- *Three million cubic metres of roundwood was harvested from Irish forests in 2007, supplying the sawmilling, wood based panel (WBP) and energy sectors.*
- *Irish sawn wood output for 2007 is estimated at 984,000 m^3.*
- *In 2007, the Irish wood based panel sector had a combined output of 918,000 m^3 of finished product.*
- *Irish forest products exports grew by 14% to €333 million in 2007.*
- *Key drivers of demand for timber products include masonry housing and timber frame. Both markets slowed considerably in 2007 which led to a significant reduction in sawn timber imports in 2007.*
- *The demand for wood biomass for domestic and commercial energy use grew significantly in 2007.*

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Estimated woodflow for the Republic of Ireland in 2007

Gordon Knaggs[1] and Eoin O'Driscoll[2]

The Irish forest products sector experienced significant growth in 2007. A record three million cubic metres (m^3) of roundwood was harvested from Irish forests in 2007, supplying the sawmilling, wood based panel sector and energy sectors (Table 1). Coillte supplied 87% of this harvest, with the balance coming from an expanding private forest estate. Harvest levels in private sector forests are increasing significantly, and have the potential to grow ten fold over the coming decade.

The forest industry is rapidly developing a range of quality wood fuels, which includes high quality firewood, as well as refined products such as wood chip and pellets. This COFORD Connects note looks at the flow of roundwood, timber and timber products in the Republic of Ireland for 2007. It outlines:

- Sources and uses of wood fibre in the Republic of Ireland;
- Timber harvest;
- Sawn timber output;
- Residue production;
- Production of wood-based panels;
- Timber import and exports;
- Demand drivers;
- New developments in timber markets.

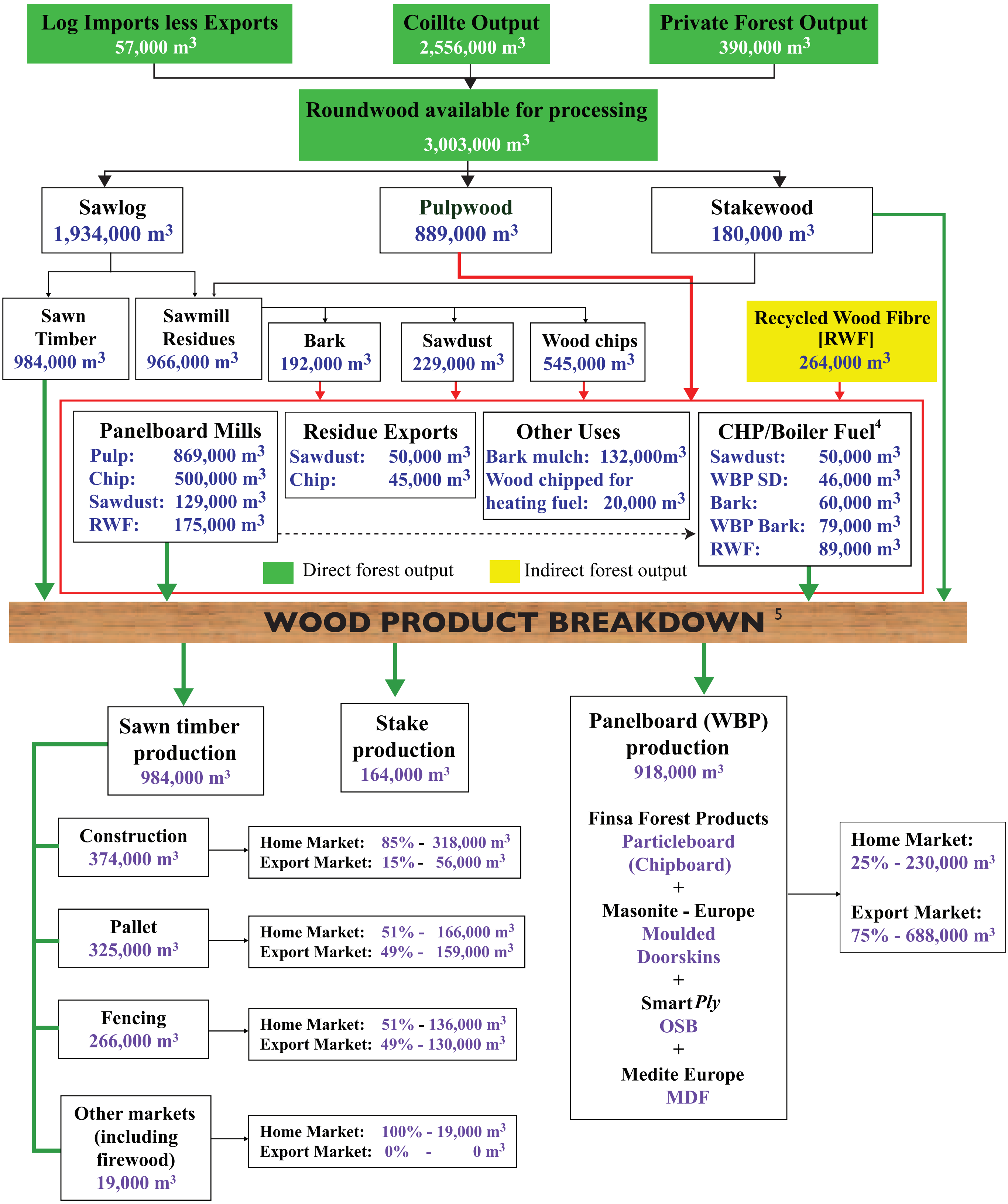
Table 1: Irish forest products sector output for 2007.

Category	Value
Roundwood harvest	
Coillte	2.6 million m^3
Private	0.4 million m^3
Total	**3.0 million m^3**
Exports	
Wood based panels	€ 262 million
Sawn wood	€ 71 million
Total	**€ 333 million** [3]

[1] *Forest Products Consultant. Email: gordonknaggs@eircom.net*
[2] *Drima Market Research. Email: eoin@drima.com*
[3] *14% increase on 2006.*

Estimated woodflow for the Republic of Ireland in 2007.

Roundwood volume in cubic metres (m^3) overbark to 7 cm top diameter



[4] *Within the forest industry sector.*
[5] *cubic metres of finished product.*

Sources and uses of wood fibre in the Republic of Ireland[6]

Wood fibre sources are shown in Table 2 and the products produced are shown in Table 3.

Table 2: Estimated sources of wood fibre in the Republic of Ireland (2007).[7]

Fibre source	Volume m^3 (OB)
Roundwood	3,003,000
Sawmill residues	966,000
Wood residues produced by the Irish wood-based panel (WBP) processing sector	125,000
Recycled wood fibre (RWF)	264,000
Total	4,358,000

Table 3: Estimated uses of wood fibre in the Republic of Ireland (2007).[7]

Uses of wood fibre in the Republic of Ireland	Volume m^3 (OB)
Wood fibre use by the Irish sawmilling sector	1,934,000
Wood fibre use by the Irish WBP sector	1,673,000
Wood fibre use by Irish producers of round stakes	180,000
Wood biomass use by the Irish forest products sector	324,000
Other uses	
Production of horticultural bark mulch	132,000
Production of wood chip for commercial biomass use	20,000
Residue exports	95,000
Total	4,358,000

Sorted small sawlogs awaiting processing.

Roundwood available for processing

In 2007, roundwood available for processing in the Republic of Ireland totalled 3 million m^3; 87% was supplied by Coillte, with the balance coming from the private sector and imports. The split between sawlog, pulp and stake is shown in Table 4.[8]

Sawmilling

Ten sawmills form the core of the Irish sawmill sector. They provide the outlet for sawlog and stakewood harvested from Irish forests. In 2007, Irish sawmills utilised 1.934 million m^3 of roundwood. Irish sawmill output for 2007 is estimated at 0.984 million m^3 of sawn timber.

Primary products include 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.

Table 4: Roundwood available for processing in the Republic of Ireland by product class (2007).

Product class	Top diameter (cm)	Roundwood harvest in cubic metres (OB m^3)
Sawlog	> 14 cm	1,934,000
Pulpwood	7 – 14 cm	889,000
Stakewood	7 – 14 cm	180,000

3 million m^3 of roundwood was harvested from Irish forests in 2007.

[6] *Source: EUROSTAT Joint Wood Energy Enquiry (JWEE) report for Ireland (2007) and EUROSTAT Joint Forest Sector Questionnaire (JFSQ) report for Ireland (2007).*
[7] *Wood fibre that is reused is counted twice in this model (total fibre source = total fibre use).*
[8] *This harvest excludes firewood.*

Co-products and recycled wood fibre (RWF)

Sawmill co-products include bark, sawdust and wood chip.

In 2007, the output of co-products from Irish sawmills was 0.966 million m^3. Recycled Wood Fibre (RWF) obtained by chipping used pallets and timber sourced from construction waste is estimated to have added a further 264,000 m^3 (roundwood equivalent) of feedstock.

Co-products and recycled wood fibre are primarily used as a feedstock for board mills. A small amount of wood co-products were exported.

In recent years, other uses for co-products have emerged:

- Bark mulch;
- Pellets;
- Boiler fuel.

Combined heat and power (CHP) is the generation of thermal and electrical energy in a single process, usually using fossil fuel such as natural gas. In this way, better use is made of the energy available from the fuel. CHP installations can typically convert between 80 and 90% of the energy in the fuel into electrical power and useful heat. This compares with conventional power generation, which has a delivered energy efficiency of only around 30%.

Moreover, international evidence from the paper and board sectors shows that CHP can reduce total site energy bills by as much as 30%.

Harvesting of wood pulp for biomass energy use in an Irish forest.

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

- Forest energy assortments;
- Agricultural residues;
- Waste and processing residues;
- Residues from crop processing.

From an environmental point of view a wood biomass CHP plant has many advantages over a fossil fuel plant, including the fact that wood is a renewable source of energy, which is carbon dioxide (CO_2) neutral. Generating one megawatt (MW) of electricity from wood saves emissions of 7,500 tonnes of carbon dioxide (the main greenhouse gas) a year.

Wood-based panels (WBP)

In 2007, the Irish panel products sector had a combined output of 918,000 m^3.

The sector is an active buyer of both wood pulp, sawmill co-products (sawdust, woodchip and bark) and recycled wood fibre (RWF).

The estimated wood fibre requirement of the WBP mills is 1.7 million m^3.

Products manufactured include chipboard/particleboard, Oriented Strand Board (OSB), Medium Density Fibreboard (MDF) and moulded door facings.

The sector is export orientated, selling more than three quarters of output in overseas markets. Irish wood-based panel companies are listed in Table 5.

Imports and exports of forest products

The breakdown of Irish forest product imports and exports in 2007 is shown in Table 6.

In 2007, imports of forest products exceeded €863 million. Pulp and paper products were responsible for over 50% with sawn timber and wood-based panels making up the remainder.

Wood-based panels accounted for 62% of the value of Irish timber exports. The majority of the timber produced by Irish sawmills is sold on the home market. In 2007, sawn timber exports from Ireland were worth €71 million. Exports are mainly pallet and fencing products.

Table 5: Wood-based panel manufacturers in the Republic of Ireland.

Company	Established	Product(s)	Location
Finsa Forest Products[9]	1984	Chipboard/Particleboard	Scariff, Co Clare
Masonite Ireland Ltd[10]	1997	Moulded door facings	Drumsna, Co Leitrim
Medite Europe[11]	1983	Medium Density Fibreboard (MDF)	Clonmel, Co Tipperary
Smart*Ply* Europe[12]	1995	Oriented Strand Board (OSB)	Slieverue, Co Kilkenny

Table 6: Irish timber imports and exports in 2007.

Item	Unit of measurement	Import Volume	Import Value €000
Sawn wood	1,000 m^3	724	€251,200
Wood-based panels (WBP)	1,000 m^3	358	€145,706
Pulp and paper products	1,000 mt	546	€466,526
Total			€863,432
Item	**Unit of measurement**	**Export Volume**	**Export Value €000**
Sawn wood	1,000 m^3	381	€70,977
Wood-based panels (WBP)	1,000 m^3	757	€262,410
Pulp and paper products	1,000 mt	85	€92,026
Total			€425,413

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

A reduction in Irish construction output led to a significant reduction in sawn timber imports in 2007.[13]

Drivers of timber demand

Decline in housing output [14]

House completions[15] are an important driver of timber sales. It is estimated that an average new house uses 7 m^3 of timber products.

A sharp contraction in new house building has been underway since the middle of 2007. After more than a decade of rising levels of housing output, Irish house building completions (for 2007) declined by 16.5% on 2006, the first decline in completions since 1993.

The Irish National Accounts for 2007 from the Central Statistics Office (CSO)[16] show that the volume of building and construction output declined by 1.4% last year, the first decline in construction output volumes since 1993, which led to a significant reduction in sawn timber imports for 2007.[17]

Moreover, data provided by the Irish Bankers Federation showed that levels of new mortgage applications were down 20% in value and 22% in volume in Quarter 4, 2007 when compared to the similar period in 2006.

Table 7 shows house completions for the period 1990–2008. Commentators are forecasting housing output in the region of 55,000 units in 2008 - a 41% reduction on 2006 levels.

Timber frame housing[18]

Timber frame is an important part of the Irish construction sector. According to the Irish Timber Frame Manufacturers Association (ITFMA), the timber frame market share doubled from 15 to 30% from 1999 to 2007. The sector had a very difficult year in 2007, due to a combination of factors:

9 *The chipboard plant at Scariff, Co Clare, was formerly operated by Aicher GmbH/ Irish firm — Chipboard Ltd. It first opened in 1965.*

10 *www.masonite.com/*

11 *Medite–Europe Ltd was established in Clonmel by the Medford Corporation in 1983. It was acquired in November 2006 as a subsidiary of Coillte.*

12 *The OSB mill at Slieverue was first established as a joint venture between Coillte and Louisiana – Pacific in 1995. Coillte acquired full ownership of the business in May 2002.*

13 *Sawn timber imports are reported in Ireland's EUROSTAT JFSQ return for 2007.*

14 *A Preliminary Construction Forecast for 2008; Prepared for the Department of the Environment, Heritage and Local Government by DKM Economic Consultants. April 2008.*

15 *House completion data are based on the number of new dwellings connected by the Electricity Supply Board (ESB).*

16 *www.cso.ie.*

17 *Sawn timber imports are reported in Ireland's EUROSTAT JFSQ return for 2007.*

18 *Timber Frame in Ireland, a Presentation to Innovawood by Philip Mahony, Manager, ITFMA.*

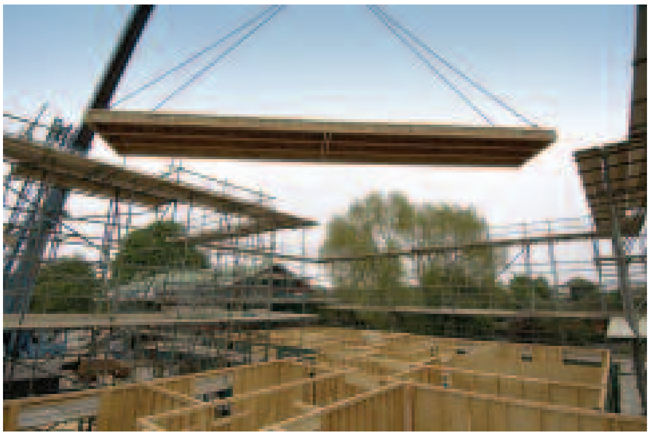
Table 7: House completions in the Republic of Ireland (1990 – 2008).

Year	Total completions	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 f [19]	55,000	281.49

Source: Department of the Environment, Heritage and Local Government (www.environ.ie).

- Uncertainty regarding Stamp Duty at the end of 2006;
- Rising interest rates;
- Many housing developments were on hold with only ‘completions’ being worked on;
- Census 2006 showed that fifteen percent of Irish housing stock was unoccupied;
- Falling house prices;
- Housing supply exceeded demand - at the end 2007 there was an estimated twelve months supply of second hand housing stock;
- Economic downturn.

These factors have caused a number of timber frame manufacturers to go on short time or to cease operations.



Irish timber frame output declined significantly in 2007.

Euro/Sterling exchange rates[20]

Since late 2007, the Euro has strengthened against Sterling by seventeen percent, seriously eroding the competitiveness of Irish timber exports in the UK. The pattern in the Euro/Sterling exchange rate is shown in Table 8. Forecasts by the Bank of England predict no major change in rates to July 2009.

UK construction market

The UK is a key market for forest products exported from Ireland. However, since late 2007 there has been a major change in market activity in the UK construction sector. New house building starts have slowed considerably. Conditions in early to mid 2008 have deteriorated rapidly, with housing starts and completions well down on 2007. A series of increasingly pessimistic announcements from

Table 8: Historic and forecast Euro/Sterling exchange rates to July 2009.

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
Forecast[21]		
October 2008	0.800	1.25
January 2009	0.806	1.24
July 2009	0.806	1.24

19 *Forecast.*
20 *Barclays Commercial Interest & Exchange Rate Outlook; July 2008.*
21 *Bank of England, Thompson Datastream & Barclays Bank.*

builders indicate severe problems in the sector.[22] These sentiments were supported by the UK's NHBC[23] statistics released in July 2008[24] that showed that there was a 'serious decline' in UK housing output during the second quarter of 2008. Applications to start new homes totalled just 20,973, a decrease of 51% on the same three-month period in 2007.

Forecasts for 2008 are changing constantly. Current estimates are for a decline of around twenty five percent in volume completions in 2008, followed by a further decline of around four to five percent in 2009. The sector is expected to make a modest recovery in 2010.

I-beams installed at an Irish construction site.

New developments

New Irish Timber Frame Standard – I.S. 440[25]

A new Irish Timber Frame Standard has been developed by the National Standards Authority of Ireland (NSAI)[26].

I.S. 440 specifies requirements for materials, design, manufacture, construction details, site work and quality control for platform timber frame construction. The draft standard has undergone public enquiry.

Engineered wood products in Ireland, edited by Bill Robinson, was published in June 2008. It deals with:

- The Irish market: the current and potential market in Ireland for engineered wood products (EWPs).
- Raw material: the suitability of Irish timber as a feedstock for re-engineered timber and EWPs.
- Cost benefit analysis: the costs and benefits of producing re-engineered timber and EWPs for Ireland.
- Opportunities and threats: the opportunities and threats posed to Irish timber by the use of EWPs and the opportunities for producing EWPs in Ireland using Irish timber.

Mid Cork Pallets / Palfab / Eirebloc[27]

In September 2007, Mid Cork Pallets announced that they had joined forces with the sawmiller Palfab to launch a €16 million pallet manufacturing business at Macroom, Co Cork. This new facility will manufacture composite pallet blocks from recycled wood.

This project will lead to the creation of 73 new jobs in Macroom over the next two years. Enterprise Ireland is providing a level of support towards an initial €6 million investment by Eirebloc.[28]

Plant capacity is estimated at 100,000 m^3 per annum.

Private Sector Roundwood Production Forecast

COFORD is currently undertaking an analysis of roundwood availability within the Irish private forest estate. The forecast is planned for completion by mid 2009. The work is being undertaken by University College Dublin (UCD).

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.

However, since 2006, the use of wood energy by commercial and domestic users has risen considerably (Table 9).

[22] *AMA Research's report 'House Building Market - UK 2008 - 2018'.*
[23] *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.*
[24] *http://www.nhbc.co.uk/Newscentre/Recentnews/Name,33966,en.html.*
[25] *http://www.nsai.ie/index.cfm/area/news/action/article/information/hayesptimber.*
[26] *www.nsai.ie.*
[27] *http://archives.tcm.ie/businesspost/2007/09/16/story26602.asp.*
[28] *http://www.entemp.ie/press/2007/20070910.htm.*

Table 9: Use of wood biomass in Ireland (2007).*

Biomass type	End use	Unit	Usage
Wood pellets	Domestic heating	Tonnes/year	24,640
Wood briquettes	Domestic heating	Tonne/year	5,638
Wood chips	Commercial heating	m^3/year	20,000
Biomass use by the forest products industry	Process drying/ heating/CHP	Tonnes/year	382,000

* *Source: EUROSTAT Joint Wood Energy Enquiry return for Ireland (2007).*

Harvesting wood for energy.

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Serious Decline in Number of Home Starts. NHBC Press Release 23/7/2008. http://www.nhbc.co.uk/Newscentre/Recentnews/Name,33966,en.html

Timber Frame in Ireland. A presentation to InnovaWood by Philip Mahony, Manager, ITFMA.

Web Links

For additional information on the companies and organisations referred to in this note, see:

Timber Growers:
Coillte - www.coillte.ie
Irish Timber Growers Association - www.itga.ie
Wood-based Panel Mills (WBP)/Board Sector:
Finsa - www.finsa.es
Masonite - www.masonite-europe.com
Medite – Europe - www.medite-europe.com
Smartply Europe - www.smartply.com
Forestry Research:
COFORD - www.coford.ie
Timber Frame:
Irish Timber Frame Manufacturers Association - www.itfma.ie
UK Timber Frame Association (UKTFA) - www.timber-frame.org
Timber Frame Standards NSAI / I.S. 440 -
http://www.nsai.ie/index.cfm/area/news/action/article/information/hayesptimber
UK Building Standards - www.bre.co.uk
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