	17	40	25	47	24	54	39	68	38	76	47	36	76	36	54	36	51	36	110	36
Clare	46	174	39	171	47	197	71	198	109	182	132	208	121	208	139	208	198	208	207	208
Cork	111	384	62	382	68	399	100	392	117	374	140	330	159	330	207	330	192	330	252	330
Donegal	25	143	26	153	24	156	52	158	46	169	63	240	62	240	57	240	71	240	72	240
Dublin	3	13	8	21	4	2	5	18	6	16	2	15	14	15	11	15	1	15	18	15
Galway	73	223	68	261	51	218	48	199	82	222	106	238	148	238	204	238	152	238	282	238
Kerry	50	171	45	148	70	172	96	168	120	127	117	147	162	147	172	147	161	147	252	147
Kildare	11	23	11	19	13	15	24	7	12	11	19	24	34	24	31	24	36	24	25	24
Kilkenny	25	71	22	70	18	70	41	99	25	62	25	82	36	82	77	82	95	82	59	82
Laois	25	106	36	109	31	140	35	144	17	95	35	147	31	147	61	147	131	147	87	147
Leitrim	48	81	46	95	80	76	53	75	117	85	77	82	82	82	135	82	127	82	150	82
Limerick	29	55	11	55	18	64	27	103	28	119	29	68	39	68	63	68	83	68	75	68
Longford	17	30	10	22	13	17	14	8	19	10	42	13	26	13	40	13	32	13	27	13
Louth	12	7	2	29	8	8	3	8	8	8	8	15	4	15	3	15	4	15	4	15
Mayo	34	70	27	86	24	52	53	67	46	97	41	97	85	97	94	97	167	97	160	97
Meath	25	0	39	13	12	4	8	8	9	14	18	4	15	4	18	4	18	4	23	4
Monaghan	4	18	9	18	13	17	7	21	14	27	8	22	12	22	13	22	16	22	20	22
Offaly	40	45	26	35	19	38	20	65	43	31	28	72	24	72	88	72	68	72	96	72
Roscommon	27	44	24	64	25	63	48	75	93	48	107	45	104	45	157	45	167	45	154	45
Sligo	27	68	22	93	16	89	33	82	27	80	41	85	48	85	85	85	146	85	98	85
Tipperary	72	232	58	176	107	198	98	149	56	210	80	218	124	218	149	218	208	218	118	218
Waterford	60	163	60	134	36	141	28	170	38	180	42	163	53	163	135	163	93	163	231	163
Westmeath	43	41	21	20	33	33	28	30	35	13	19	19	26	19	42	19	51	19	43	19
Wexford	35	36	27	79	31	86	52	88	44	81	50	86	59	86	44	86	41	86	42	86
Wicklow	52	242	132	242	76	246	90	254	89	309	77	259	102	259	102	259	232	259	208	259
Northern Ireland	534		534		534		534		534		518		518		518		518		518	
Totals	1,450	2,509	1,393	2,570	1,402	2,616	1,616	2,698	1,781	2,675	1,877	2,759	2,189	2,759	2,721	2,759	3,089	2,759	3,379	2,759

Notes:
1. Coillte volumes exclude broadleaves
2. Northern Ireland volumes are not available at a county level
3. Northern Ireland volumes do not include broadleaves
4. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 8: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	37	36	40	36	18	36	25	36	33	36	18	33	17	33	25	33	18	33	17	33	412	739
Cavan	102	45	69	45	82	45	89	45	86	45	109	46	107	46	186	46	93	46	84	46	1,489	921
Clare	229	204	263	204	219	204	235	204	235	204	206	201	277	201	272	201	285	201	420	201	3,749	3,987
Cork	314	341	316	341	280	341	224	341	294	341	330	378	385	378	278	378	320	378	487	378	4,636	7,172
Donegal	106	182	107	182	88	182	114	182	105	182	119	224	106	224	152	224	350	224	251	224	1,995	4,008
Dublin	2	16	13	16	4	16	10	16	6	16	21	11	2	11	45	11	30	11	15	11	220	279
Galway	189	289	159	289	211	289	230	289	223	289	262	271	264	271	167	271	271	271	368	271	3,557	5,112
Kerry	280	115	218	115	197	115	270	115	276	115	284	147	472	147	425	147	396	147	649	147	4,712	2,835
Kildare	53	12	33	12	24	12	46	12	45	12	40	8	52	8	21	8	56	8	73	8	658	301
Kilkenny	111	70	101	70	121	70	77	70	146	70	145	73	103	73	108	73	120	73	131	73	1,587	1,499
Laois	185	113	185	113	194	113	130	113	109	113	126	133	150	133	89	133	128	133	196	133	1,978	2,558
Leitrim	200	123	176	123	119	123	200	123	215	123	244	97	143	97	198	97	157	97	255	97	2,822	1,920
Limerick	142	80	67	80	95	80	146	80	89	80	133	90	99	90	195	90	133	90	173	90	1,675	1,587
Longford	55	18	42	18	71	18	55	18	61	18	42	9	35	9	67	9	69	9	55	9	792	290
Louth	4	6	6	6	3	6	4	6	7	6	14	3	7	3	7	3	3	3	14	3	126	181
Mayo	146	119	193	119	104	119	124	119	176	119	160	160	218	160	194	160	191	160	240	160	2,477	2,252
Meath	15	3	29	3	36	3	21	3	19	3	23	2	14	2	88	2	67	2	47	2	543	84
Monaghan	24	20	41	20	34	20	26	20	16	20	19	22	18	22	23	22	44	22	24	22	385	422
Offaly	125	36	126	36	113	36	98	36	111	36	38	33	94	33	104	33	105	33	106	33	1,472	915
Roscommon	159	56	194	56	166	56	137	56	149	56	141	53	188	53	131	53	181	53	169	53	2,522	1,064
Sligo	77	85	126	85	78	85	90	85	132	85	72	77	102	77	89	77	203	77	153	77	1,664	1,648
Tipperary	249	186	300	186	301	186	219	186	273	186	322	210	201	210	305	210	211	210	337	210	3,789	4,035
Waterford	122	127	137	127	88	127	134	127	123	127	115	170	159	170	127	170	110	170	132	170	2,024	3,088
Westmeath	48	15	48	15	60	15	68	15	68	15	75	9	56	9	113	9	94	9	94	9	1,064	355
Wexford	52	80	71	80	69	80	65	80	83	80	53	59	53	59	52	59	73	59	72	59	1,068	1,496
Wicklow	187	185	196	185	108	185	133	185	131	185	149	201	169	201	155	201	156	201	161	201	2,704	4,521
Northern Ireland	598		598		598		598		598		422		422		422		422		422		10,360	
Totals	3,810	2,561	3,853	2,561	3,481	2,561	3,567	2,561	3,812	2,561	3,678	2,719	3,915	2,719	4,036	2,719	4,286	2,719	5,146	2,719	60,478	53,269

Table 9: Annual forecast of Net Realisable Volume, 7-13 cm by county and Northern Ireland (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	3	8	2	6	2	10	2	6	3	6	3	7	5	7	4	7	5	7	7	7
Cavan	11	9	12	13	15	13	14	15	15	14	19	10	22	10	18	10	16	10	27	10
Clare	30	35	19	35	25	35	36	31	39	28	33	33	37	33	42	33	37	33	39	33
Cork	36	87	32	64	32	67	41	75	52	74	53	71	54	71	62	71	52	71	65	71
Donegal	17	28	23	29	17	30	25	32	30	30	35	35	26	35	24	35	34	35	29	35
Dublin	2	2	2	3	2	1	2	3	2	2	1	3	2	3	2	3	1	3	4	3
Galway	28	55	29	69	28	50	27	48	33	53	39	50	40	50	49	50	36	50	58	50
Kerry	34	31	28	21	35	24	44	24	40	17	47	21	59	21	54	21	48	21	57	21
Kildare	3	4	5	3	4	3	5	2	5	1	6	4	9	4	8	4	7	4	5	4
Kilkenny	14	19	13	19	12	15	16	21	12	16	11	20	16	20	21	20	18	20	17	20
Laois	10	25	15	24	13	29	13	28	9	14	13	27	12	27	14	27	17	27	14	27
Leitrim	21	20	20	20	29	17	20	19	31	16	25	17	28	17	28	17	23	17	27	17
Limerick	12	18	8	16	10	16	15	18	17	20	19	16	22	16	21	16	24	16	27	16
Longford	6	7	7	5	7	3	6	2	7	2	12	4	8	4	12	4	10	4	8	4
Louth	3	1	2	3	2	1	2	1	3	1	3	2	2	2	2	2	2	2	2	2
Mayo	19	30	15	22	17	12	29	16	27	21	22	20	36	20	34	20	68	20	40	20
Meath	5	0	10	2	6	0	6	1	7	1	10	1	7	1	7	1	10	1	9	1
Monaghan	3	4	3	5	4	4	3	7	4	8	5	5	5	5	4	5	5	5	6	5
Offaly	11	8	12	7	8	7	11	6	13	5	13	10	14	10	18	10	19	10	20	10
Roscommon	15	10	14	11	17	14	26	13	23	11	27	9	29	9	41	9	33	9	34	9
Sligo	11	13	9	15	9	13	16	15	14	13	17	16	15	16	22	16	23	16	23	16
Tipperary	22	55	25	34	30	43	33	30	28	41	31	48	36	48	36	48	40	48	32	48
Waterford	15	32	15	24	9	27	13	33	13	29	13	40	15	40	26	40	17	40	30	40
Westmeath	12	3	8	3	14	3	14	3	14	1	13	3	13	3	16	3	14	3	12	3
Wexford	9	12	8	13	7	17	11	18	11	15	13	19	13	19	11	19	9	19	10	19
Wicklow	17	34	18	36	18	41	20	44	18	43	18	49	20	49	20	49	27	49	30	49
Northern Ireland	92		92		92		92		92		74		74		74		74		74	
Totals	460	549	448	502	467	494	543	511	565	481	575	539	621	539	669	539	669	539	706	539

Notes:
1. Coillte volumes exclude broadleaves
2. Northern Ireland volumes are not available at a county level
3. Northern Ireland volumes do not include broadleaves
4. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 9: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	6	6	7	6	4	6	5	6	6	6	4	5	3	5	5	5	3	5	5	5	86	125
Cavan	21	6	18	6	20	6	23	6	16	6	16	4	18	4	20	4	13	4	13	4	348	170
Clare	40	27	42	27	40	27	42	27	46	27	31	28	39	28	41	28	44	28	60	28	764	604
Cork	76	73	68	73	57	73	54	73	67	73	56	62	65	62	57	62	59	62	79	62	1,118	1,393
Donegal	32	24	38	24	25	24	29	24	34	24	27	18	23	18	29	18	60	18	45	18	605	535
Dublin	1	4	2	4	2	4	3	4	2	4	3	2	2	2	5	2	4	2	4	2	48	57
Galway	37	46	38	46	36	46	44	46	48	46	42	40	44	40	29	40	38	40	53	40	775	956
Kerry	60	15	46	15	41	15	45	15	51	15	45	17	61	17	60	17	56	17	86	17	998	382
Kildare	12	3	8	3	7	3	7	3	10	3	6	2	11	2	5	2	11	2	18	2	153	57
Kilkenny	26	14	21	14	22	14	16	14	28	14	20	11	18	11	21	11	17	11	22	11	362	312
Laois	24	22	26	22	23	22	20	22	16	22	16	22	17	22	12	22	18	22	27	22	331	475
Leitrim	32	18	29	18	25	18	33	18	27	18	22	12	19	12	21	12	18	12	27	12	507	325
Limerick	31	15	19	15	22	15	28	15	24	15	22	15	19	15	24	15	21	15	26	15	410	313
Longford	14	4	14	4	11	4	13	4	13	4	8	3	9	3	9	3	10	3	9	3	193	74
Louth	2	2	2	2	3	2	3	2	3	2	3	1	3	1	3	1	2	1	3	1	50	31
Mayo	33	20	59	20	27	20	33	20	44	20	35	19	51	19	45	19	38	19	55	19	725	397
Meath	7	1	12	1	12	1	11	1	6	1	7	1	7	1	10	1	20	1	12	1	184	17
Monaghan	5	3	6	3	7	3	5	3	4	3	5	2	5	2	6	2	5	2	5	2	95	82
Offaly	25	7	26	7	19	7	18	7	20	7	9	8	16	8	17	8	21	8	24	8	333	155
Roscommon	29	8	35	8	26	8	26	8	33	8	23	6	27	6	22	6	25	6	20	6	525	173
Sligo	13	14	19	14	18	14	18	14	26	14	10	12	13	12	15	12	24	12	25	12	341	279
Tipperary	51	34	52	34	47	34	41	34	49	34	49	29	35	29	34	29	32	29	47	29	751	755
Waterford	21	29	24	29	19	29	25	29	22	29	18	27	22	27	22	27	18	27	22	27	377	622
Westmeath	16	4	17	4	18	4	26	4	16	4	16	4	13	4	19	4	15	4	23	4	308	67
Wexford	15	15	16	15	12	15	15	15	16	15	10	10	9	10	11	10	16	10	16	10	239	298
Wicklow	27	37	38	37	20	37	25	37	21	37	24	30	28	30	21	30	20	30	28	30	458	778
Northern Ireland	77		77		77		77		77		46		46		46		46		46		1,445	
Totals	**733**	**449**	**760**	**449**	**637**	**449**	**686**	**449**	**727**	**449**	**574**	**390**	**624**	**390**	**609**	**390**	**655**	**390**	**799**	**390**	**12,528**	**9,430**

Table 10: Annual forecast of Net Realisable Volume 14-19 cm, by county and Northern Ireland (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	6	1	6	2	18	2	11	4	8	2	14	8	14	7	14	9	14	16	14
Cavan	4	12	4	14	5	17	14	21	9	23	16	12	24	12	19	12	14	12	35	12
Clare	11	56	10	53	13	59	25	59	40	51	39	72	40	72	51	72	63	72	60	72
Cork	21	112	12	89	13	103	23	106	34	108	45	111	52	111	66	111	61	111	83	111
Donegal	5	39	3	41	4	45	17	46	11	46	20	82	19	82	20	82	25	82	25	82
Dublin	1	3	1	5	0	1	1	5	1	4	0	4	2	4	2	4	0	4	8	4
Galway	17	70	15	86	15	62	16	60	29	70	42	83	62	83	80	83	58	83	114	83
Kerry	11	49	9	33	14	44	28	36	27	36	41	51	56	51	67	51	58	51	100	51
Kildare	2	5	2	4	2	4	5	2	2	3	5	8	9	8	8	8	8	8	6	8
Kilkenny	8	20	6	19	5	22	13	33	9	17	10	28	12	28	27	28	28	28	21	28
Laois	7	25	9	29	10	44	12	48	6	25	13	48	11	48	19	48	33	48	22	48
Leitrim	17	25	13	26	30	22	19	21	47	22	28	26	31	26	47	26	37	26	50	26
Limerick	9	15	2	14	4	20	9	31	8	33	8	23	13	23	23	23	25	23	28	23
Longford	3	8	2	7	3	5	4	3	6	3	16	4	8	4	11	4	9	4	10	4
Louth	2	2	0	7	1	3	0	3	2	2	2	4	1	4	0	4	1	4	1	4
Mayo	6	25	6	28	5	16	17	19	14	36	13	34	31	34	36	34	65	34	59	34
Meath	3	0	4	4	2	1	1	2	1	4	5	1	4	1	5	1	5	1	6	1
Monaghan	1	4	2	5	1	5	1	6	4	8	2	7	4	7	4	7	5	7	6	7
Offaly	8	12	5	8	5	11	7	17	10	9	8	23	6	23	25	23	22	23	31	23
Roscommon	8	13	7	17	7	20	18	23	34	15	40	16	41	16	62	16	58	16	57	16
Sligo	8	18	6	26	4	26	11	25	8	23	14	29	19	29	35	29	47	29	35	29
Tipperary	18	67	15	45	23	60	31	46	17	60	27	71	36	71	47	71	58	71	45	71
Waterford	14	39	10	29	6	41	8	51	12	46	11	53	18	53	43	53	24	53	64	53
Westmeath	12	7	3	5	11	10	9	8	7	3	5	6	8	6	12	6	13	6	12	6
Wexford	9	11	7	17	8	24	16	28	14	24	11	29	16	29	18	29	9	29	13	29
Wicklow	13	52	18	54	18	73	26	74	17	78	22	84	29	84	33	84	48	84	63	84
Northern Ireland	214		214		214		214		214		178		178		178		178		178	
Totals	433	696	388	672	426	758	548	784	586	755	624	925	738	925	944	925	960	925	1,147	925

Notes:
1. Coillte volumes exclude broadleaves
2. Northern Ireland volumes are not available at a county level
3. Northern Ireland volumes do not include broadleaves
4. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 10: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	11	10	11	10	6	10	8	10	13	10	6	8	5	8	8	8	5	8	6	8	130	207
Cavan	32	11	20	11	26	11	26	11	23	11	25	9	30	9	36	9	21	9	22	9	406	244
Clare	71	61	78	61	67	61	74	61	81	61	58	56	89	56	77	56	85	56	121	56	1,153	1,225
Cork	105	103	98	103	80	103	74	103	101	103	78	101	116	101	84	101	91	101	141	101	1,379	2,094
Donegal	35	59	41	59	28	59	37	59	39	59	40	57	35	57	52	57	111	57	80	57	646	1,203
Dublin	0	4	2	4	1	4	3	4	2	4	6	3	0	3	10	3	6	3	5	3	51	78
Galway	65	87	55	87	65	87	69	87	82	87	90	76	88	76	50	76	81	76	119	76	1,211	1,578
Kerry	101	39	71	39	66	39	84	39	98	39	83	39	142	39	137	39	116	39	185	39	1,491	848
Kildare	15	4	9	4	8	4	11	4	17	4	8	2	18	2	5	2	14	2	25	2	179	90
Kilkenny	41	20	32	20	41	20	23	20	55	20	37	19	32	19	37	19	29	19	38	19	503	445
Laois	53	31	57	31	55	31	37	31	33	31	32	38	36	38	23	38	31	38	50	38	549	759
Leitrim	62	32	58	32	39	32	55	32	57	32	45	22	39	22	44	22	38	22	60	22	815	519
Limerick	44	23	21	23	29	23	47	23	33	23	39	23	30	23	56	23	40	23	50	23	518	457
Longford	18	4	14	4	15	4	18	4	22	4	12	3	10	3	16	3	19	3	15	3	230	83
Louth	1	2	1	2	0	2	1	2	2	2	3	1	2	1	2	1	1	1	3	1	25	54
Mayo	53	39	73	39	35	39	44	39	68	39	51	46	74	46	62	46	65	46	81	46	859	721
Meath	4	1	9	1	9	1	8	1	4	1	5	1	4	1	18	1	24	1	15	1	138	23
Monaghan	4	5	7	5	11	5	4	5	3	5	5	4	5	4	7	4	8	4	7	4	92	110
Offaly	42	11	50	11	27	11	28	11	35	11	10	10	26	10	30	10	35	10	32	10	443	277
Roscommon	51	16	64	16	45	16	39	16	53	16	38	11	56	11	38	11	47	11	38	11	802	301
Sligo	21	26	36	26	27	26	27	26	48	26	17	21	25	21	24	21	60	21	46	21	519	500
Tipperary	92	55	91	55	83	55	70	55	87	55	96	56	62	56	75	56	60	56	96	56	1,126	1,190
Waterford	38	37	44	37	29	37	41	37	42	37	31	46	46	46	41	46	32	46	39	46	593	887
Westmeath	15	5	15	5	21	5	26	5	20	5	25	3	20	3	30	3	23	3	30	3	315	97
Wexford	19	22	25	22	18	22	22	22	31	22	12	16	16	16	15	16	23	16	25	16	327	439
Wicklow	55	55	66	55	32	55	30	55	35	55	39	56	55	56	42	56	40	56	48	56	731	1,305
Northern Ireland	193		193		193		193		193		122		122		122		122		122		3,535	
Totals	**1,241**	**764**	**1,242**	**764**	**1,056**	**764**	**1,098**	**764**	**1,277**	**764**	**1,012**	**725**	**1,184**	**725**	**1,140**	**725**	**1,226**	**725**	**1,498**	**725**	**18,767**	**15,735**

Table 11: Annual forecast of Net Realisable Volume, 20 cm+ by county and Northern Ireland (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	12	0	16	2	30	7	24	2	13	2	22	12	22	9	22	17	22	23	22
Cavan	2	20	8	19	4	24	11	32	14	39	11	14	30	14	16	14	20	14	49	14
Clare	5	83	10	83	8	103	10	109	30	104	59	103	44	103	46	103	98	103	108	103
Cork	54	185	18	229	23	229	35	211	30	193	41	148	52	148	79	148	78	148	105	148
Donegal	2	77	0	83	2	81	10	80	5	93	8	123	16	123	13	123	13	123	18	123
Dublin	0	8	6	13	2	1	2	9	3	10	0	8	10	8	7	8	0	8	6	8
Galway	29	98	24	107	8	106	5	91	20	100	25	105	46	105	75	105	59	105	109	105
Kerry	5	92	8	93	22	104	23	109	52	74	29	75	47	75	52	75	56	75	95	75
Kildare	6	14	4	12	7	8	13	3	5	7	8	12	17	12	15	12	21	12	13	12
Kilkenny	4	33	3	32	1	32	12	45	3	29	4	35	9	35	29	35	49	35	21	35
Laois	7	57	11	56	9	68	10	67	2	56	9	72	8	72	28	72	81	72	51	72
Leitrim	11	36	12	50	22	36	15	35	39	47	24	39	24	39	59	39	67	39	73	39
Limerick	8	22	0	25	4	28	3	54	3	67	2	30	4	30	20	30	34	30	21	30
Longford	8	16	0	10	3	9	3	4	6	5	13	5	10	5	17	5	14	5	10	5
Louth	7	4	-	20	5	4	1	4	3	5	3	8	1	8	1	8	2	8	1	8
Mayo	9	16	6	36	2	24	8	32	5	39	6	43	18	43	24	43	34	43	61	43
Meath	17	0	24	7	4	2	0	5	0	9	3	2	3	2	6	2	2	2	8	2
Monaghan	1	10	4	7	7	8	2	8	6	11	2	10	4	10	5	10	6	10	7	10
Offaly	21	25	9	21	5	20	3	42	20	18	7	40	4	40	45	40	27	40	44	40
Roscommon	4	21	3	36	1	30	5	39	35	22	40	20	33	20	54	20	76	20	63	20
Sligo	8	37	7	52	2	50	7	42	4	44	10	40	13	40	29	40	76	40	40	40
Tipperary	32	110	19	97	54	94	34	73	11	110	22	99	51	99	67	99	111	99	41	99
Waterford	31	93	35	81	20	73	7	86	13	105	19	69	20	69	67	69	52	69	137	69
Westmeath	19	31	10	11	8	20	5	20	15	9	2	10	5	10	14	10	23	10	19	10
Wexford	16	13	13	49	16	45	25	43	19	43	26	38	30	38	15	38	22	38	19	38
Wicklow	21	156	96	152	40	132	44	136	54	188	37	127	53	127	49	127	157	127	115	127
Northern Ireland	228		228		228		228		228		266		266		266		266		266	
Totals	556	1,265	557	1,396	509	1,363	526	1,403	629	1,439	678	1,295	830	1,295	1,108	1,295	1,460	1,295	1,526	1,295

Notes:
1. Coillte volumes exclude broadleaves
2. Northern Ireland volumes are not available at a county level
3. Northern Ireland volumes do not include broadleaves
4. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 11: (continued).

	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	20	20	22	20	8	20	12	20	13	20	9	20	8	20	12	20	9	20	5	20	195	407
Cavan	48	28	31	28	36	28	41	28	47	28	68	33	59	33	130	33	59	33	50	33	735	508
Clare	118	116	144	116	112	116	118	116	107	116	116	117	149	117	154	117	156	117	240	117	1,832	2,159
Cork	133	165	150	165	143	165	96	165	126	165	195	215	205	215	137	215	170	215	268	215	2,139	3,685
Donegal	39	99	27	99	35	99	49	99	32	99	51	149	48	149	70	149	179	149	126	149	744	2,270
Dublin	1	8	9	8	1	8	4	8	2	8	12	5	0	5	30	5	20	5	6	5	121	145
Galway	86	156	66	156	110	156	117	156	93	156	129	154	132	154	88	154	152	154	197	154	1,571	2,578
Kerry	119	60	101	60	90	60	142	60	127	60	156	91	269	91	228	91	224	91	379	91	2,223	1,605
Kildare	26	5	16	5	9	5	28	5	18	5	26	4	22	4	11	4	31	4	31	4	325	153
Kilkenny	44	35	48	35	58	35	38	35	63	35	89	44	53	44	50	44	73	44	71	44	723	741
Laois	108	59	101	59	115	59	73	59	60	59	78	73	97	73	54	73	79	73	119	73	1,098	1,325
Leitrim	106	73	88	73	55	73	112	73	131	73	177	63	85	63	133	63	101	63	167	63	1,500	1,076
Limerick	67	42	27	42	44	42	71	42	32	42	72	53	51	53	115	53	73	53	96	53	747	817
Longford	24	9	14	9	45	9	24	9	27	9	21	3	16	3	42	3	40	3	31	3	369	133
Louth	1	2	3	2	0	2	0	2	3	2	8	1	2	1	3	1	0	1	8	1	51	95
Mayo	60	60	61	60	42	60	47	60	65	60	74	95	93	95	87	95	88	95	104	95	893	1,135
Meath	4	1	7	1	15	1	3	1	8	1	11	1	3	1	61	1	22	1	20	1	221	44
Monaghan	15	12	28	12	15	12	17	12	9	12	9	16	8	16	10	16	31	16	12	16	198	230
Offaly	58	18	50	18	68	18	52	18	56	18	19	14	52	14	56	14	49	14	50	14	696	483
Roscommon	80	32	95	32	95	32	72	32	63	32	79	36	106	36	71	36	108	36	111	36	1,195	590
Sligo	43	45	70	45	34	45	45	45	58	45	45	44	64	44	50	44	118	44	82	44	804	869
Tipperary	105	98	157	98	171	98	107	98	138	98	177	125	104	125	196	125	120	125	194	125	1,911	2,090
Waterford	64	62	70	62	41	62	68	62	58	62	66	97	91	97	64	97	61	97	72	97	1,054	1,579
Westmeath	17	7	16	7	22	7	16	7	33	7	33	3	23	3	64	3	56	3	41	3	441	191
Wexford	17	43	30	43	39	43	28	43	37	43	31	33	28	33	26	33	34	33	30	33	502	759
Wicklow	105	93	92	93	56	93	78	93	75	93	86	115	86	115	91	115	96	115	85	115	1,515	2,438
Northern Ireland	328		328		328		328		328		254		254		254		254		254		5,380	
Totals	**1,836**	**1,348**	**1,851**	**1,348**	**1,789**	**1,348**	**1,783**	**1,348**	**1,807**	**1,348**	**2,091**	**1,604**	**2,107**	**1,604**	**2,287**	**1,604**	**2,405**	**1,604**	**2,849**	**1,604**	**29,183**	**28,105**

Table 12: Annual forecast of Net Realisable Volume, tip to 7 cm by county and Northern Ireland (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	0	3	0	2	0	3	0	2	1	2	0	2	0	2	0	2	1	2	0	2
Cavan	0	3	0	4	1	4	0	4	0	4	1	4	0	4	1	4	0	4	2	4
Clare	0	6	0	7	0	11	1	8	0	8	0	7	1	7	1	7	0	7	0	7
Cork	2	26	2	19	1	20	1	22	2	25	2	21	1	21	2	21	2	21	1	21
Donegal	1	6	-	6	0	8	0	8	1	8	0	7	0	7	0	7	0	7	1	7
Dublin	-	1	0	1	-	0	-	1	-	1	0	1	-	1	-	1	-	1	0	1
Galway	2	11	3	15	2	14	3	14	2	16	3	14	2	14	3	14	2	14	3	14
Kerry	1	7	0	5	0	6	1	7	0	4	0	4	0	4	1	4	0	4	0	4
Kildare	0	1	-	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0	1
Kilkenny	1	7	1	5	1	5	1	7	1	6	1	6	1	6	3	6	2	6	1	6
Laois	1	10	1	7	1	10	2	9	1	5	0	7	0	7	2	7	2	7	1	7
Leitrim	1	5	-	5	0	5	1	5	0	5	-	5	0	5	0	5	0	5	-	5
Limerick	1	7	0	6	0	5	1	5	2	7	1	5	2	5	1	5	1	5	1	5
Longford	0	2	0	1	0	1	0	1	0	1	0	1	0	1	1	1	0	1	0	1
Louth	0	0	-	0	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0	0
Mayo	0	5	0	4	0	3	0	4	0	4	0	6	0	6	0	6	0	6	0	6
Meath	-	0	-	0	-	0	-	0	-	0	-	0	0	0	0	0	0	0	0	0
Monaghan	0	2	0	1	0	1	0	2	0	3	0	2	0	2	-	2	0	2	0	2
Offaly	0	2	0	2	-	2	-	2	0	2	-	2	-	2	-	2	-	2	-	2
Roscommon	1	3	1	3	1	4	2	4	1	3	0	3	0	3	1	3	1	3	1	3
Sligo	1	3	0	3	0	3	1	4	1	3	0	4	0	4	1	4	1	4	0	4
Tipperary	1	16	2	9	1	15	2	10	1	14	2	13	4	13	3	13	1	13	1	13
Waterford	1	10	1	6	1	8	1	10	1	9	1	11	1	11	2	11	2	11	1	11
Westmeath	0	1	0	1	0	1	1	1	0	0	0	1	0	1	1	1	0	1	0	1
Wexford	1	5	0	4	0	5	0	6	1	5	1	5	0	5	0	5	1	5	1	5
Wicklow	1	11	1	10	0	12	1	14	1	14	1	13	1	13	1	13	1	13	2	13
Northern Ireland	21		21		21		21		21		21		21		21		21		21	
Totals	39	150	34	126	33	149	40	151	37	148	34	145	36	145	45	145	40	145	38	145

Notes:
1. This is the volume associated with the NRV >= 7 cm. An estimate of harvestable volume is provided in Tables 1 and 2
2. Coillte volumes exclude broadleaves
3. Northern Ireland volumes are not available at a county level
4. Northern Ireland volumes do not include broadleaves
5. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 12: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	2	0	2	0	2	0	2	0	2	0	1	0	1	0	1	0	1	0	1	6	40
Cavan	0	2	1	2	0	2	1	2	0	2	1	1	1	1	0	1	0	1	1	1	11	55
Clare	1	5	1	5	0	5	0	5	1	5	0	6	0	6	0	6	0	6	0	6	8	132
Cork	3	23	1	23	3	23	2	23	2	23	1	20	2	20	1	20	1	20	1	20	31	433
Donegal	0	4	0	4	0	4	1	4	0	4	0	4	0	4	1	4	0	4	1	4	9	109
Dublin	-	1	-	1	-	1	0	1	-	1	-	1	-	1	-	1	-	1	-	1	0	18
Galway	3	12	4	12	1	12	2	12	2	12	3	10	1	10	1	10	2	10	1	10	44	255
Kerry	0	2	1	2	0	2	0	2	0	2	0	3	0	3	0	3	0	3	0	3	6	75
Kildare	0	1	0	1	0	1	0	1	0	1	0	1	0	1	-	1	-	1	-	1	1	14
Kilkenny	2	4	2	4	3	4	2	4	3	4	1	4	1	4	2	4	1	4	1	4	32	97
Laois	1	7	1	7	1	7	1	7	0	7	1	6	1	6	0	6	0	6	1	6	19	140
Leitrim	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	6	99
Limerick	2	5	2	5	2	5	1	5	2	5	1	4	1	4	0	4	1	4	0	4	21	100
Longford	1	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	5	24
Louth	-	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0	0	1	7
Mayo	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	4	86
Meath	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
Monaghan	0	1	-	1	0	1	0	1	0	1	-	1	0	1	0	1	-	1	-	1	1	27
Offaly	-	2	-	2	-	2	-	2	0	2	-	2	0	2	-	2	0	2	0	2	1	39
Roscommon	0	2	1	2	1	2	1	2	0	2	1	2	1	2	0	2	1	2	1	2	15	52
Sligo	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	6	74
Tipperary	4	10	4	10	4	10	3	10	5	10	5	8	2	8	1	8	2	8	3	8	51	220
Waterford	1	9	1	9	2	9	2	9	1	9	1	8	1	8	1	8	1	8	1	8	22	185
Westmeath	1	1	1	1	0	1	0	1	0	1	0	1	0	1	-	1	0	1	0	1	6	19
Wexford	0	5	2	5	1	5	1	5	0	5	1	3	1	3	0	3	0	3	0	3	11	91
Wicklow	2	11	2	11	2	11	1	11	1	11	1	10	2	10	1	10	0	10	1	10	21	231
Northern Ireland	24		24		24		24		24		17		17		17		17		17		414	
Totals	**46**	**125**	**50**	**125**	**46**	**125**	**42**	**125**	**44**	**125**	**35**	**110**	**34**	**110**	**27**	**110**	**26**	**110**	**31**	**110**	**756**	**2,625**

Table 13: Annual forecast of Net Realisable Volume, spruce (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	3	24	2	20	5	55	7	31	7	24	5	33	19	33	18	33	28	33	44	33
Cavan	12	34	15	43	17	52	33	68	31	76	40	34	68	34	48	34	45	34	104	34
Clare	37	161	26	140	36	190	58	196	97	177	109	200	111	200	129	200	189	200	194	200
Cork	33	341	35	338	40	377	55	380	58	370	109	298	137	298	183	298	173	298	226	298
Donegal	11	128	18	114	14	143	39	157	23	168	43	235	48	235	38	235	33	235	52	235
Dublin	2	8	0	13	1	2	3	18	1	12	0	11	13	11	9	11	-	11	17	11
Galway	34	193	43	168	24	211	35	194	55	189	70	225	120	225	177	225	135	225	257	225
Kerry	42	154	27	132	57	163	80	167	61	121	105	140	146	140	155	140	141	140	238	140
Kildare	1	21	5	16	10	12	21	7	7	11	7	19	27	19	27	19	33	19	21	19
Kilkenny	20	51	19	49	14	65	38	95	20	59	21	65	31	65	73	65	87	65	47	65
Laois	16	102	24	100	22	135	32	141	13	94	28	133	24	133	54	133	125	133	77	133
Leitrim	44	73	36	79	73	75	50	75	108	85	72	79	72	79	128	79	122	79	144	79
Limerick	20	49	7	54	15	61	22	103	22	119	24	65	33	65	60	65	77	65	67	65
Longford	6	30	8	16	9	17	12	8	12	10	39	13	19	13	35	13	29	13	24	13
Louth	8	7	0	14	1	5	1	7	6	8	5	10	2	10	1	10	2	10	2	10
Mayo	13	39	13	63	12	47	33	66	26	62	22	91	55	91	75	91	73	91	133	91
Meath	1	0	7	10	5	3	4	8	5	14	12	4	7	4	14	4	11	4	17	4
Monaghan	2	18	5	14	3	17	4	20	10	27	5	22	9	22	11	22	14	22	18	22
Offaly	14	38	12	34	13	32	15	65	25	31	18	64	15	64	81	64	61	64	85	64
Roscommo	20	40	20	60	17	62	43	75	78	47	99	44	94	44	148	44	159	44	141	44
Sligo	22	64	19	75	13	85	30	79	20	79	37	81	42	81	78	81	138	81	90	81
Tipperary	42	183	46	120	57	182	67	135	43	206	55	183	94	183	133	183	187	183	100	183
Waterford	27	126	24	80	13	101	23	153	30	177	19	117	47	117	118	117	83	117	218	117
Westmeath	32	40	7	12	30	31	24	29	29	13	13	17	19	17	38	17	46	17	38	17
Wexford	30	30	17	45	22	79	48	76	35	75	23	49	29	49	40	49	33	49	36	49
Wicklow	33	184	33	165	46	184	71	231	37	282	46	195	85	195	83	195	218	195	190	195
Northern Ire	486	-	486	-	486	-	486	-	486	-	443	-	443	-	443	-	443	-	443	-
Totals	**1,011**	**2,135**	**953**	**1,974**	**1,057**	**2,386**	**1,336**	**2,581**	**1,347**	**2,537**	**1,469**	**2,425**	**1,808**	**2,425**	**2,399**	**2,425**	**2,685**	**2,425**	**3,025**	**2,425**

Notes:
1. Northern Ireland volumes are not available at a county level
2. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 13: (continued).

	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	34	32	35	32	15	32	21	32	29	32	14	31	14	31	21	31	15	31	4	31	342	633
Cavan	94	45	56	45	72	45	73	45	69	45	100	46	94	46	166	46	80	46	69	46	1,287	893
Clare	216	181	242	181	190	181	206	181	199	181	191	188	256	188	234	188	239	188	350	188	3,310	3,708
Cork	280	323	277	323	251	323	187	323	249	323	268	365	336	365	237	365	252	365	398	365	3,784	6,741
Donegal	76	171	43	171	53	171	69	171	54	171	82	220	73	220	102	220	232	220	146	220	1,251	3,837
Dublin	1	16	11	16	1	16	6	16	4	16	18	10	1	10	43	10	24	10	6	10	161	237
Galway	164	237	128	237	181	237	169	237	172	237	243	222	223	222	141	222	228	222	326	222	2,926	4,376
Kerry	260	109	197	109	178	109	246	109	242	109	233	144	423	144	393	144	358	144	592	144	4,172	2,701
Kildare	39	9	25	9	18	9	34	9	27	9	25	8	26	8	10	8	34	8	33	8	433	242
Kilkenny	98	61	89	61	112	61	67	61	134	61	139	66	82	66	91	66	102	66	102	66	1,387	1,273
Laois	175	103	168	103	190	103	104	103	94	103	111	105	137	105	78	105	91	105	139	105	1,701	2,278
Leitrim	189	120	163	120	90	120	171	120	190	120	229	97	130	97	183	97	135	97	219	97	2,547	1,865
Limerick	128	76	56	76	86	76	130	76	76	76	124	85	89	85	187	85	120	85	154	85	1,500	1,514
Longford	49	15	32	15	65	15	30	15	50	15	36	9	27	9	63	9	61	9	45	9	651	269
Louth	2	4	4	4	1	4	1	4	4	4	12	2	2	2	4	2	1	2	10	2	71	120
Mayo	129	81	97	81	67	81	77	81	99	81	122	128	154	128	129	128	119	128	126	128	1,573	1,777
Meath	10	3	11	3	26	3	5	3	12	3	19	1	10	1	83	1	22	1	27	1	308	73
Monaghan	21	20	37	20	29	20	23	20	13	20	15	22	13	22	19	22	41	22	18	22	307	411
Offaly	110	28	102	28	97	28	84	28	96	28	28	29	67	29	86	29	73	29	57	29	1,140	804
Roscommo	146	49	178	49	146	49	113	49	109	49	132	52	178	52	113	52	154	52	145	52	2,236	1,008
Sligo	73	75	108	75	55	75	72	75	102	75	68	70	92	70	81	70	191	70	96	70	1,428	1,513
Tipperary	229	165	263	165	266	165	178	165	243	165	301	189	169	189	285	189	168	189	263	189	3,187	3,508
Waterford	111	113	112	113	73	113	119	113	104	113	105	157	127	157	101	157	84	157	94	157	1,631	2,570
Westmeath	37	11	41	11	34	11	23	11	55	11	68	8	43	8	81	8	74	8	58	8	791	307
Wexford	32	65	59	65	60	65	49	65	73	65	43	50	39	50	37	50	42	50	37	50	782	1,125
Wicklow	173	167	173	167	95	167	107	167	109	167	135	188	110	188	135	188	112	188	89	188	2,081	3,797
Northern Ire	528	-	528	-	528	-	528	-	528	-	352	-	352	-	352	-	352	-	352	-	9,045	-
Totals	3,404	2,276	3,236	2,276	2,980	2,276	2,893	2,276	3,137	2,276	3,212	2,492	3,267	2,492	3,455	2,492	3,404	2,492	3,957	2,492	50,034	47,579

Table 14: Annual forecast of Net Realisable Volume, lodgepole pine (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	-	-	-	-	0	-	0	-	-	-	-	0	0	0	-	0	0	0	-	0
Cavan	0	5	0	2	1	-	0	-	0	-	0	0	1	0	0	0	0	0	1	0
Clare	0	6	0	16	3	-	5	-	0	-	1	1	2	1	2	1	2	1	4	1
Cork	3	9	1	5	2	-	1	-	21	-	3	1	4	1	8	1	3	1	8	1
Donegal	7	7	4	28	5	-	7	-	15	-	14	1	9	1	14	1	32	1	14	1
Dublin	-	-	-	1	-	-	-	-	-	-	-	1	0	1	-	1	-	1	-	1
Galway	11	24	10	60	19	-	7	-	19	18	25	3	18	3	19	3	10	3	18	3
Kerry	0	8	3	13	3	-	7	-	3	-	2	2	4	2	7	2	8	2	3	2
Kildare	0	-	0	-	1	-	0	-	-	-	0	0	1	0	1	0	-	0	1	0
Kilkenny	0	0	0	2	2	-	0	-	-	-	1	0	1	0	0	0	-	0	1	0
Laois	3	0	1	3	3	-	0	-	1	-	2	1	2	1	1	1	1	1	6	1
Leitrim	0	7	0	10	3	-	1	-	2	-	0	0	6	0	1	0	1	0	1	0
Limerick	0	-	0	-	0	-	1	-	0	-	0	0	2	0	0	0	1	0	2	0
Longford	0	0	1	5	3	-	0	-	0	-	1	-	0	-	3	-	1	-	2	-
Louth	0	0	-	2	0	-	-	-	0	-	-	1	0	1	0	1	-	1	-	1
Mayo	7	24	5	21	6	-	17	-	16	33	12	3	25	3	13	3	89	3	21	3
Meath	-	-	0	2	0	-	0	-	0	-	0	-	0	-	0	-	0	-	1	-
Monaghan	0	1	0	4	0	-	-	-	0	-	0	-	0	-	-	-	0	-	0	-
Offaly	2	0	3	-	1	-	1	-	1	-	1	0	2	0	2	0	3	0	4	0
Roscommon	2	4	2	4	5	-	3	-	2	0	5	0	7	0	5	0	6	0	8	0
Sligo	1	4	1	9	1	-	2	-	4	1	3	0	2	0	5	0	7	0	6	0
Tipperary	1	10	0	12	1	-	5	-	3	-	8	1	6	1	2	1	2	1	3	1
Waterford	3	2	2	7	2	-	-	-	0	-	1	0	1	0	11	0	2	0	1	0
Westmeath	0	1	0	6	0	-	0	-	1	-	0	-	2	-	0	-	1	-	1	-
Wexford	-	1	0	-	0	-	0	-	-	-	0	3	1	3	0	3	-	3	0	3
Wicklow	1	6	0	4	1	-	-	-	0	-	0	1	2	1	1	1	5	1	0	1
Northern Ireland	20	-	20	-	20	-	20	-	20	-	10	-	10	-	10	-	10	-	10	-
Totals	**62**	**119**	**53**	**215**	**81**	**-**	**80**	**-**	**108**	**53**	**89**	**19**	**110**	**19**	**105**	**19**	**183**	**19**	**115**	**19**

Notes:
1. Northern Ireland volumes are not available at a county level
2. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 14: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	0	0	1	0	-	0	0	0	0	0	0	0	-	0	1	0	0	0	0	0	3	3
Cavan	1	0	2	0	0	0	1	0	6	0	1	-	0	-	0	-	1	-	1	-	16	7
Clare	2	20	5	20	14	20	14	20	18	20	6	12	7	12	5	12	9	12	11	12	109	185
Cork	18	9	18	9	7	9	11	9	24	9	13	7	18	7	9	7	7	7	22	7	194	98
Donegal	24	10	55	10	24	10	36	10	43	10	31	4	15	4	35	4	82	4	74	4	540	112
Dublin	-	0	0	0	-	0	-	0	0	0	-	0	-	0	-	0	-	0	-	0	0	9
Galway	15	51	22	51	20	51	51	51	38	51	9	47	14	47	6	47	18	47	11	47	350	609
Kerry	7	5	9	5	5	5	4	5	13	5	4	2	7	2	14	2	9	2	20	2	132	64
Kildare	1	3	3	3	0	3	5	3	7	3	0	0	7	0	-	0	7	0	0	0	34	17
Kilkenny	2	2	4	2	1	2	0	2	3	2	0	3	0	3	-	3	0	3	1	3	16	26
Laois	1	7	8	7	-	7	13	7	7	7	0	24	0	24	0	24	5	24	1	24	50	164
Leitrim	3	3	5	3	12	3	2	3	17	3	1	0	3	0	2	0	0	0	4	0	65	34
Limerick	4	1	3	1	2	1	4	1	2	1	0	2	0	2	1	2	2	2	2	2	26	20
Longford	3	2	4	2	4	2	16	2	10	2	1	0	3	0	1	0	1	0	3	0	55	18
Louth	0	1	0	1	-	1	-	1	0	1	0	-	0	-	-	-	-	-	1	-	2	11
Mayo	11	37	85	37	27	37	34	37	71	37	25	32	54	32	43	32	43	32	79	32	679	435
Meath	0	0	1	0	0	0	3	0	2	0	0	1	0	1	-	1	0	1	1	1	10	7
Monaghan	0	-	0	-	0	-	-	-	1	-	1	-	0	-	-	-	-	-	0	-	3	4
Offaly	7	7	14	7	5	7	2	7	6	7	3	2	4	2	1	2	11	2	1	2	74	48
Roscommon	10	7	12	7	16	7	18	7	37	7	6	1	3	1	8	1	15	1	10	1	177	44
Sligo	1	10	13	10	17	10	11	10	26	10	1	7	4	7	2	7	3	7	28	7	138	96
Tipperary	2	11	15	11	11	11	10	11	10	11	4	11	4	11	4	11	2	11	18	11	110	136
Waterford	1	0	13	0	2	0	0	0	9	0	3	3	1	3	2	3	1	3	2	3	53	25
Westmeath	1	4	2	4	2	4	10	4	8	4	0	1	0	1	0	1	3	1	3	1	33	31
Wexford	1	2	4	2	0	2	0	2	1	2	0	1	0	1	0	1	-	1	1	1	8	29
Wicklow	0	1	3	1	0	1	2	1	7	1	1	1	1	1	0	1	1	1	1	1	26	23
Northern Ireland	10	-	10	-	10	-	10	-	10	-	10	-	10	-	10	-	10	-	10	-	250	-
Totals	**125**	**196**	**309**	**196**	**181**	**196**	**256**	**196**	**375**	**196**	**121**	**160**	**156**	**160**	**144**	**160**	**228**	**160**	**302**	**160**	**3,154**	**2,258**

Table 15: Annual forecast of Net Realisable Volume, other conifers (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	1	1	8	0	4	3	10	1	3	1	10	4	10	1	10	1	10	1	10
Cavan	2	2	7	1	3	2	1	-	4	0	4	2	3	2	2	2	2	2	3	2
Clare	3	7	8	15	2	6	2	2	6	6	3	7	2	7	2	7	1	7	3	7
Cork	64	34	16	39	15	22	33	11	27	3	14	30	6	30	4	30	5	30	7	30
Donegal	2	8	0	11	0	13	0	1	3	1	1	4	1	4	0	4	1	4	0	4
Dublin	0	5	7	7	2	0	0	0	4	4	0	2	0	2	0	2	0	2	0	2
Galway	23	6	11	32	2	7	2	5	3	14	5	10	4	10	4	10	2	10	2	10
Kerry	1	9	9	3	4	9	2	2	50	6	3	6	5	6	4	6	5	6	5	6
Kildare	8	2	4	3	1	3	1	0	3	1	7	5	2	5	1	5	1	5	1	5
Kilkenny	3	20	1	20	1	6	1	4	2	3	2	17	2	17	2	17	2	17	3	17
Laois	4	4	9	5	4	5	0	3	2	0	3	13	4	13	3	13	3	13	2	13
Leitrim	1	1	7	6	2	0	1	-	2	0	2	2	2	2	2	2	2	2	3	2
Limerick	8	6	1	1	1	3	1	0	4	1	2	4	2	4	1	4	2	4	3	4
Longford	10	0	0	0	0	0	1	0	4	-	1	0	4	0	1	0	1	0	0	0
Louth	3	0	0	14	5	2	0	1	1	0	2	4	1	4	0	4	1	4	1	4
Mayo	11	7	5	3	2	5	0	1	1	1	2	3	1	3	1	3	1	3	2	3
Meath	22	-	29	-	4	1	1	0	1	-	2	0	4	0	1	0	2	0	2	0
Monaghan	0	0	3	-	8	-	2	0	3	0	1	1	1	1	1	1	1	1	1	1
Offaly	22	6	9	1	2	6	1	1	14	-	4	8	3	8	2	8	2	8	2	8
Roscommon	4	-	1	0	1	1	1	-	11	1	1	1	1	1	1	1	1	1	2	1
Sligo	2	0	0	9	0	4	0	3	0	1	0	4	1	4	1	4	0	4	0	4
Tipperary	26	39	9	44	45	16	21	13	7	4	7	34	20	34	8	34	4	34	7	34
Waterford	27	35	31	48	18	40	2	17	5	3	19	45	2	45	4	45	4	45	6	45
Westmeath	9	0	12	2	1	2	1	2	4	0	3	2	3	2	1	2	1	2	1	2
Wexford	3	5	8	34	7	7	1	12	6	6	23	34	27	34	2	34	5	34	4	34
Wicklow	6	52	96	73	25	62	15	23	47	27	22	64	11	64	13	64	5	64	11	64
Northern Ireland	28	-	28	-	28	-	28	-	28	-	55	-	55	-	55	-	55	-	55	-
Totals	**293**	**251**	**314**	**378**	**184**	**226**	**122**	**113**	**242**	**83**	**189**	**313**	**169**	**313**	**116**	**313**	**112**	**313**	**127**	**313**

Notes:
1. Northern Ireland volumes are not available at a county level
2. Due to computational methodology, the county totals may not always exactly match the national or entity totals

Table 15: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	4	1	4	0	4	0	4	2	4	3	1	2	1	1	1	2	1	5	1	33	102
Cavan	3	0	7	0	6	0	3	0	6	0	5	0	9	0	10	0	5	0	6	0	88	19
Clare	2	2	4	2	5	2	1	2	6	2	3	1	8	1	17	1	8	1	15	1	100	90
Cork	3	7	5	7	5	7	4	7	9	7	36	6	18	6	11	6	26	6	26	6	316	325
Donegal	2	1	1	1	2	1	2	1	3	1	1	0	11	0	8	0	17	0	14	0	70	58
Dublin	0	0	0	0	1	0	0	0	1	0	2	0	1	0	1	0	4	0	6	0	30	32
Galway	2	1	1	1	2	1	2	1	6	1	4	1	20	1	11	1	13	1	7	1	117	122
Kerry	3	2	4	2	5	2	5	2	8	2	39	1	30	1	5	1	11	1	13	1	208	68
Kildare	2	1	1	1	1	1	2	1	8	1	12	0	16	0	7	0	7	0	15	0	100	42
Kilkenny	2	7	3	7	2	7	3	7	6	7	3	5	13	5	9	5	9	5	15	5	75	198
Laois	3	2	4	2	1	2	4	2	5	2	12	4	11	4	4	4	24	4	30	4	131	115
Leitrim	3	0	3	0	6	0	7	0	6	0	12	0	6	0	7	0	13	0	14	0	102	19
Limerick	4	2	4	2	2	2	4	2	4	2	7	2	6	2	3	2	6	2	8	2	70	51
Longford	2	0	1	0	1	0	2	0	1	0	3	0	4	0	1	0	2	0	2	0	41	3
Louth	1	1	0	1	0	1	0	1	2	1	1	1	3	1	1	1	1	1	1	1	23	49
Mayo	2	1	6	1	4	1	6	1	3	1	10	0	4	0	13	0	19	0	21	0	114	40
Meath	1	0	2	0	2	0	4	0	1	0	1	0	2	0	2	0	8	0	5	0	95	4
Monaghan	1	0	1	0	1	0	1	0	1	0	1	0	3	0	1	0	1	0	2	0	30	6
Offaly	2	1	3	1	4	1	1	1	5	1	3	1	19	1	6	1	10	1	14	1	124	64
Roscommon	1	0	2	0	1	0	2	0	1	0	2	0	3	0	4	0	5	0	5	0	47	11
Sligo	1	0	2	0	1	0	2	0	1	0	2	0	3	0	1	0	3	0	18	0	38	37
Tipperary	7	11	7	11	5	11	9	11	16	11	13	9	23	9	9	9	15	9	26	9	222	386
Waterford	2	14	4	14	3	14	5	14	6	14	4	10	25	10	13	10	14	10	15	10	203	489
Westmeath	6	0	1	0	3	0	2	0	3	0	3	0	9	0	10	0	2	0	6	0	79	17
Wexford	9	13	3	13	2	13	2	13	5	13	8	8	12	8	9	8	9	8	11	8	152	341
Wicklow	5	17	11	17	6	17	7	17	9	17	9	12	53	12	9	12	32	12	57	12	421	697
Northern Ireland	60	-	60	-	60	-	60	-	60	-	70	-	70	-	70	-	70	-	70	-	1,065	-
Totals	**129**	**88**	**141**	**88**	**131**	**88**	**141**	**88**	**185**	**88**	**269**	**66**	**381**	**66**	**243**	**66**	**333**	**66**	**426**	**66**	**4,092**	**3,384**

Table 16: Annual forecast of Net Realisable Volume, broadleaves (000 m^3 overbark).

	2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
County / Northern Ireland	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-
Cavan	3	-	3	-	3	-	4	-	3	-	3	-	3	-	3	-	4	-	3	-
Clare	5	-	5	-	6	-	6	-	5	-	18	-	6	-	6	-	6	-	6	-
Cork	11	-	11	-	11	-	11	-	12	-	13	-	12	-	12	-	11	-	12	-
Donegal	4	-	4	-	4	-	4	-	5	-	5	-	4	-	4	-	5	-	5	-
Dublin	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-
Galway	5	-	5	-	5	-	5	-	5	-	7	-	5	-	5	-	5	-	5	-
Kerry	6	-	6	-	7	-	6	-	7	-	7	-	7	-	7	-	6	-	7	-
Kildare	2	-	1	-	2	-	1	-	2	-	5	-	6	-	2	-	2	-	2	-
Kilkenny	2	-	2	-	2	-	2	-	2	-	2	-	3	-	2	-	5	-	8	-
Laois	2	-	2	-	2	-	2	-	2	-	3	-	2	-	3	-	2	-	2	-
Leitrim	3	-	2	-	3	-	2	-	5	-	3	-	3	-	3	-	3	-	2	-
Limerick	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	3	-	4	-
Longford	1	-	1	-	1	-	1	-	2	-	1	-	2	-	1	-	1	-	1	-
Louth	1	-	1	-	1	-	1	-	1	-	2	-	2	-	1	-	1	-	1	-
Mayo	4	-	4	-	4	-	4	-	3	-	5	-	4	-	4	-	4	-	4	-
Meath	3	-	3	-	3	-	3	-	3	-	3	-	4	-	3	-	4	-	3	-
Monaghan	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-	2	-
Offaly	2	-	2	-	3	-	3	-	3	-	4	-	5	-	3	-	3	-	5	-
Roscommon	1	-	1	-	2	-	1	-	2	-	2	-	2	-	3	-	1	-	2	-
Sligo	2	-	1	-	2	-	1	-	1	-	1	-	2	-	2	-	1	-	2	-
Tipperary	3	-	4	-	4	-	5	-	4	-	10	-	4	-	5	-	15	-	9	-
Waterford	3	-	3	-	3	-	3	-	4	-	4	-	3	-	3	-	4	-	5	-
Westmeath	2	-	2	-	2	-	2	-	2	-	3	-	3	-	2	-	2	-	3	-
Wexford	2	-	2	-	2	-	3	-	2	-	4	-	3	-	2	-	3	-	2	-
Wicklow	11	-	3	-	5	-	4	-	4	-	9	-	4	-	6	-	4	-	5	-
Northern Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	84	-	74	-	80	-	79	-	83	-	119	-	92	-	90	-	98	-	102	-

Notes: 1. Coillte broadleaf volumes are not available at a county level

2. No forecast broadleaf volumes are available for Northern Ireland

Table 16: (continued).

County / Northern Ireland	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Total 2016 - 2035	
	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte	Non Coillte	Coillte
Carlow	1	-	3	-	2	-	4	-	1	-	1	-	1	-	2	-	1	-	7	-	32	-
Cavan	4	-	4	-	4	-	12	-	5	-	4	-	4	-	9	-	7	-	9	-	97	-
Clare	8	-	13	-	9	-	12	-	12	-	6	-	6	-	17	-	29	-	44	-	226	-
Cork	13	-	16	-	18	-	22	-	14	-	13	-	13	-	20	-	34	-	42	-	321	-
Donegal	4	-	8	-	9	-	8	-	6	-	4	-	6	-	8	-	19	-	16	-	133	-
Dublin	1	-	1	-	2	-	3	-	1	-	1	-	1	-	2	-	2	-	4	-	28	-
Galway	7	-	8	-	8	-	7	-	6	-	5	-	7	-	9	-	12	-	25	-	144	-
Kerry	10	-	8	-	9	-	16	-	14	-	7	-	13	-	12	-	19	-	23	-	198	-
Kildare	11	-	4	-	4	-	5	-	2	-	2	-	2	-	3	-	8	-	25	-	91	-
Kilkenny	9	-	6	-	6	-	7	-	3	-	3	-	9	-	7	-	9	-	13	-	101	-
Laois	5	-	5	-	3	-	9	-	3	-	3	-	2	-	7	-	8	-	26	-	92	-
Leitrim	6	-	4	-	11	-	20	-	2	-	2	-	4	-	5	-	8	-	18	-	108	-
Limerick	7	-	4	-	4	-	7	-	7	-	2	-	4	-	5	-	6	-	9	-	77	-
Longford	2	-	5	-	1	-	7	-	1	-	2	-	2	-	3	-	5	-	5	-	46	-
Louth	2	-	1	-	1	-	2	-	1	-	1	-	1	-	2	-	1	-	2	-	29	-
Mayo	5	-	5	-	6	-	7	-	4	-	4	-	7	-	9	-	9	-	15	-	108	-
Meath	3	-	15	-	8	-	10	-	3	-	3	-	3	-	3	-	36	-	14	-	129	-
Monaghan	2	-	3	-	4	-	3	-	2	-	2	-	2	-	3	-	3	-	4	-	43	-
Offaly	6	-	8	-	6	-	11	-	4	-	3	-	4	-	11	-	12	-	34	-	132	-
Roscommon	2	-	2	-	3	-	5	-	2	-	2	-	5	-	6	-	8	-	9	-	61	-
Sligo	1	-	3	-	5	-	5	-	2	-	2	-	3	-	4	-	6	-	10	-	57	-
Tipperary	11	-	14	-	19	-	22	-	5	-	4	-	5	-	8	-	27	-	30	-	207	-
Waterford	8	-	9	-	10	-	10	-	4	-	3	-	6	-	10	-	12	-	21	-	130	-
Westmeath	5	-	4	-	21	-	33	-	3	-	3	-	4	-	21	-	15	-	28	-	160	-
Wexford	10	-	5	-	7	-	13	-	4	-	2	-	2	-	6	-	23	-	23	-	119	-
Wicklow	8	-	9	-	7	-	17	-	5	-	4	-	5	-	11	-	11	-	15	-	147	-
Northern Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	153	-	167	-	189	-	277	-	115	-	87	-	121	-	204	-	331	-	471	-	3,017	-

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