



- Roundwood harvest in 2008 was 2.503 M m³, 18% down on the 2007 level.
- A sharp reduction in demand for sawn timber and for wood-based panels was the main reason for the reduced harvest.
- Sawmill output for 2008 was 780,000 m³.
- Wood-based panel output was 780,000 m³.
- Sawnwood and wood-based panel exports in 2008 were worth €249 million.
- Since 2006, the demand for wood biomass for domestic and commercial energy and heat use has grown significantly.

Woodflow for the Republic of Ireland for 2008

Gordon Knaggs¹ and Eoin O'Driscoll²

Roundwood harvest and roundwood available for processing

In 2008, roundwood available for processing was 2,503,000 m³ (Table 1), a reduction of 18% on the 2007 level. This was mainly as a result of a sharp decline in construction activity.

Coillte supplied 91% of roundwood, with the balance coming from privately-owned forests and from imports. Private harvest declined sharply on 2007 levels, by some 70%, to 118,000 m³ - a number of forest management companies surveyed recorded no harvesting activity for 2008. Net imports of roundwood contributed an additional 106,000 m³ (Table 1). The assortment breakdown is provided in Table 2.

Table 1: Roundwood available for processing in the Republic of Ireland (2008).³

Sector	Roundwood available for processing 000 m ³ OB
Coillte	2,279
Private	118
Imports less exports	106
Roundwood available for processing	2,503

Table 2: Roundwood available for processing by assortment (2008).³

Assortment	Top diameter cm	Roundwood available for processing 000 m ³ OB
Sawlog	> 14	1,619
Pulpwood	7 – 14	804
Stakewood	7 – 14	80
Total		2,503

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³ OB: Overbark.

Sources and uses of wood fibre in the Republic of Ireland (2008)^{4,5}

Wood fibre sources are shown in Table 3, with the associated products in Table 4.

Table 3: Sources of wood fibre in the Republic of Ireland (2008).

Fibre source	000 m ³ OB
Roundwood	2,503
Sawmilling residues	846
Wood-based panel (WBP) residues ⁶	106
Post-consumer recovered wood (PCRW)	208
Total	3,663

Table 4: Uses of wood fibre in the Republic of Ireland (2008).

Uses of wood fibre	000 m ³ OB
Sawmilling sector	1,619
WBP sector	1,462
Round stakes	80
Wood biomass use by the forest products sector ⁷	378
Other uses	
Horticultural bark mulch	44
Wood chip for commercial biomass use	30
Exports of forest product residues	50
Total	3,663

Timber products trade (2008)

In 2008, imports of forest products exceeded €789 million, mainly pulp and paper products (over 66%), with sawn timber and wood-based panels making up the remainder. A reduction in Irish construction output led to a significant reduction in sawn timber imports in 2007 and in 2008⁸ (Table 5).

Table 5: Timber imports and exports (2007-2008).^{9,10}

Product	Imports			
	000 m ³		€ million	
	2007	2008	2007	2008
Sawnwood	724	412	251	141
WBP	358	264	146	108
	000 t		€ million	
Pulp products	31	29	22	20
Paper and paperboard products	546	526	467	520
Total			886	789
	Exports			
	000 m ³		€ million	
	2007	2008	2007	2008
Sawnwood	381	389	71	54
WBP	757	614	262	195
	000 t		€ million	
Pulp products	0	2	0	0
Paper and paperboard products	85	77	92	69
Total			425	318

Source: Central Statistics Office (CSO) www.cso.ie

Nine companies form the core of the Irish sawmilling sector, providing the outlet for sawlog and stakewood harvested from Irish forests. In 2008, Irish sawmills utilised 1.62 million m³ of roundwood. Output was 780,000 m³ of sawn timber¹¹. The primary products produced included construction timber, pallet and fencing products. While Irish construction timber is largely sold on the home market, pallet and fencing products make up the bulk of sawn timber exports.

The sector has been badly affected by the downturn in construction activity. In 2008, many sawmills closed for short periods to better match sawn timber output with market demand. As a result, output declined by 6% over 2007.

Sawn timber exports (almost all to Great Britain) were worth €54 million, comprising mainly pallet wood and

⁴ Source: UNECE Joint Wood Energy Enquiry (JWEE) reports for Ireland (2007 and 2008) and EUROSTAT Joint Forest Sector Questionnaire (JFSQ) reports for Ireland (2007 and 2008).

⁵ Wood fibre that is reused is counted twice in this model.

⁶ This includes bark (from the debarking lines at Medite and SmartPly) and sawdust produced from the sanding of wood-based panels.

⁷ Wood biomass is used by the forest products sector for process drying, heating and for the generation of electricity.

⁸ Sawn timber imports are reported in Ireland's EUROSTAT JFSQ return for 2007 and 2008.

⁹ This table includes import/export figures for sawn timber, wood-based panels (WBP) and pulp/paper products only. Data are taken from Ireland's EUROSTAT JFSQ returns (2007 – 2008). Roundwood, sawmill residues and secondary processed timber products are not included.

¹⁰ These data are based on Ireland's EUROSTAT Joint Forest Sector Questionnaire (JFSQ) return for 2007 and 2008.

¹¹ This output includes the production of round stakes.

fencing products. Despite difficult market conditions and unfavourable euro/sterling exchange rates, sawmill exports in 2008 were slightly in excess of 2007 (Table 5).

The panel products sector had a combined output of 779,000 m³. Output was 15% down on 2007, largely due to a reduction in construction activity in both home and export markets. Raw materials used are pulpwood, sawmilling residues (sawdust, woodchip and bark) and post-consumer recovered wood (PCRW). Overall, the wood fibre requirement for WBP manufacture was 1.462 million m³.

Products manufactured by the sector include chipboard/particleboard, Oriented Strand Board (OSB), Medium Density Fibreboard (MDF) and moulded door facings. The sector is export orientated, selling more than 75% of its products in overseas markets. The companies involved are listed in Table 6.

In 2008, Irish wood-based panel (WBP) and sawn timber exports were worth €249 million (Table 5). Wood-based panels accounted for 78% of this total¹². Compared with 2007, the value and volume of WBP exported from Ireland has declined considerably (Table 5)¹³.

Wood residues and post-consumer recovered wood (PCRW)

Wood residues include bark, sawdust and wood chip. These are produced in both sawmills and in wood-based panel (WBP) plants. In 2008, the output of residues from Irish sawmills was 0.846 million m³. Post-consumer recovered wood (PCRW) obtained by chipping used pallets and timber sourced from construction waste is estimated to have added a further 0.208 million m³ of feedstock¹⁸. Residues produced during the manufacture of WBP¹⁹ added a further 0.106 million m³.

Wood residues and recycled wood fibre are primarily used as a feedstock for board manufacture. A small volume of wood residues is exported. However, in recent years, other uses for wood residues have emerged. These include bark mulch, wood pellets, and biomass/combined heat and power/boiler fuel.

Combined heat and power (CHP) is the generation of both thermal and electrical energy in a single process, normally using fossil fuel such as natural gas. In this way, more

Table 6: Wood-based panel manufacturers in the Republic of Ireland.

Company	Established	Product(s)	Location
Finsa Forest Products ¹⁴	1984	Chipboard/Particleboard	Scariff, Co Clare
Masonite Ireland ¹⁵	1997	Moulded door facings	Drumsna, Co Leitrim
Medite-Europe ¹⁶	1983	Medium Density Fibreboard (MDF)	Clonmel, Co Tipperary
SmartPly Europe ¹⁷	1995	Oriented Strand Board (OSB)	Slieverue, Co Kilkenny

¹² Secondary processed wood products are excluded from the total.

¹³ These data are taken from Ireland's Joint Forest Sector Questionnaire (JFSQ) returns to EUROSTAT for the period 2007–2008.

¹⁴ The plant at Scariff was formerly operated by Aicher GmbH/Chipboard Ltd. It first opened in 1965. This facility is now owned and operated by Finsa; www.finsa.es

¹⁵ <http://www.masonite.com/>

¹⁶ Medite – Europe Ltd was established in Clonmel by the Medford Corporation in 1983. It was acquired in November 2006 by Coillte; www.medite-europe.com

¹⁷ The OSB mill at Slieverue, Co Kilkenny was first established as a joint venture between Coillte and Louisiana – Pacific in 1995. Coillte acquired full ownership of the business in May 2002; www.smartply.com

¹⁸ Source: Environmental Protection Agency (EPA) waste report 2007; http://www.epa.ie/downloads/pubs/waste/stats/National_Waste_Report_2007.pdf

¹⁹ This includes bark (from debarking lines at Medite and SmartPly) and sawdust from sanding lines.

efficient use is made of the energy available from the fuel. CHP installations can typically convert between 80% and 90% fuel energy into electrical power and useable heat. This compares with conventional power generation, which typically has a delivered energy efficiency of only 30%. Moreover, international evidence from the paper and board sectors shows that CHP can reduce total site energy bills by as much as 30%.

Biomass CHP uses renewable fuels to generate heat and electricity; these fuels are derived from four main sources:

- forest residues
- agricultural residues
- processing residues and waste and
- residues from crop processing.

Where wood is sourced from sustainably managed forests it is a renewable source of energy, with high greenhouse gas (GHG) emission savings. For example, each megawatt (MW) of electricity generated from wood fuel saves carbon dioxide (CO₂) emissions of 7,500 tonnes/year.

Drivers of timber demand

Housing and timber frame output^{20, 21,22,23}

Housing is an important driver of timber sales (an average new house uses 7 m³ of timber). Since 2007, the Irish housing sector has been in severe decline, with 2008 the most difficult year in many decades. In 2008, the total number of planning permissions for houses and apartments fell to its lowest level in ten years, to just 67,584 units²⁴.

Moreover, in 2008, the Construction Industry Federation (CIF) estimates that 35,000 homes and apartments remain unsold in Ireland.

In January 2009, employment in the construction sector stood at 190,000, down 90,000 from its peak in Q3 2007²⁵. As a result, the industry is going through a severe re-adjustment. This retrenchment is having a significant effect on the demand for forest products. House completions over the period 1990-2008 are shown in Table 7.

Table 7: House completions in the Republic of Ireland.

Year	House completions (1990–2009f) ^{26, 27}	Growth rate 1990 = 100
1990	19,539	100.00
1991	19,652	100.58
1992	22,464	114.97
1993	21,391	109.48
1994	26,863	137.48
1995	30,575	156.48
1996	33,725	172.60
1997	38,842	198.79
1998	42,349	216.74
1999	46,512	238.05
2000	49,812	254.94
2001	52,602	269.22
2002	57,695	295.28
2006	68,819	352.21
2004	76,954	393.85
2005	80,957	414.34
2006	93,419	478.12
2007	78,027	399.34
2008	51,724	264.72
2009f ^{28, 29}	20,000	102.37

²⁰ A preliminary construction forecast for 2008; prepared for the Department of the Environment, Heritage and Local Government by DKM Economic Consultants.; April 2008.

²¹ <http://www.environ.ie/en/PublicationsDocuments/FileDownload,20505,en.pdf>

²² <http://www.environ.ie/en/Publications/StatisticsandRegularPublications/ConstructionIndustryStatistics/FileDownload,20339,en.pdf>

²³ <http://www.cif.ie/asp/document.asp?target=../uploads/3726.pdf>

²⁴ This showed a 20% decline on 2007.

²⁵ Source: Construction Industry Federation (CIF); www.cif.ie

²⁶ House completion data is based on the number of new dwellings connected by the Electricity Supply Board (ESB).

²⁷ Department of the Environment, Heritage and Local Government; www.environ.ie

²⁸ House completion figures for 2009 are forecast.

²⁹ <http://www.environ.ie/en/PublicationsDocuments/FileDownload,20339,en.pdf>

Timber frame house construction³⁰ is an important part of the Irish construction sector, but it too has contracted in line with the overall fall in construction.

€/£ exchange rate

Since late 2007, the euro has strengthened against sterling by 24%. This has made Irish timber exports less competitive in the UK, and has, of course, improved the competitiveness of UK producers in the Irish market.

Movement in the €/£ exchange rate is shown in Table 8. Forecasts by Barclays Bank anticipate no major change in rates up to July 2010.

Table 8: Historic and forecasted €/£ exchange rate³¹.

Period	€/£	£/€
Q3 2007	0.680	1.47
Q4 2007	0.709	1.41
Q1 2008	0.758	1.32
Q2 2008	0.794	1.26
Q3 2008	0.807	1.24
Q4 2008	0.852	1.17
Q1 2009	0.923	1.08
Q2 2009 ³²	0.896	1.12
Forecast ³³		
1-month	0.83	1.21
3-month	0.82	1.22
6-month	0.82	1.22
12-month	0.75	1.33

UK construction market

The UK construction market is a key export market for forest products. However, since late 2007 new house building starts have also slowed considerably in Britain. Conditions in early to mid 2008 deteriorated further, with housing starts and completions well down on 2007, followed by a series of increasingly pessimistic announcements from builders, indicating severe problems in the sector³⁴.

These sentiments are echoed in the UK's National House Building Council (NHBC)³⁵ statistics released in July 2008³⁶. They show that there was a serious decline in UK housing output during Q2 2008. Over 2008 as a whole, the number of NHBC³⁷ registrations for new build fell to under 107,000, a drop of 47% on 2007³⁸. Moreover, the prospects for the UK housing market have not improved in the first half of 2009. NHBC figures show that private housing starts for the three months to the end of February 2009 have plunged 72% against the same period last year³⁹. In January 2009, the NHBC Chief Executive stated that: *UK house completion figures for the 2008 are the lowest since our computerised records began. These are 18% lower than the previous lowest year, which was 1992 when 130,998 new homes were started. In 2008 several UK regions experienced a decrease in new home starts in excess of 50% when compared with the previous year. These regions include Scotland, Wales, Northern Ireland, North East, Yorkshire, the Humber, North West and the West Midlands*⁴⁰. Furthermore, the NHBC anticipates that the volume of new home starts in the UK will remain relatively low throughout 2009.

³⁰ Timber frame in Ireland, a presentation to Innovawood by Philip Mahony, Manager, Irish Timber Frame Manufacturers Association (ITFMA); www.itfma.ie

³¹ <http://www.ecb.int/stats/exchange/eurofxref/html/eurofxref-graph-gbp.en.html>

³² Q2 data is to 24/06/2009.

³³ Forecast date is from 19/06/2009; Barclays Wealth Research 2009; http://www.barclayswealth.com/files/FX_Weekly.pdf

³⁴ AMA Research's report "House Building Market - UK 2008 - 2018".

³⁵ NHBC, (the National House-Building Council), is the standard setting body and leading warranty and insurance provider for new and newly converted homes in the UK; www.nhbc.co.uk

³⁶ <http://www.nhbc.co.uk/Newscentre/Recentnews/Name,33966,en.html>

³⁷ NHBC is the leading warranty and insurance provider for new homes in the UK; www.nhbc.co.uk

³⁸ <http://www.contractjournal.com/blogs/brickonomics/2009/01/nhbc-figures-show-new-home-sta.html>

³⁹ <http://www.contractjournal.com/Articles/2009/04/02/66527/private-housing-starts-plunge-72-in-latest-nhbc-figures.html>

⁴⁰ <http://www.nhbc.co.uk/NewsandComment/UKnewhouse-buildingstatistics/Year2008/Name,36493,en.html>

Developments in wood supply and processing

*Spanboard ceases chipboard manufacture in Northern Ireland*⁴¹

In 1959, chipboard production began at Spanboard Products Ltd., located outside Coleraine, Co Derry. In 1989, the facility was acquired by Sonae Indústria⁴², Portugal's largest privately owned industrial group. However, in January 2009, Sonae announced that it was ceasing production of raw chipboard at the Spanboard facility⁴³, referring to the downturn in the construction industry, combined with the rising cost of raw materials⁴⁴. Spanboard will however remain open, and will now concentrate on producing value-added products, including manufacturing melamine-faced chipboard⁴⁵ from raw chipboard sourced from Sonae (UK)⁴⁶.

New wood pellet plants

D Pellet Ltd⁴⁷, the first wood pellet production facility to operate in the Republic of Ireland, commenced production in 2008. The plant is located at Knocktopher, Co Kilkenny, and has a capacity to produce 75,000 tonnes of wood pellets per annum.

In early 2009, Laois Sawmills commenced production of wood pellets at its Portlaoise sawmill and is currently supplying wood pellets in bulk form.

In May 2009, Imperative Energy⁴⁸ announced that it is in the process of building a wood pellet, bio-refining and CHP

facility at Claremorris, Co Mayo. When fully operational, the facility will have a capacity to produce 60,000 tonnes of pellets/annum, together with a 15MWth⁴⁹/5MWe⁵⁰ CHP plant. The plan also includes a bio-processing plant, with an annual capacity of 20,000 tonnes⁵¹.

*Eirebloc opens for business*⁵²

In September 2008, Eirebloc, a new manufacturer of composite pallet blocks commenced production at Macroom, Co Cork. The company was established as a joint venture between Mid Cork Pallets⁵³ and Palfab⁵⁴. It uses recycled wood as a raw material to manufacture pallet blocks in an environmentally-friendly process. Annual production capacity exceeds 60,000 m³ of finished product, for both the home and export markets.

Private sector roundwood production forecast

COFORD is currently undertaking an analysis of roundwood availability within the Irish private forest estate. It is expected that this forecast will be completed by July/August 2009.

Biomass/Bioenergy

The use of wood biomass in Ireland is dominated by the forest products sector, which uses it for process drying and for energy purposes. Since 2006, the use of wood energy by commercial and domestic users has risen (Table 9).

⁴¹ From March 2009, Spanboard ceased manufacturing of 'raw' chipboard in Coleraine. However it will continue to import furniture grade chipboard from Sonae UK. This will be overlaid with melamine paper for use in furniture and in DIY applications.

⁴² <http://www.sonae-industria-tafisa.com/>

⁴³ http://www.sonae-industria-tafisa.com/file_bank/press/announcements/Com20090116-eng.pdf

⁴⁴ http://www.wbponline.com/news/fullstory.php/aid/566/Spanboard_makes_70_redundant.html

⁴⁵ These are largely used in furniture and in DIY applications.

⁴⁶ <http://www.sonaeuk.com/index.htm>

⁴⁷ <http://www.dpellet.ie/index.html>

⁴⁸ <http://www.imperativeenergy.ie>

⁴⁹ MWth: megawatt thermal energy.

⁵⁰ MWe: megawatt electricity.

⁵¹ http://www.biospark.ie/the_project.php

⁵² www.eirebloc.com

⁵³ www.midcorkpallets.com

⁵⁴ www.palfab.com

Table 9: Use of wood biomass in Ireland (2007 - 2008).⁵⁵

Biomass type	End use	Usage 000 m ³	
		2007	2008
Wood pellets and briquettes	Domestic heating	30	30
Wood chips	Commercial heating	20	30
Biomass use by the forest products industry ⁵⁶	Process drying/heating/CHP	382	317
Total		432	377

Co-firing with wood biomass

Four million tonnes of milled peat are harvested each year in Ireland from over 20,000 ha of peatland⁵⁷, the main markets for which are power generation, briquette manufacture and horticultural use. Around 3.08 million tonnes are used at three modern peat-fired power plants⁵⁸. They generate 6% of Ireland's total primary energy requirement (TPER)⁵⁹. However, the combustion process emits 2.8 million tonnes⁶⁰ of carbon dioxide (CO₂) per annum. In 2007, Ireland's greenhouse gas (GHG) emissions were 69.21 million t of carbon dioxide equivalent

(Mt CO₂eq)⁶¹. Peat-fired electricity generation therefore accounts for 4.1% of total emissions. Research has shown that co-firing of peat with wood biomass could reduce emissions from peat fired power stations by up to 30%⁶².

Edenderry Power⁶³, a modern peat-burning power station operated by Bord Na Móna is currently working to increase the volume of wood biomass which is used as a feedstock for its electricity generating process.

Biomass fuelled combined heat and power (CHP)

There are currently three commercial wood fuelled biomass CHP plants in operation on the island of Ireland: Balcas Fuel Ltd, Grainger Sawmills Ltd and Munster Joinery Ltd. The heat and electricity output of these facilities are shown in Table 10.

It is anticipated that the REFIT⁶⁴ tariff for biomass CHP of 12 cent/kWh⁶⁵, initially announced in January 2008 will be available for applicants from July 2009.

Table 10: Existing biomass fuelled CHP output on the island of Ireland (2008).

Plant name and location	Feedstock	Electricity output (MWe)	Heat output MWth
Balcas Fuel, Enniskillen, Co Fermanagh ⁶⁶	Sawmill residues	2.7	10.0
Grainger Sawmills, Enniskeane, Co Cork ⁶⁷	Sawmill residues	2.0	4.0
Munster Joinery Ltd, Ballydesmond, Co Cork ⁶⁸	Joinery residues	3.0	-
Total		7.7	14.0

⁵⁵ Source: EUROSTAT JWEE return for Ireland (2007 and 2008).

⁵⁶ In 2008 the requirement for wood biomass use by this sector declined in line with the decline in WBP output.

⁵⁷ <http://www.sei.ie/uploadedfiles/RenewableEnergy/PeatuseforEnergyinIreland.ppt>

⁵⁸ These plants are significantly more efficient than those they replaced.

⁵⁹ Source: Sustainable Energy Ireland (SEI) www.sei.ie

⁶⁰ Source: Environmental Protection Agency (EPA) www.epa.ie

⁶¹ http://www.epa.ie/downloads/pubs/air/airemissions/GHG_UN_2007_Final_150409.pdf

⁶² Greenhouse gas benefits of co-firing biomass with peat for energy in Ireland; Sari Lappi and Kenneth A. Byrne; IEA bio – energy task 38; www.ieabioenergy-task38.org/projects/task38casestudies/ireland-brochure.pdf

⁶³ www.edenderrypower.ie

⁶⁴ REFIT: Renewable energy feed in tariff.

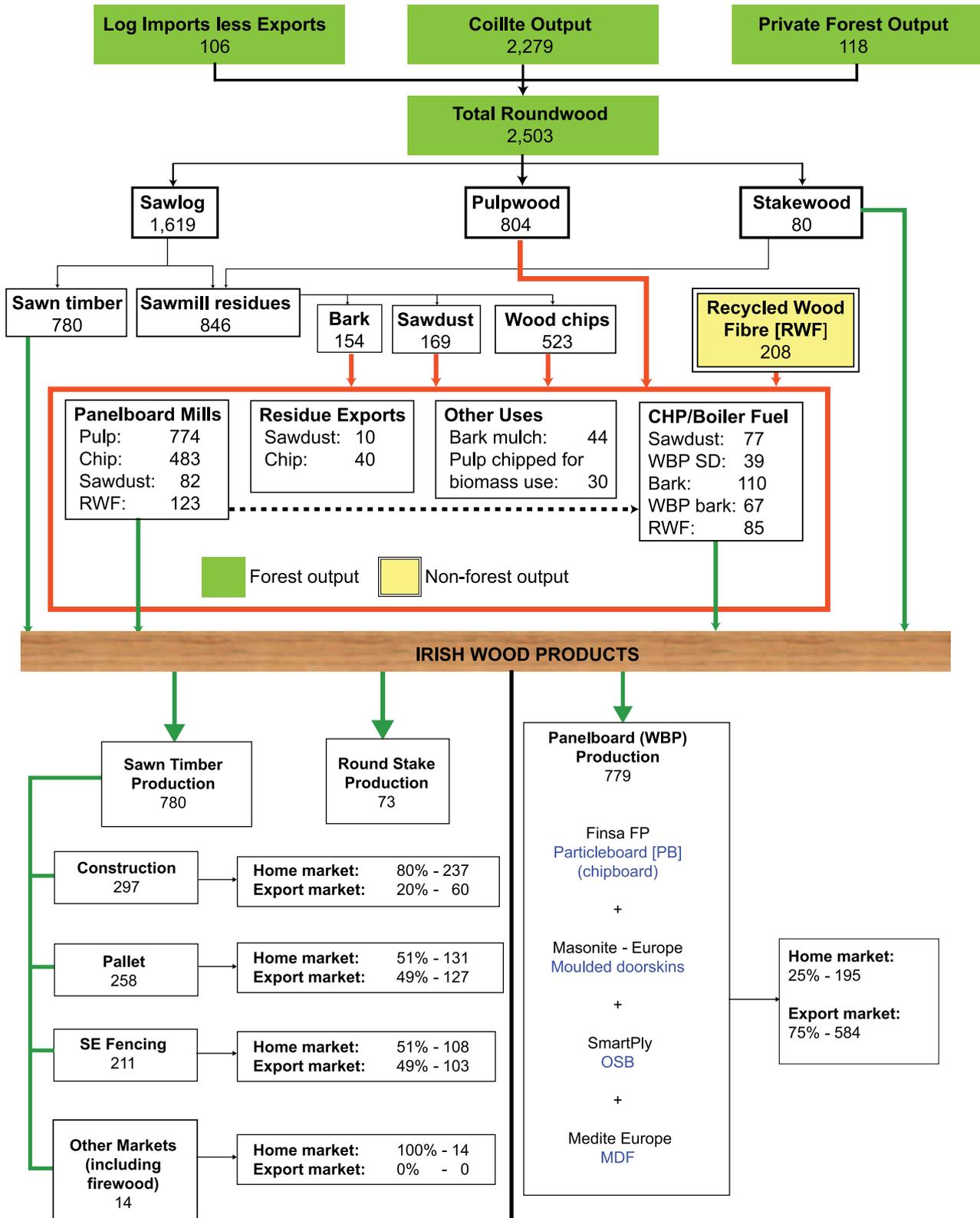
⁶⁵ kWh: Kilowatt hour.

⁶⁶ <http://www.balcas.com/articles/chp.html>

⁶⁷ <http://www.graingersawmills.com/chp.htm>

⁶⁸ http://www.sei.ie/Your_Business/Large_Industry_Energy_Network/Workshop_Presentations/John_Fingleton-_CHP_Projects.pdf

Woodflow for the Republic of Ireland for 2008 (000 m³) [overbark]



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