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# Timber Utilisation Statistics 2011

## This report updates the March 2012 report:

## Timber Utilisation Statistics 2010 & 2011 Estimates

**for**
**the Forestry Commission**

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# Table of Contents



# Charts and Tables

## Introduction:

This report is part of a series of studies designed to provide estimates of the utilisation of sawn softwood in the main user markets.

An initial report produced in 2006 covering the year 2004 was followed by a further report produced in 2007, covering the year 2005. Since that time, the information on timber utilisation has been updated annually through a set of tables and charts accompanied by a brief commentary.

Sponsored by the Forestry Commission of Great Britain and through the guidance of the Forestry Commission's advisory group, the Expert Group on Timber and Trade Statistics, it was decided that a sufficient period of time had elapsed to warrant the writing of a further report in 2012 to encompass the information provided in the series of tables and charts up to 2010.

The original aim of the study was to investigate the nature and apparent accuracy of existing available data, with a view to producing an estimate of wood consumption in the UK, by principal market sector and to identify where gaps in knowledge existed.

The reason for the carrying out this work was the **absence of information on the utilisation of timber by major market which was believed to be a significant problem for the sector as a whole and from discussions held by the Forestry Commission Committee, the Expert Group on Timber and Trade Statistics and trade bodies, it was broadly agreed that there was a need for indicative figures.**

Before this work on timber utilisation, no recent or reliable statistics existed on timber usage in the main timber-using markets.

Forestry and timber industry organisations, as well as businesses in the sector, regularly receive enquiries about the production of wood and the consumption of timber in the UK, with most enquirers keen to obtain information about usage within the principal market sectors, i.e. construction, packaging/pallets and fencing/outdoor products.

## New, in this Report:

Accurate reporting on the immediate past year requires delivery of information on the main markets from, usually, official sources such as the Office for National Statistics.

In the case of house building data for the UK, a delay of eight months from the close of the previous year occurs. Protracted delivery of other information has meant that the quantification of sawn softwood utilisation has regularly only taken place a full nine to ten months after the close of the year.

A new feature of the report published in March 2012 was the provision of estimates of sawn softwood consumption by main market for the immediate past year, just three months after the end of the year.

These estimates were made possible by a closer understanding of the dynamics within each market and the utilisation of forecast information from industry associations, the Forestry Commission (through its contribution to the UNECE Timber Committee Questionnaire), economic forecasts as supplied by HM Treasury and from trade sources.

**The report published in March 2012 contained estimates for 2011, but this has now been superseded by this update which provides final data for the year 2011.**

**In retrospect, the relative accuracy of these estimates gives confidence that, for future reports and the more regular annual "Tables and Charts", estimates made for the immediate past year, just three months after the close of the year, are reliable.**

## Purpose and Scope of this Study:

The purpose of this updated report is to not only update the March 2012 report, but also the previous Timber Utilisation report published in March 2007, which reported on sawn softwood utilisation in the years prior to 2006.

The maintenance of data sets on each of the main end-use markets for sawn softwood since 2002 has taken place and this has enabled a time series to be established for sawn softwood usage in main markets covering the period 2004 to 2011.

This report is concerned with use of sawn softwood that is supplied to secondary processors and fabricators (e.g. manufacturers, builders) by UK sawmillers and importers and merchants.

The term consumption, as used in this report, is apparent consumption defined as the addition of imports and UK production less exports. No allowance has been made for changes in stock levels.

## Study Objective:

1. To provide estimates of consumption of sawn softwood in the UK by main market: construction, pallets & packaging, fencing & outdoor uses and other markets for 2011 and present the trend in consumption by main market from 2002.

## Methodology:

Desk research, conducted by e-mail, telephone and via the internet, were the main methods used to meet the objectives of this report.

Information was gathered from official published statistics, selected members of the Forestry Commission's Expert Group on Timber and Trade Statistics (EGTTS) and also from a number of third parties. Market research conducted for other purposes (than these timber utilisation studies) was also used selectively to inform on timber usage in those markets.

The official statistics used in this report included import data on wood products from Her Majesty's Revenue and Customs (HMRC); housing statistics from the Department for Communities and Local Government (DCLG), construction statistics from the Construction Products Association (CPA) and the Business, Innovation and Skills department of Government (BIS) and further construction data and packaging statistics from PRODCOM data which is published annually by the Office for National Statistics (ONS).

These data, in combination with timber usage data and information from third parties enabled updated estimates to be made on the utilisation of sawn softwood in the main markets under review. The involvement of third parties was once again invaluable in gathering information on usage trends in various market places. Information was requested from the following sources.

The Forestry Commission
Timber Trade Federation
UK Timber Frame Association
Timber Decking Association
TIMCON
The Construction Products Association
Department for Communities and Local Government (DCLG)
The Office for National Statistics (ONS)
Business, Innovation and Skills (BIS)
HM Revenue and Customs (HMRC)
Timber Companies

## Executive Summary:

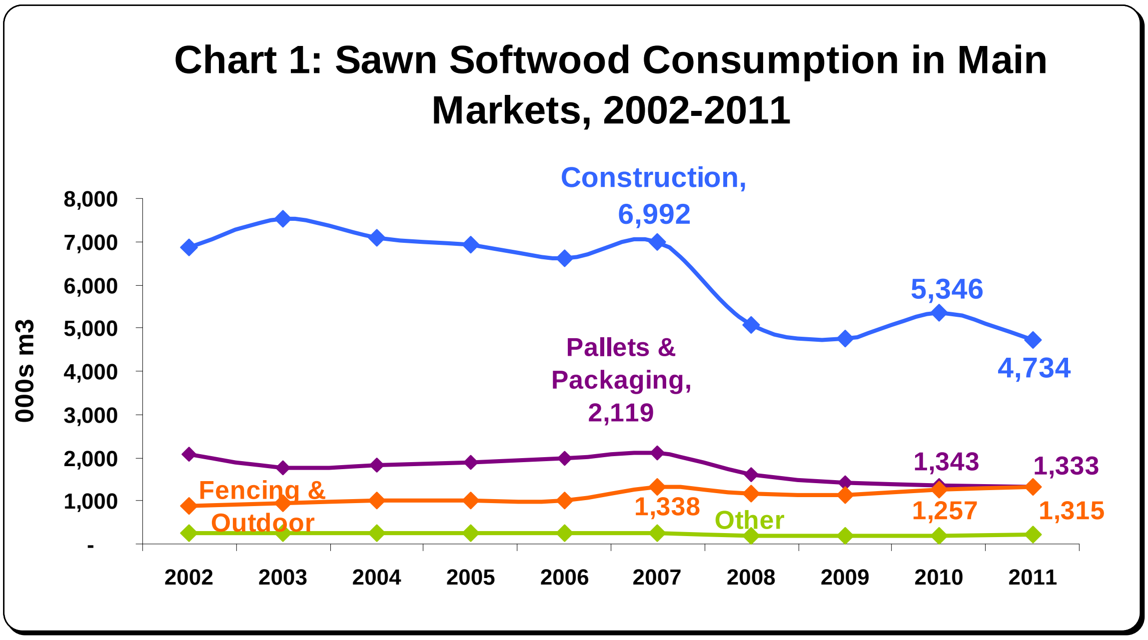
During the period covered by this report, 2002 to 2011, the construction industry has remained the largest market for sawn and planed softwood. Sawn softwood volumes have generally declined during the first decade of this century, although increased demand from construction experienced two years of higher utilisation, in 2003 and 2007. The onset of the recession in 2008 significantly reduced activity in this market and as a consequence, sawn softwood volumes used in construction experienced substantial decline. The new house building market was particularly badly affected and the repair, maintenance and improvement (RMI) sectors of construction, including housing RMI - traditionally a high volume market for sawn softwood products – also experienced lower levels of activity.

The other leading markets for sawn softwood products, the pallets and packaging industry and the fencing and outdoor uses market also experienced declines in volume following the recession, but by differing degrees.

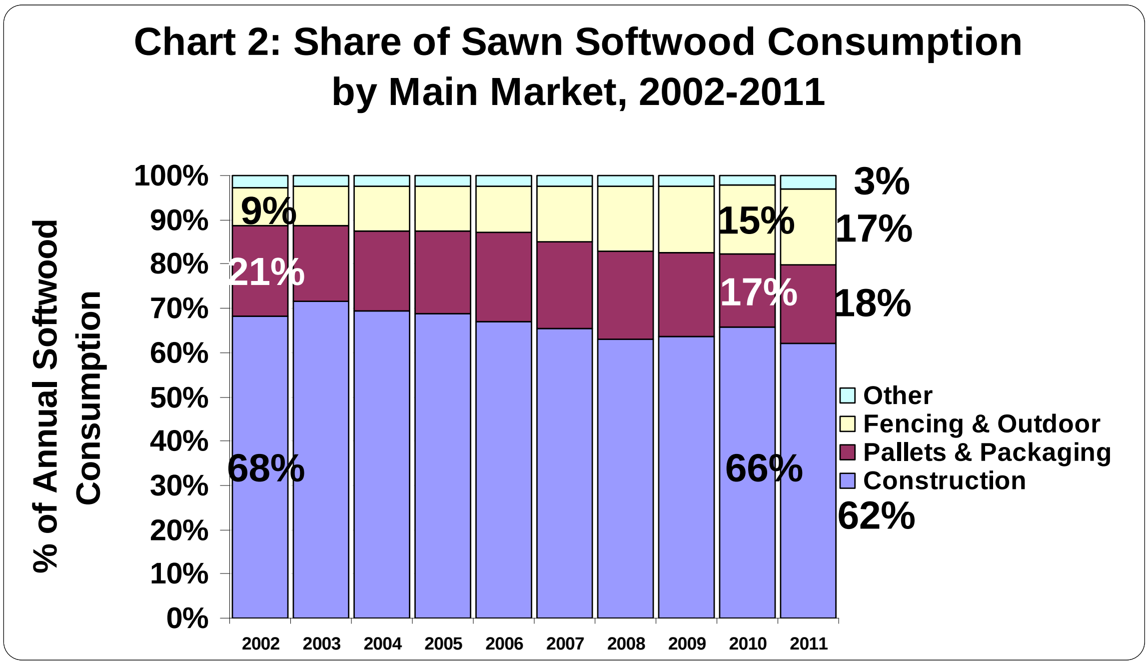
Lower output in many industries adversely affected the demand for pallets and packaging materials and sawn softwood volumes declined accordingly. There has been a significant change in the type of production of pallet manufacturers in the UK since 2007, with greater quantities of repaired and re-manufactured pallets placed onto the market and fewer new pallets manufactured. With less sawn softwood used in a repaired pallet compared to a newly manufactured pallet, this has compounded the loss in volume over the last three years.

The fencing and outdoor uses market also suffered from poor economic performance of the UK, but to a lesser extent than some other market places, including construction and manufacturing. Consequently, while sawn softwood volumes have fallen from 2007, the extent of the loss in the fencing and outdoor market has been proportionately less than in other markets.

The development of each of the main markets for sawn softwood in the UK from 2002 is shown in chart 1 below.



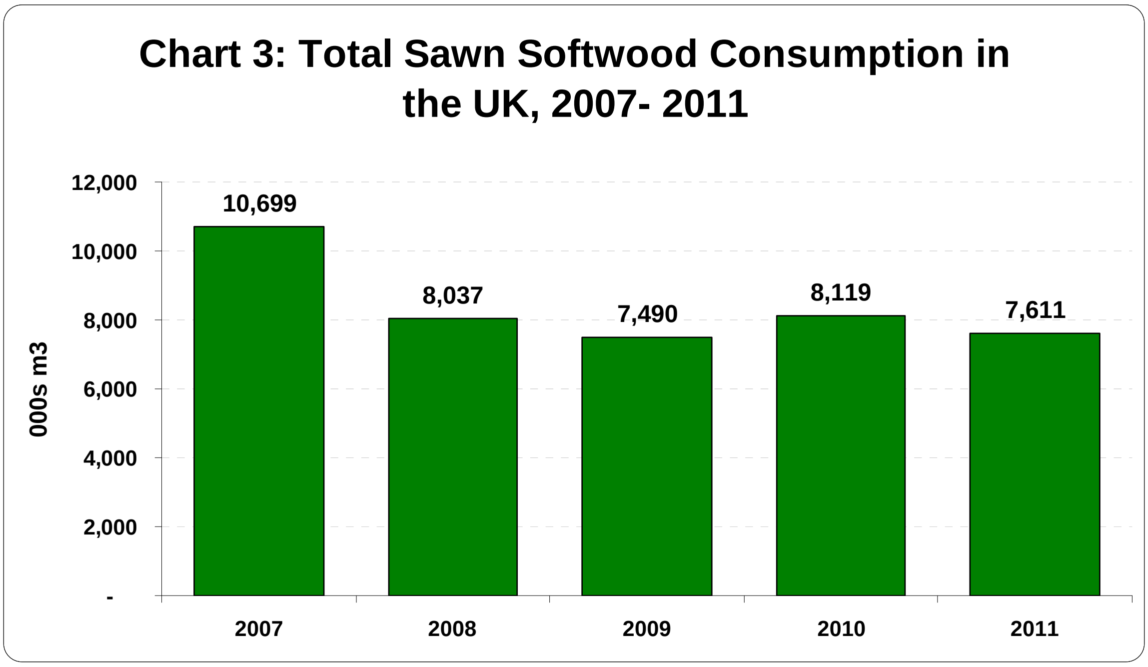

The utilisation of sawn softwood in each of the main markets has varied over the ten year period. The worst performing market has been construction and the relative importance of this market, as expressed by share of sawn softwood consumption, is shown in chart 2 alongside the other main markets.




Despite the decline in the share of sawn softwood consumed at 62% of the total, construction remains the largest market. The rise in relative importance of the fencing and outdoor uses market has been somewhat exaggerated by the decline in volumes entering construction and the pallets and packaging market since 2007, but nevertheless, sawn softwood continues to be a popular choice of material for residential and agricultural fencing, decking, garden and landscaping products throughout the period.

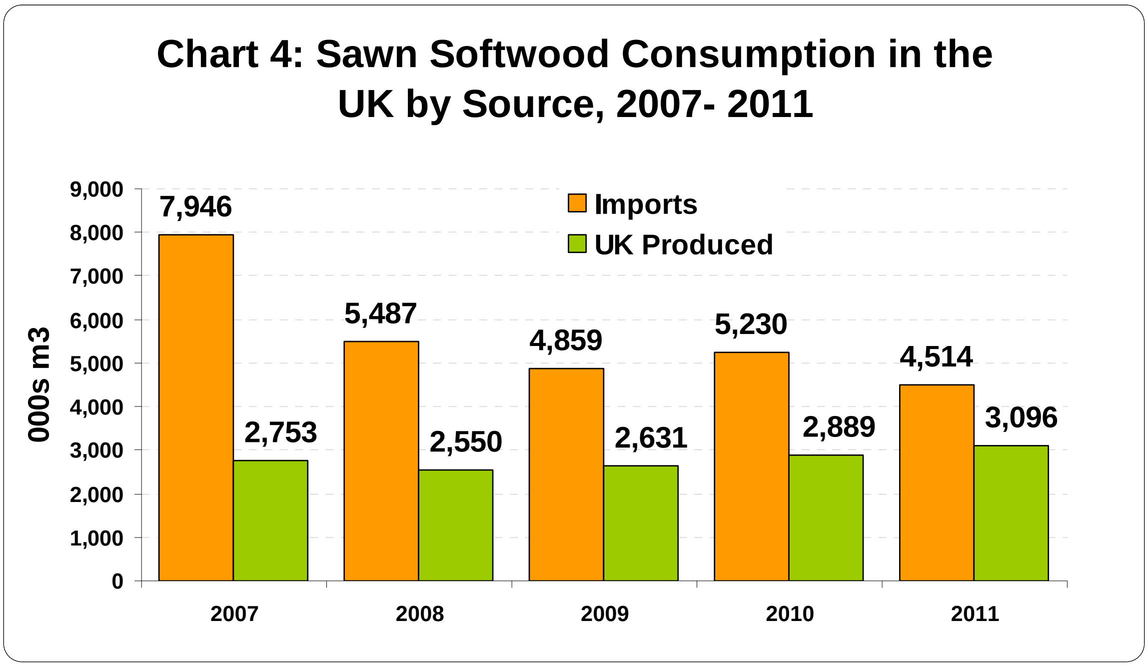
Sawn softwood utilisation, in similar fashion to the use of virtually every other raw material and product in the UK, has experienced mixed fortune in recent years.

Following the two years of decline in 2008 and 2009, a moderate recovery took place in 2010, but for 2011, sawn softwood utilisation fell once more. The volumes consumed in the UK since 2007 are shown in chart 3 below.




The development of sawn softwood utilisation by source has not been consistent in the period under review however. The economic difficulties of the last three years and the downturn in construction specifically have adversely affected import volumes more than UK produced sawn softwood. As will be seen later in this report, imports account for the majority of the volume consumed by construction, therefore lower demand from construction sectors has a disproportionate effect on imported sawn softwood.

The changes in sawn softwood consumption since the peak of economic activity in 2007, the recession of 2008 and its aftermath are shown in the chart below.



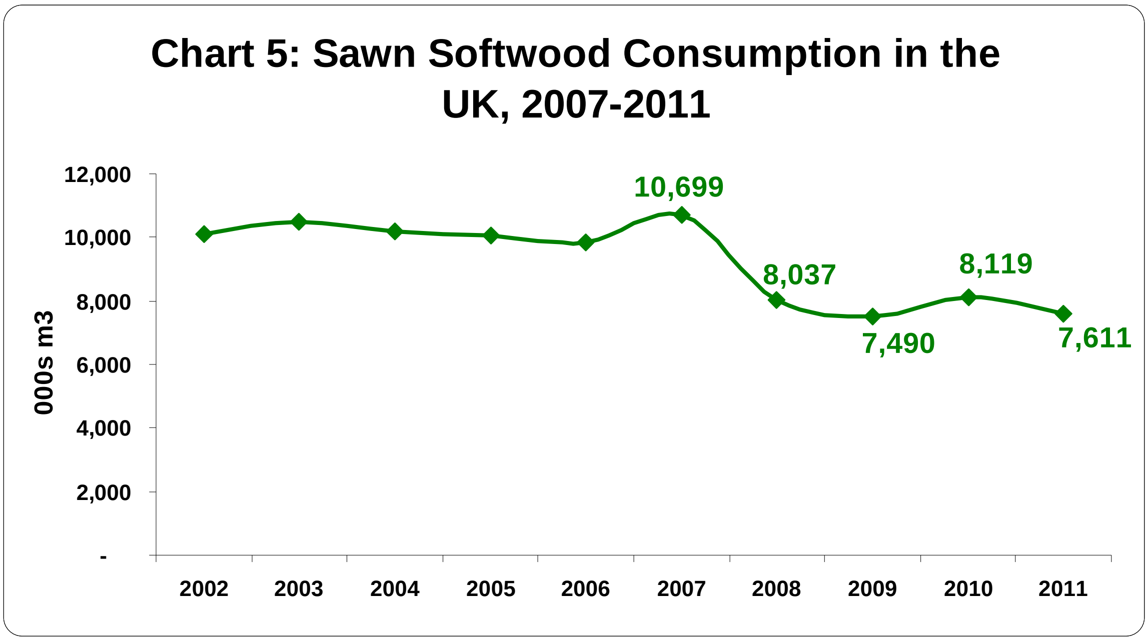

The decline in import volumes and the consistent growth of UK produced consumption has resulted in the share of sawn softwood consumption supplied by UK producers climbing to 41% in 2011, from 26% in 2007. It is believed that this share for UK production will probably fall back a little should markets begin to achieve better rates of growth in the next few years and sawn softwood volumes return to higher levels.

## Main Findings:

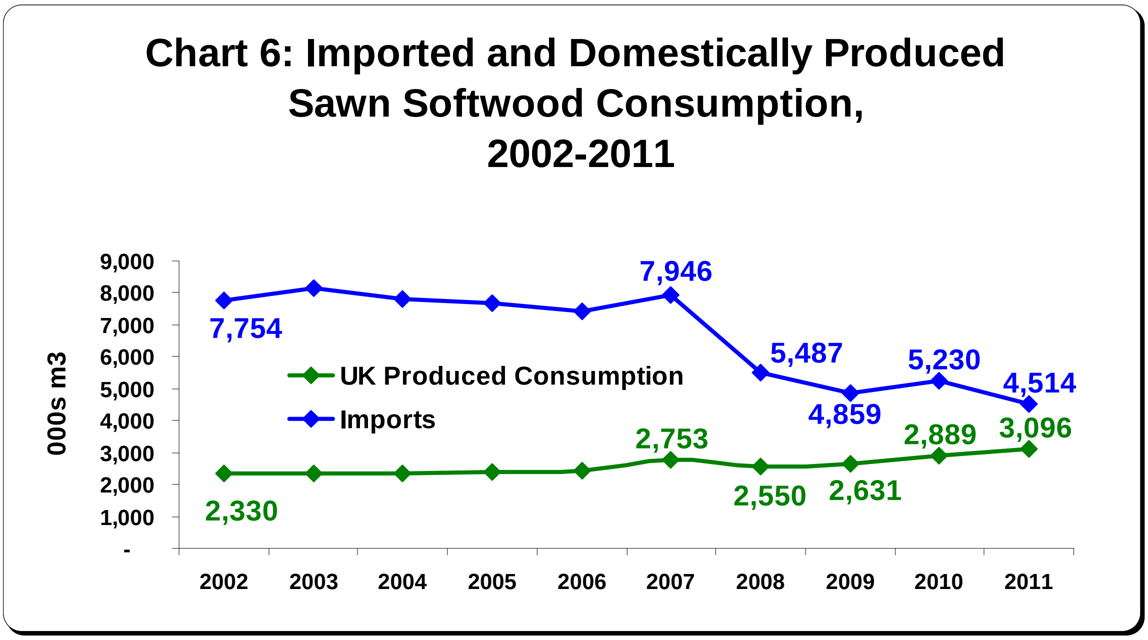
**UK Sawn Softwood Consumption**
In common with virtually every other industry in the UK and Europe, economic recession resulted in lower demand for sawn softwood from user markets, significantly reducing levels of consumption in 2008 and 2009.

Moderate recovery took place in 2010, but consumption of sawn softwood in the UK fell once more in 2011.

The pattern of sawn softwood consumption from 2002 to 2011 is shown in chart 5 below.




A fall of 25% in sawn softwood consumption was experienced in 2008 with a further 7% reduction in 2009. The improvement in consumption in 2010 of 8% was followed by a 6% reduction in 2011. The development of sawn softwood consumption by source of supply is shown in chart 6.



Imports fell by 31% and UK domestic consumption (production less exports) by 8% in 2008, but domestically produced consumption has risen each year since 2008 and increased once again in 2011, by around 7%. This contrasts with a decline in imports in 2011 of around 14%.

The forecast provided in the March 2012 report of just over 3.1 million $m^3$ for domestic consumption was derived from the mid-point between the Forestry Commission's forecast of UK sawn softwood production submitted to the United Nations Economic Commission for Europe (UNECE) Timber Committee and the (then) current industry opinion of the eventual outturn of sawn softwood production in 2011. This production estimate was then subtracted from the provisional export volume provided from HMRC trade data. These estimates were accurate to within less than 1% of the actual.

The positive development of UK production since 2003 has resulted in an increasing share of sawn softwood consumption for UK sawmillers. The market share growth of UK sawmillers has accelerated since 2008 as UK production has increased every year while import volume has been more variable and mostly lower over the same period.

The forecast of domestic consumption for 2011 made in the March 2012 report, which proved to be close to the actual, would have given UK producers a share of total consumption of over 40%. The actual share for 2011 was 40.7%, as shown in chart 12 later in this updated report.

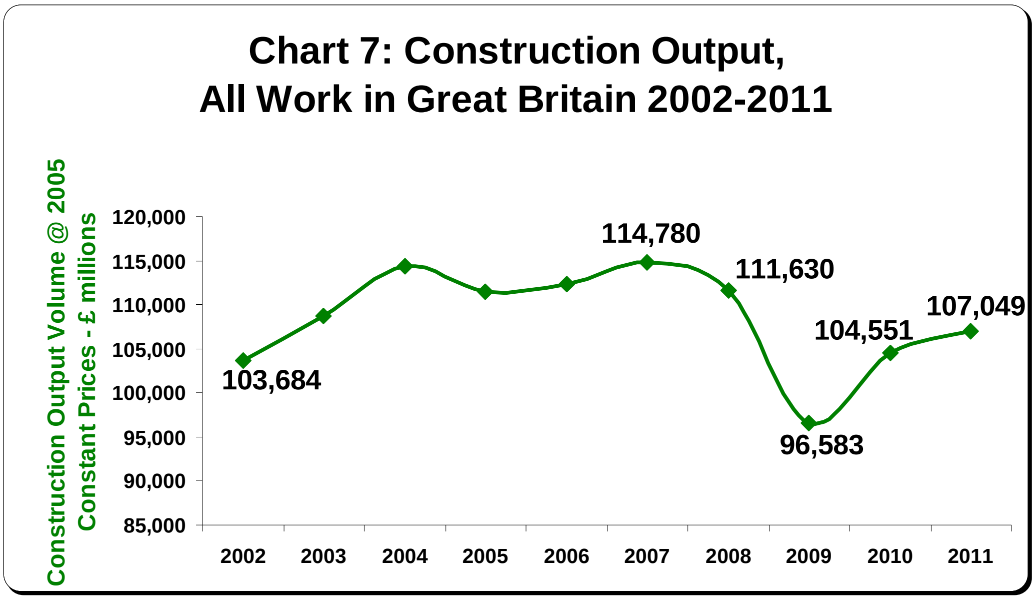
**Major Market Developments**

Two of the most important markets for sawn softwood are construction and pallets and packaging. Recent developments of these markets, as reported by official statistics available from the Office for National Statistics, have followed a broadly similar pattern to the rest of the UK economy.

However, construction has experienced a greater downturn than many other markets with the significant reductions in house building and repair, maintenance and improvement works accounting for much of the reduction in demand for sawn softwood.

A rise of 2% in 2011 over 2010, a year when an increase of around 8% occurred in construction output, followed a reduction of just over 13% in 2009 and a 3% fall in 2008.

Construction output remains 7% below the 2007 level however. The trend of construction output over the period from 2002 is shown in the chart below.

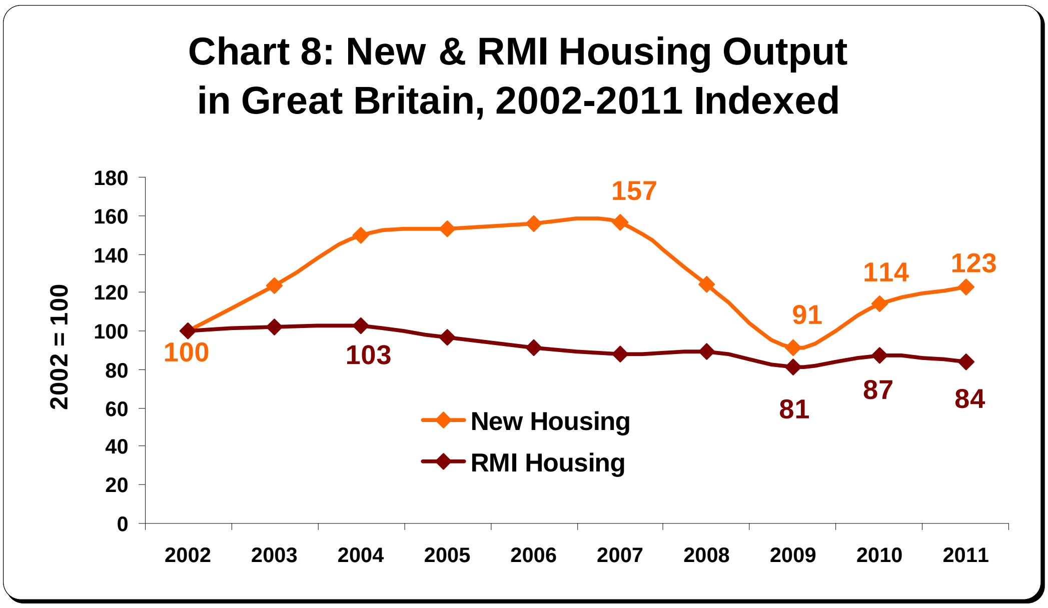



The measure shown in chart 7 above is the volume of construction output at 2005 constant prices in Great Britain.

Output in the housing market – both new and repair, maintenance and improvement (RMI) – represented around 35% of total construction output in 2007, at the height of modern-day house building activity, but had fallen to 33% in 2011.

New and RMI housing was a significant contributor to the large fall in all construction activity in 2009, accounting for over 40% of the decline in construction volume in that year.

Within these two housing sectors, the sudden and substantial fall in new house building was a major factor in this decline, as shown in chart 8 below.



New housing output reached a recent peak in 2007 with volume nearly 60% higher than in 2002. The sharp drop in output in 2008 and again in 2009 has been followed by modest recovery in 2010 and 2011, but only back to the levels of 2008.

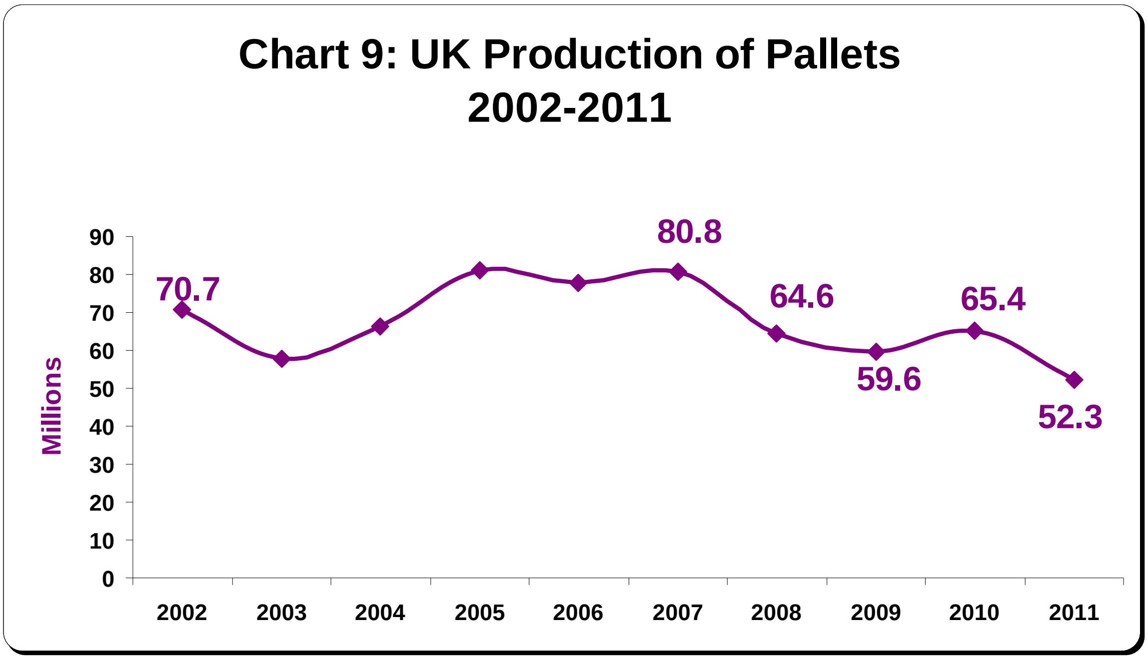
RMI housing output has followed a less volatile, but generally downward development path. The peak in RMI activity occurred in 2004 and despite a shallow recovery in 2010, output fell back once more in 2011 and remains below the levels of 2004.

The other main market for sawn softwood, where official statistics are regularly available, is in the packaging and pallets industry.

A similar pattern of activity to many other industries in the UK has taken place with the production of pallets.

A recent peak was reached in 2007 with a sharp decline in output occurring in 2008 and a further fall experienced in 2009. A modest increase in output was achieved in 2010, but in common with other markets, output fell back in 2011.

Chart 9 below describes the output, in million of pallets produced, of UK pallet makers from 2002 to 2011.




The data shown above is provided through ProdCom. This is PRODucts of the European COMmunity and is a European Union (EU) wide survey of production, mainly for the manufacturing industries, and covers over 4,500 products classified to around 250 industries. The packaging industry, with UK manufacturers' sales reported to be worth over £500 million in 2007 (around £394 million in 2011) is of sufficient scale to be including within the ProdCom series and is a significant consumer of sawn softwood.

Construction and packaging are major consumers of sawn softwood, but many other industries, including the fencing and outdoor uses market also consume substantial quantities.

Little or no official published information exists for many of the other major wood consuming markets, with the exception of furniture, consequently, the specific developments of these other markets has needed to be derived from other sources.

Consumption of sawn softwood in the UK in 2011 was valued at around £1.3 billion which is a significant sum for the value of a feedstock that supplies the many timber manufacturing and construction activities in the UK. Such activities include timber frame manufacturing, builders carpentry and joinery, packaging and tool making, Once sawn softwood and other timber raw materials are converted to an equivalent measure of manufacturing output and compared to other industries, the timber industry valued at a little over £7 billion compares favourably with the textiles industry (£5.5 billion), soaps & detergents, cleaning & polishing, perfumes & toiletries (£5.4 billion), ship and boatbuilding (£4.4 billion), soft drinks: production of mineral waters & other bottled waters (£3.9 billion) and paints, varnishes, printing inks & mastics (£3.9 billion).

Compared to other manufacturing industries the timber industry has followed a similar pattern of development before and after the recession of 2008. The chart below plots the indexed development of the timber industry against all manufacturing and while following similar patterns, it can be seen from this chart that both the rate of growth and decline experienced by the timber industry over the period tends to be of a greater scale than for manufacturing in total.

Manufacturing has also experienced a less volatile period in terms of output than construction and the importance of the construction industry in the consumption of sawn softwood compared to the many types of manufacturing helps explain these higher rates of growth and decline.


Perhaps larger than many would imagine, timber products and the uses of sawn softwood in particular serve a multitude of other industries with a usefulness that few other industries are able to emulate.

Although the use of sawn softwood is widespread, many of the other industries outside of the three main markets of construction, pallets and packaging and fencing and outdoor uses consume relatively small amounts of sawn softwood in comparison. For this reason, the focus of attention with timber utilisation in this report rests with these main markets.

**Sawn Softwood Utilisation by Main Market**

As shown previously in chart 5, sawn softwood consumption in 2010 was at a relatively low level compared to previous years, although an 8% rise was achieved in the year. The estimate for 2011 in the March report indicated a 6% reduction in consumption was probable, as housing starts and RMI activity in construction declined once more, and this has subsequently been proved to be correct.

The work of these timber utilisation studies has provided estimates of sawn softwood consumption by main market from 2002 and these data are shown below in table 1.

**Table 1: Sawn Softwood Utilisation by Volume by Main Market**

| 000s m3 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| Construction | 6,868 | 7,521 | 7,072 | 6,926 | 6,610 | 6,992 | 5,069 | 4,760 | 5,346 | 4,734 |
| Pallets & Packaging | 2,070 | 1,771 | 1,831 | 1,886 | 1,978 | 2,119 | 1,595 | 1,431 | 1,343 | 1,333 |
| Fencing & Outdoor | 881 | 936 | 1,004 | 1,003 | 1,019 | 1,338 | 1,173 | 1,123 | 1,257 | 1,315 |
| Other | 265 | 263 | 260 | 250 | 245 | 250 | 200 | 175 | 174 | 229 |
| Total Consumption | 10,084 | 10,490 | 10,167 | 10,065 | 9,853 | 10,699 | 8,037 | 7,490 | 8,119 | 7,611 |

All markets experienced a downturn in demand with a consequent lowering of the volumes of sawn softwood consumed during 2008 and 2009. Differing rates of decline in each of the main markets took place in these two years however, with sawn softwood consumption in construction the worst affected, falling by 28% in 2008 and a further 5% in 2009. The pallets and packaging market also consumed substantially less sawn softwood in these two years; down by 25% in 2008 and 10% in 2009. The fencing and outdoors uses market fared better, although experienced lower volumes, down by an estimated 10% in 2008 and 8% in 2009.

The moderate recovery in 2010 saw sawn softwood volumes rising once more in the construction industry and in the fencing and outdoor markets, with increases in volume of 10% and 11% respectively, but as previously described, volumes supplied to construction fell once more in 2011.

With changes in the use characteristics in the pallets and packaging market - more repaired pallets being used and lower levels of new pallet manufacturing - softwood volumes have been lower each year since 2007.

As correctly estimated in the March 2012 report, overall sawn softwood consumption fell by around 6% in 2011, mainly because of continuing weakness in construction markets.

Sawn softwood consumption in construction declined by 11% in 2011 and by around 1% in the pallets and packaging market. However, sawn softwood used by the fencing and outdoor market grew once again in 2011, by nearly 5%.

The depth of the 2008 recession was severe and its aftermath prolonged, but it should be noted that although construction was the greatest casualty with a 28% decline in 2008, the volumes consumed by construction had already been in general decline since 2003. From table 1, it can be seen that volumes in construction had fallen from around 7.6 million $m^3$ in 2003 to 6.6 million $m^3$ in 2006. The peak of the last economic cycle in 2007 when construction output reached new heights (see chart 1) helped the volume of sawn softwood consumed by construction to rise, but this did not prove to be a turning point in the fortunes of suppliers of sawn softwood. Indeed, despite the rise in volume consumed by construction in 2007, its share of sawn softwood consumption continued on the downward path, as shown in table 2 below, which identifies the relative importance of each of the main markets, in terms of the share of total sawn softwood consumption in each of the years under review.

**Table 2: Sawn Softwood Utilisation by Share of the Total by Main Market**

| % of Total pa | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| Construction | 68% | 72% | 70% | 69% | 67% | 65% | 63% | 64% | 66% | 62% |
| Pallets & Packaging | 21% | 17% | 18% | 19% | 20% | 20% | 20% | 19% | 17% | 18% |
| Fencing & Outdoor | 9% | 9% | 10% | 10% | 10% | 13% | 15% | 15% | 15% | 17% |
| Other | 3% | 3% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 3% |

From a peak of 72% of all sawn softwood consumed, the share held by the construction industry had fallen to 65% in 2007 and, with the large decline in demand in 2008, fell once more to 63% of the total in that year.

By 2011, with continuing weakness in the main softwood consuming construction markets, construction's share of softwood consumption by main market had fallen to 62% of the total.

Fencing and outdoor markets, including decking for domestic and commercial uses, have experienced – against a background of generally poor trading conditions – improved performance in 2011.

Although a little less sawn softwood was consumed by the pallets and packaging market in 2011, the greater decline in consumption by construction resulted in a slight increase in share of all softwood consumption held by the pallets and packaging market to 18% of the total.

The fencing and outdoor uses market has performed better than many others over the last three years and this continuing better performance has led to an increase in the actual volumes consumed and a further rise in the share of total sawn softwood consumption. This share of fencing and outdoor activity rose in 2011, as predicted, claiming a share of UK sawn softwood consumption only marginally lower than the pallets and packaging market, at 17%.

The weakness of demand for sawn softwood in the pallets and packaging market over the last two to three years has been brought about by structural changes within that market and not because of any general change in the preference for sawn softwood as the main material of choice in pallet making.

The latest report in the series of Wood Packaging Studies[1], sponsored by Timcon, the pallets and packaging confederation and the Forestry Commission, has revealed changes in use characteristics that have had a significant effect on the utilisation of sawn softwood in this market. In brief, since the beginning of the recession, greater quantities of recycled pallets (repaired, re-manufactured and re-used) have been placed onto the market as many pallet using companies have attempted to reduce costs by using more second-hand/previously used pallets, to the detriment of newly manufactured pallets. The implications for sawn softwood consumption are brought sharply into focus when the differences in usage between a new pallet and a repaired pallet are viewed. Repaired and re-manufactured pallets, on average, use a tenth of the amount of sawn softwood compared to newly manufactured pallets.

## Sawn Softwood Utilisation by Main Market & Construction Sector

The availability of official data on the various sectors of the UK construction market has enabled separate analysis of these sectors and the housing market specifically.

New house building in the UK has traditionally been a market perceived to have a direct bearing on the demand for sawn softwood.

[1] Wood Packaging Study - Quantification of the Manufacture and Repair of Wood Packaging in the UK, 2011.

There is certainly a good correlation between sawn softwood consumption and new housing starts, but the new housing market segment is a relatively small consumer of sawn softwood compared to the wider construction industry and the repair, maintenance and improvement (RMI) segments of construction in particular.

This is demonstrated in table 3 which separates these two segments from the total of all consumption in construction.

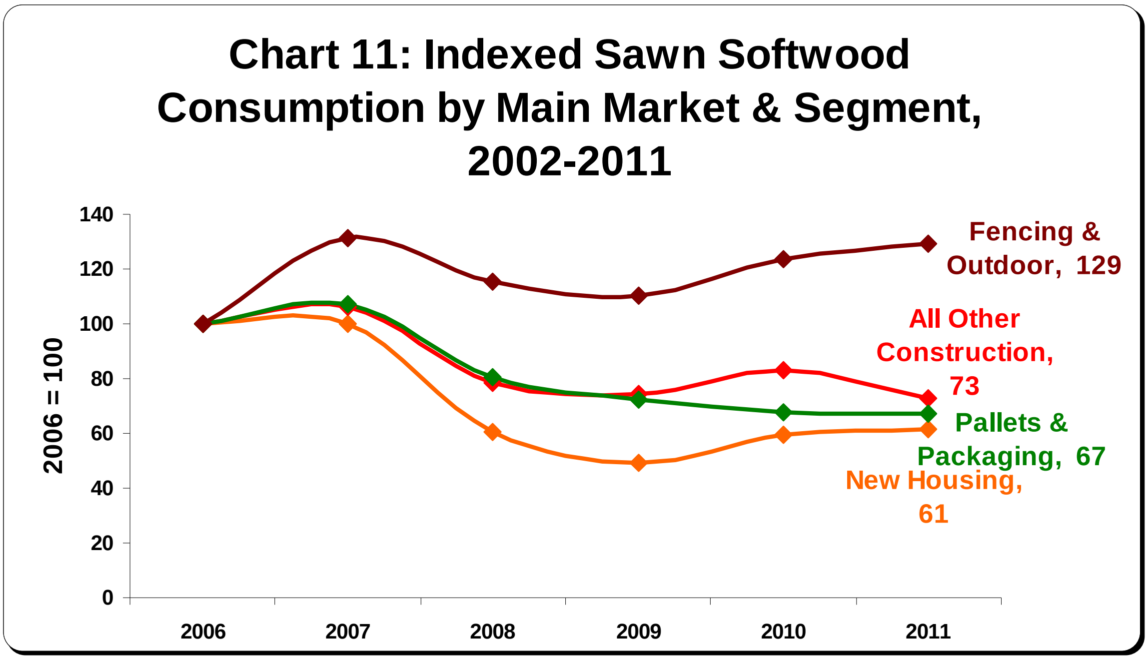
**Table 3: Sawn Softwood Utilisation by Volume by Main Market & Construction Sector**

| 000s m3 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| All Construction | 6,868 | 7,521 | 7,072 | 6,926 | 6,610 | 6,992 | 5,069 | 4,760 | 5,346 | 4,734 |
| New Housing | 645 | 660 | 679 | 674 | 668 | 669 | 406 | 328 | 397 | 410 |
| All Other Construction | 6,223 | 6,860 | 6,392 | 6,253 | 5,943 | 6,323 | 4,663 | 4,432 | 4,950 | 4,324 |
| Pallets & Packaging | 2,070 | 1,771 | 1,831 | 1,886 | 1,978 | 2,119 | 1,595 | 1,431 | 1,343 | 1,333 |
| Fencing & Outdoor | 881 | 936 | 1,004 | 1,003 | 1,019 | 1,338 | 1,173 | 1,123 | 1,257 | 1,315 |
| Other | 265 | 263 | 260 | 250 | 245 | 250 | 200 | 175 | 174 | 229 |
| Total Consumption | 10,084 | 10,490 | 10,167 | 10,065 | 9,853 | 10,699 | 8,037 | 7,490 | 8,119 | 7,611 |

Sawn softwood consumption in new housing was at its peak in 2007 when it accounted for 10% of all sawn softwood entering construction. It has since fallen back and in 2009, after the virtual halving of housing starts in the UK, accounted for just 6% of the total. In 2010, volumes into new housing rose once more, as housing starts 'bounced-back' from two years of decline. The March 2012 report suggested that with fewer housing starts predicted for 2011 than in 2010, sawn softwood volumes would likely fall once more. However, this proved to be incorrect, as seen from table 3, where volumes rose by 3%. This was due to higher than expected volumes of imported softwood supplied to the timber frame industry in 2011.

Consumption in all other construction sectors, within which RMI is the major source of sawn softwood demand, has also experienced mixed health over the last two to three years. A further decline in volume in 2009 was followed by a 'bounce-back' in demand, in similar fashion to the new housing sector, with around 9% more sawn softwood consumed in these other construction sectors in 2010. The recovery was short-lived however and a decline of nearly 13% occurred in softwood consumed by these other sectors of construction in 2011.

To provide a 'snapshot' of how each of two identifiable construction sectors and the other markets have performed, before the most recent recession and since, developments of these markets and sectors are shown in chart 11 below and indexed for ease of comparison.




As previously reported, recession in 2008 resulted in sawn softwood consumption in all main markets and sectors falling in 2008 and again in 2009, but all markets, except pallets and packaging, recovered in 2010 with sawn softwood consumption rising, but remaining below pre-recessionary levels. As indicated in the March 2012 report, the year 2011 resulted in a continuing lack-lustre performance for sawn softwood consumption in the construction (overall) and pallets and packaging market, but continued improvement in volumes used in the fencing and outdoor markets.

Volume in the fencing and outdoor markets in 2011 was expected to return to near the levels of 2007, but it was considered that all other markets were likely to remain substantially below the volume of that year. This transpired with the level of new house building in the UK, as shown above, having nearly halved since 2006.

## Sawn Softwood Utilisation by Main Market by Source of Supply

The growth of UK domestically produced consumption was quantified in chart 4, describing the increasing penetration of markets to 2011, culminating in a share of all consumption of nearly 41% in that year.

In 2011, domestically produced consumption increased once more, to 3,096,000m$^3$.

The destinations for UK produced sawn softwood between 2002 and 2011 are identified in table 4 below.

**Table 4: UK Produced Sawn Softwood Utilisation by Volume by Main Market & Construction Sector**

| 000s m3 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| All Construction | 830 | 803 | 781 | 803 | 829 | 892 | 775 | 735 | 840 | 819 |
| New Housing | 95 | 96 | 94 | 97 | 101 | 98 | 64 | 65 | 95 | 105 |
| All Other Construction | 735 | 706 | 687 | 707 | 728 | 794 | 711 | 670 | 746 | 714 |
| Pallets & Packaging | 720 | 721 | 733 | 722 | 748 | 717 | 734 | 896 | 913 | 1,008 |
| Fencing & Outdoor | 731 | 756 | 804 | 813 | 834 | 1,116 | 993 | 973 | 1,107 | 1,180 |
| Other | 49 | 47 | 47 | 45 | 42 | 28 | 49 | 26 | 29 | 89 |
| Total Consumption | 2,330 | 2,327 | 2,366 | 2,384 | 2,452 | 2,753 | 2,550 | 2,631 | 2,889 | 3,096 |

Despite a fall in housing starts in the UK in 2011, growth of 10% in UK produced sawn softwood delivered into the new housing market is estimated to have taken place.

Although volumes supplied to new housing are relatively small, these increases in volume indicate a growing acceptance by the house building industry of UK produced softwood. Consistent with the fall in all other construction activity in 2011, a 4% reduction in the volume of UK produced softwood consumed in these sectors occurred in 2011

The pallets and packaging market consumed more UK produced sawn softwood in 2011 with many pallet makers buying British timber in preference to imported.

It is likely that UK producers were able to take advantage of higher import prices and won a higher market share of a marginally smaller market. This and the structural changes within the market for new and repaired pallets - as reported in greater detail in the section of this report concerned specifically with the pallets and packaging market - are the reasons behind this improved market penetration.

The sharp rise in softwood consumption in 2010 in the fencing and outdoor markets was followed by a further, but more modest rise, of around 7% in 2011.

Collectively, these changes in volume accounted for the 7% higher volume of UK produced sawn softwood consumed in 2011.

With total sawn softwood consumption falling in 2011, as UK produced consumption increased, significant reductions in imported sawn softwood were confirmed.

**Table 5: Imported Sawn Softwood Utilisation by Volume by Main Market & Construction Sector**

| 000s m3 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| All Construction | 6,038 | 6,718 | 6,291 | 6,123 | 5,782 | 6,099 | 4,294 | 4,025 | 4,506 | 3,915 |
| New Housing | 550 | 564 | 585 | 577 | 567 | 572 | 342 | 263 | 324 | 302 |
| All Other Construction | 5,489 | 6,154 | 5,706 | 5,546 | 5,214 | 5,527 | 3,953 | 3,762 | 4,181 | 3,613 |
| Pallets & Packaging | 1,350 | 1,050 | 1,098 | 1,164 | 1,231 | 1,403 | 862 | 535 | 430 | 325 |
| Fencing & Outdoor | 150 | 180 | 200 | 190 | 185 | 222 | 180 | 150 | 150 | 135 |
| Other | 216 | 216 | 213 | 205 | 203 | 222 | 151 | 149 | 145 | 140 |
| Total Consumption | 7,754 | 8,163 | 7,801 | 7,681 | 7,401 | 7,946 | 5,487 | 4,859 | 5,230 | 4,514 |

The volume of imported sawn softwood in 2011 was 716,000$m^3$ lower than in 2010, a fall of nearly 14%.

Volume was lower in all markets with construction the worst performer, estimated to have consumed 13% less imported sawn softwood in 2011. Imported sawn softwood consumed in new housing was around 7% lower and 14% lower in all other (non-new housing) construction sectors.

Imported sawn softwood suffered from continued substitution by domestic producers in the pallets and packaging market and also for fencing and outdoor uses.

It is also believed, but not possible to quantify with limited information available, that imported sawn softwood has also experienced a small degree of substitution, especially in construction markets, by some of the newer forms of wood-based products coming to market. It is known that some small volumes of modified wood products, such as “Accoya” and cross-laminated timber (CLT) were used in construction in 2011.

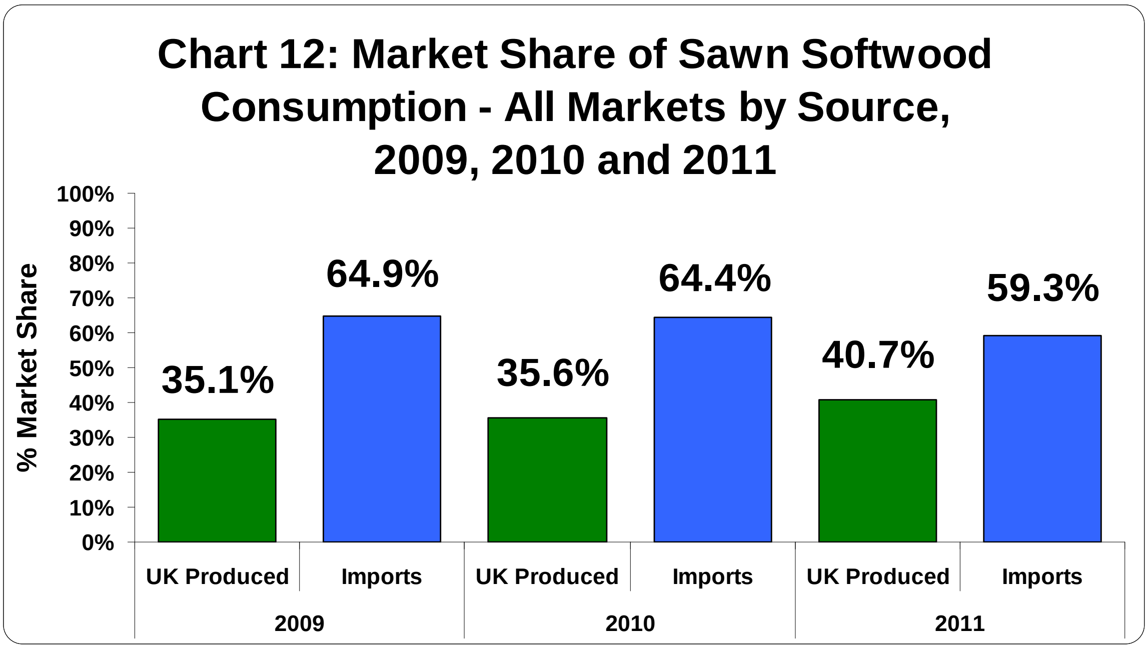
The respective strengths and weaknesses – in terms of utilisation and market share – for UK produced and imported sawn softwood are well known, with UK produced sawn softwood a major source of supply for fencing, outdoor and agricultural use and an important source of material for the large pallet and packaging industry in the UK.

Imported sawn softwood has traditionally been the leading supplier of constructional sawn softwood, especially structural grade materials imported from Scandinavia and in days past, high volumes from Canada.

As shown in chart 6, UK produced sawn softwood has grown in importance over the past ten years.

The last three years have seen a sharp rise in the market share of UK produced sawn softwood as lower demand from user markets and competitive pricing by UK producers has adversely affected the volumes of imported sawn softwood entering the UK.

The increase in volumes of UK produced sawn softwood has resulted in consistent improvement in the share held by domestic producers and stood at nearly 41% in 2011.



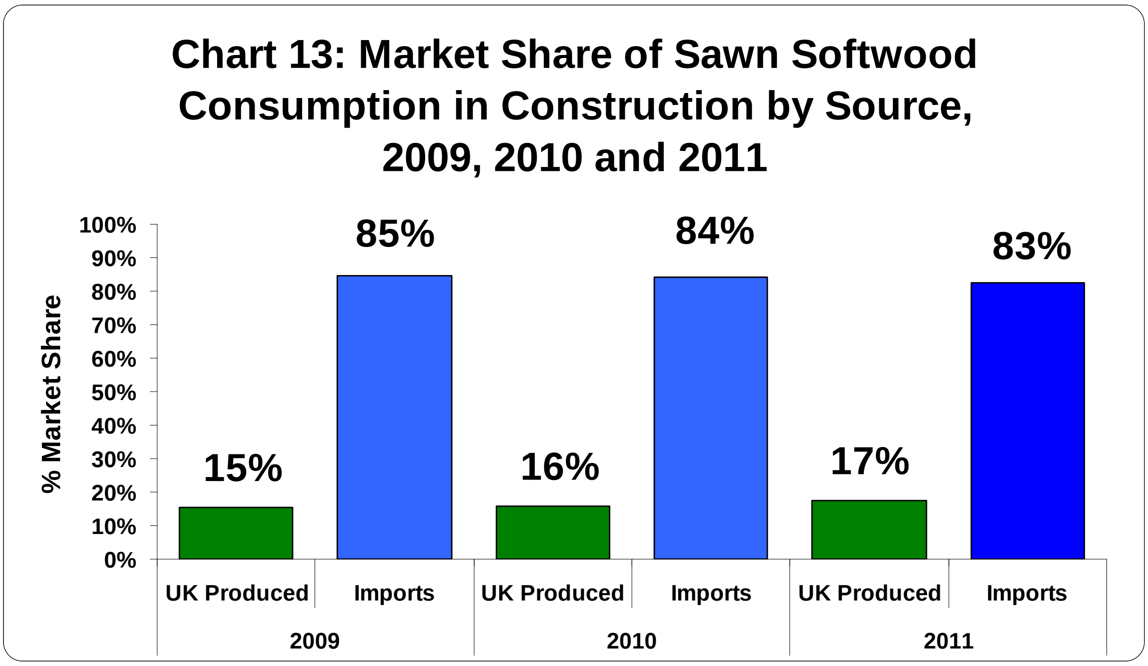

The growth in the relative importance of UK produced consumption has been achieved by an across-the-board improvement in each of the major markets for sawn softwood.

Construction remains the most important market for imported sawn softwood and imports continue to supply the great majority of the needs of the construction industry and especially in new house building.

The main end-use for UK produced sawn softwood in construction is in RMI sectors, especially the housing RMI sector, however, volume reductions were experienced by UK produced sawn softwood in 2011 as gains in volume were made in the new house building sector.

Despite overall lower volumes of UK produced softwood supplied into construction in 2011, the greater decline in imported softwood consumed helped raise the market share of UK produced softwood in this market to 17%, from 15% in 2009.

The share development over the last three years is shown in chart 13 below.



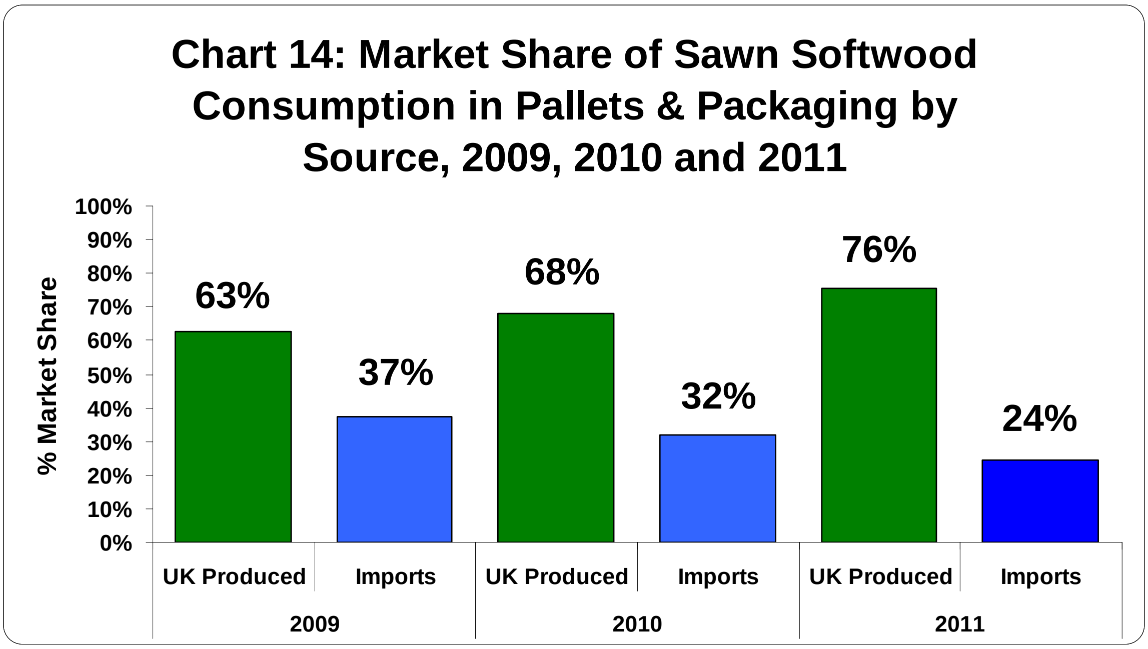

The loss in volume in construction has been the main factor in the total reduction in imported sawn softwood of around 716,000m$^3$ in 2011.

The estimated percentage loss of imported sawn softwood in 2011 in new house building was 7% and 14% in all other construction sectors.

Overall softwood consumption in 2011 remained well below the levels of 2007, but the mix of supply has changed since that time. The decline of UK produced consumption in the all other construction sectors (all, except new housing) between 2007 and 2011 has been in the region of 10%, substantially lower than the 35% decline experienced by imported softwood. This has had the effect of helping to improve the UK produced share in construction. Perhaps more significantly, in the much smaller new housing sector, the volume supplied by UK producers has remained at broadly similar levels (up by 6% over the four years), but supply of imported softwood into new housing is estimated to have fallen by nearly 50%. These factors have combined to produce the rise in the UK produced sawn softwood market in construction to 17% in 2011.

While the substitution of imported consumption by UK produced has been taking place in construction, the switch away from imported goods in the pallets and packaging market has been more pronounced.

The market share development by source of supply in this market is shown below.




The total volume of sawn softwood entering the pallets and packaging market in 2011 was estimated to be around 1,333,000m$^3$, which was marginally lower than in 2010.

However, imported sawn softwood lost ground in 2011 and 2010. The loss in volume of imported sawn softwood in this market in 2011 over 2010 was estimated to be close to 25%, following a 20% reduction in 2010 over 2009. In contrast, UK produced sawn softwood consumed by this market was higher in 2011 over 2010 by 10%.

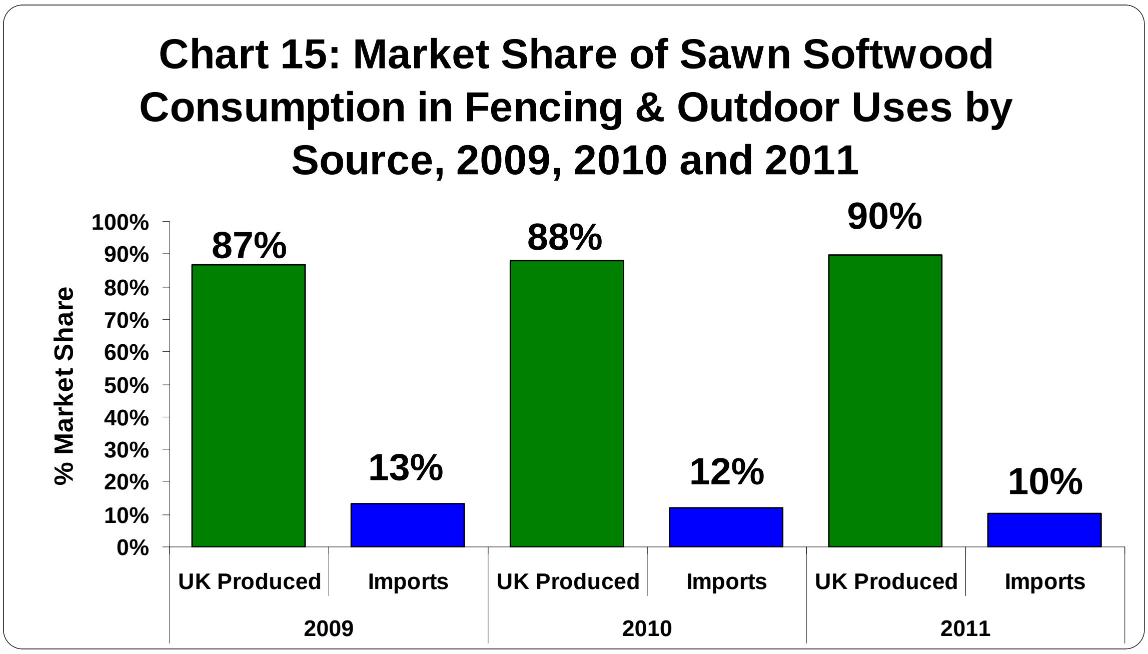
These volume changes have brought about the reduction in market share of imported sawn softwood to 24% of consumption in 2011, from 32% in 2010.

Overall volumes consumed by the pallets and packaging market have stabilised in 2011, but for the reasons previously outlined, where significant changes to the volumes of new pallet manufacturing and in the repair of pallets has taken place, lower volumes of sawn softwood generally have been used in this market over the last three to four years.

A further important factor in the reduction in imported goods sold to this market is price. The average price of sawn softwood over the period reviewed above has increased by a quarter, at a time when the Pound has strengthened and the UK price for pallet wood has not kept pace with the increase in price of similar grades from the Baltic States and other mainland European suppliers.

A similar, but less marked, development has taken place in the fencing and outdoor markets.

This market has been traditionally strong for UK producers and the market position of UK grown sawn softwood has strengthened further over the last three years, as described in chart 15 below.




The fencing and outdoor market comprises a number of different sectors, often populated by relatively small companies serving local market places. Sawn softwood prices have always been an important factor in the cost structures of wood using companies and this is especially so in this market which tends to purchase relatively low grade, low cost material. The preference for local supply and rising sawn softwood costs has, as in the pallets and packaging market, worked in favour of UK produced material.

## Development of Markets for Sawn Softwood

### The Construction Market

Available data has dictated the degree to which the construction industry and its constituent parts can be identified.

Official data on construction output, identified as new work and RMI is further categorised by **new work** in housing, industrial building, commercial building and infrastructure. **RMI** output is categorised by the same categories.

These data are available from the Office for National Statistics (ONS). Also available via ONS are data on housing starts and completions compiled by the Department for Communities and Local Government (DCLG). Housing statistics are also available from the National Home Building Corporation (NHBC) and the Construction Products Association. Statistics are also available to members of various organisations and other associations, including the Home Builders Federation, the Federation of Master Builders and the United Kingdom Timber Frame Association.

House building is therefore relatively well-served by available data. Other construction sectors are less well quantified, but the availability of output data in other sectors by ONS provides the framework within which estimates of sawn softwood usage can be made.

These data, coupled with current and previous studies of timber usage for many applications in different markets has enabled relatively good estimates to be made of the volumes of sawn softwood used in the various end-use markets.

As identified, the new house building market is well-served by available data and this has permitted an insight into the development of the new and RMI housing market in the UK and consequently, robust estimates of timber utilisation within these sectors.

## New Housing

New house building, or, with the many different types of dwelling now constructed, perhaps more properly defined as new home building, has suffered more than most markets from economic troubles of the last three to four years.

Revised data from the Office for National Statistics in 2012 for many preceding years revealed that housing starts declined from a peak of 230,664 in 2006 to a recent low point of 114,113 in 2009.

This decline of greater than a half in numbers of new homes being built has had a significant effect on sawn softwood volumes consumed.

Both main forms of home building, timber frame and masonry construction, have experienced large reductions in homes built, although the relative share of each has changed little over the last two to three years. Timber frame housing grew substantially during the last decade and it is estimated that nearly one in every four homes built in the UK is now of timber frame construction.

The rise in popularity of timber frame housing has been important to the suppliers of sawn softwood as, on average, double the quantity of sawn softwood is used in a timber frame home than a masonry built home.

Despite the rise in popularity of timber frame home building and the consequent higher volumes of sawn softwood used per home, the halving of the number of homes built since the middle of the last decade has resulted in sharply lower volumes of sawn softwood consumed by the new housing market.

As shown in table 3, the volume of sawn softwood utilised in new home building has fallen from a peak of 669,000$m^3$ in 2007 to an estimated 410,000$m^3$in 2011.

Lower sawn softwood utilisation, because of the downturn in housing volume, has been exacerbated by the changing mix of dwellings in the UK. Fewer detached dwellings in absolute terms and as a proportion of all dwellings were built in the UK during the first decade of this century and with higher quantities of sawn softwood consumed in detached dwellings compared to all other dwelling types, this also contributed to lower sawn softwood volumes used in home building and construction overall.

However, this trend away from detached dwellings was halted in 2010 and 2011 and more detached homes were built in these two most recent years as a proportion of the total. In the March 2012 report, it was predicted that lower housing starts would result in fewer detached homes built in 2011, but this proved to be incorrect with the number of detached homes rising by nearly 5,000 and this has helped to grow softwood volumes supplied to this sector.

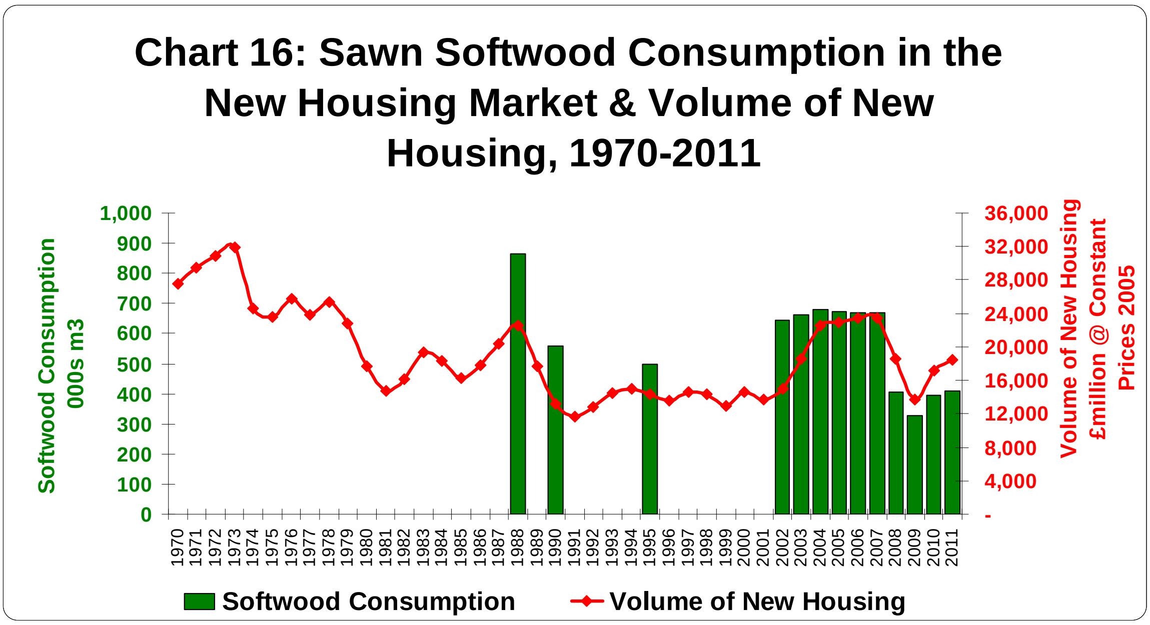
Volumes built and changes in the mix of housing types conspired to help reduce sawn softwood consumption over the medium-term, but with more timber frame and more detached homes built in 2010 and 2011, this has resulted in softwood consumption rising in the new home building sector in these two years.

Despite this improved performance, sawn softwood has experienced competition from other products for some applications in home building.

As alluded to previously, some of the newer types of wood-based products are beginning to replace sawn softwood in a limited number of applications in a small number of new build projects, but a longer-term trend of substitution of flooring joists by I-beams has had a detrimental effect on the demand for sawn softwood in these applications in new home building.

Over the long-term, housing type changes, changes in building methods and product substitution, have contributed to the reduction in sawn softwood volumes consumed in new home building in the UK.

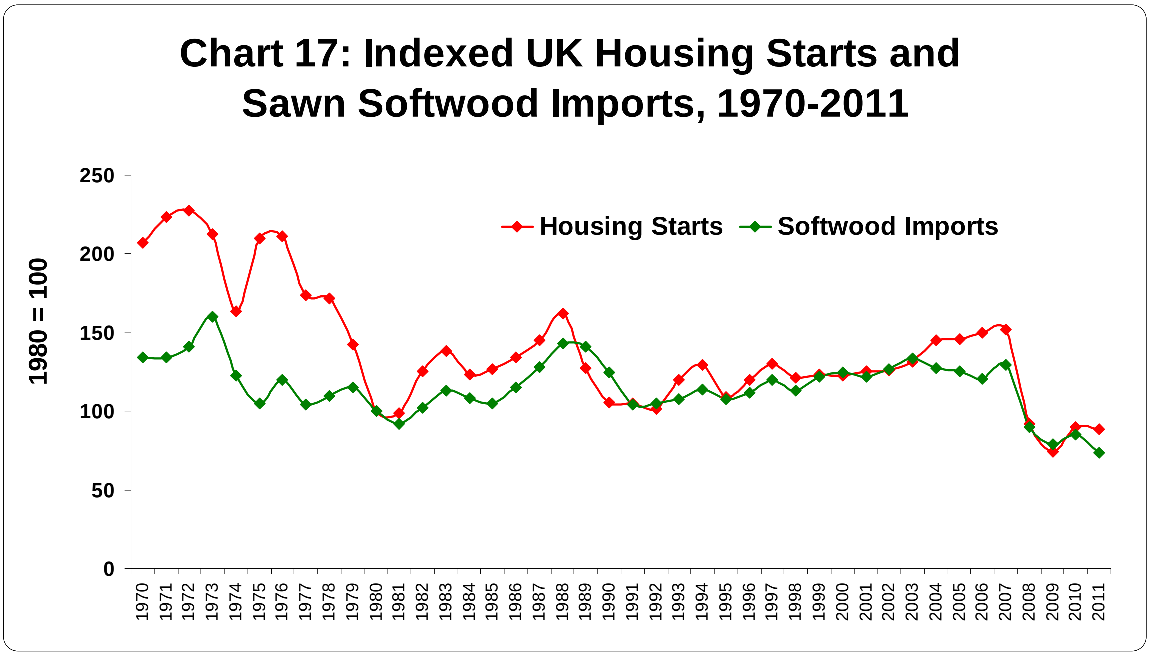
This longer-term relationship between new home building and sawn softwood consumption is shown in chart 16 below. As shown in the chart, softwood utilisation in the new housing market was relatively stable up to 2007, at time when new home building was experiencing relatively robust growth (the red line in the chart below). However, for the reasons outlined above, growth of softwood volume has matched or beaten the growth in new home building over the last two years.




As indicated, there have been a number of years where the annual development of sawn softwood consumption has not followed the annual development in home building, but the relationship between the two is consistent over the long-term.

It should be noted that the measurements of sawn softwood consumption in new home building prior to the work of this series of timber utilisation studies which quantified volumes used from 2002, are the work of other organisations. The data for 1995 was estimated from end-use studies conducted by Trada and before that, estimates derived from the work of Peter Grimsdale of the Truss Rafter Association in 1988 and the Anders Baudin work of 1990.

As identified in this report, 83% of sawn softwood consumed in construction is imported with new home building an important market for overseas suppliers. The relationship between imported sawn softwood and housing activity is confirmed through the good statistical correlation that exists between the two and this is shown in the chart below which monitors the annual development of each since 1970.




Data to 1970 on imported sawn softwood consumption specifically used in new house building are not available, hence the use of all sawn softwood imports in the chart above, nevertheless, the relationship between the volumes of housing starts and the volumes of sawn softwood imports is highly consistent.

## All Non-New Housing Construction Sectors

As reported, data availability on non-new housing construction sectors is less comprehensive than for the housing sector.

Data from ONS does provide a measure of output from these sectors however and in 2011, the scale of the non-new housing sectors is revealed through the measure of the volume of construction output at 2005 constant prices. The value of new housing in 2011 using this measure was £18.4 billion and the non-new housing sectors were valued at £75.6 billion. In output terms, the non-new housing sectors were roughly four times larger than new housing.

As previously indicated, there is a variety of different activities, including industrial and commercial building, that are categorised in these sectors.

Timber usage within the different activities differs, with more sawn softwood used in housing RMI than, for example, in infrastructure projects which often involve large civil engineering works.

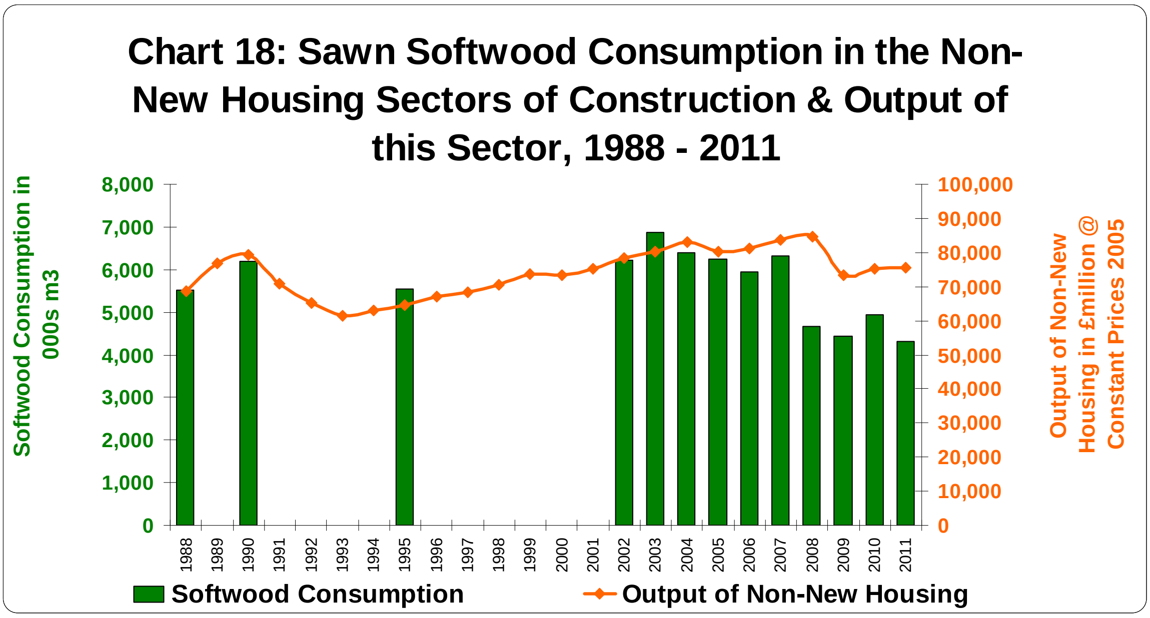
However, within the RMI sectors, which comprise, housing, industrial, commercial and infrastructure RMI, average usage data of sawn softwood is unknown and, unlike new housing, probably not possible to measure because of the variability of the applications for sawn softwood present in each sector.

In housing alone, the range of activities is wide, varying from relatively small-scale repairs (e.g. to staircases or flooring) to larger-scale improvement work which would include extensions to existing properties. Without any real uniformity of activity, the ability to measure average usage is not possible.

While it is known that very large volumes of sawn softwood are used in housing RMI and smaller volumes used in the other non-housing RMI sectors, the method through which these non-new housing sectors are quantified is to estimate usage in all other markets and subtract these volumes from the known total volume of sawn softwood consumed as derived from UK production and imports, less exports.

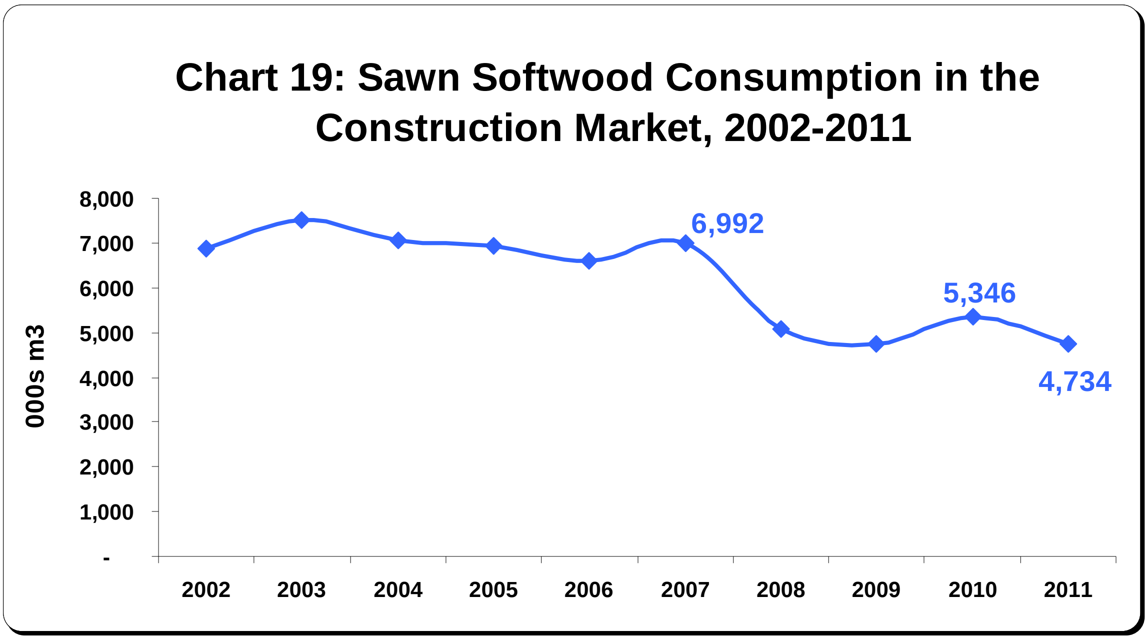
As a check on the validity of this method, the calculated sum of sawn softwood consumption in all other construction sectors than new housing can be plotted against the output of these sectors to determine co-variability.

In common with the availability of consumption data in the new housing sector, the plotting of non-new housing sawn softwood consumption against construction output reveals the expected relationship where market demand is followed by product (sawn softwood) supply.




As shown in chart 18, there is a good correlation between sawn softwood consumption in non-new housing sectors, confirming that the method of measuring sawn softwood volumes in these markets has credibility.

For all construction sectors combined, the development of sawn softwood consumption to 2011 is shown in chart 19 below.




## The Pallets and Packaging Market

The proportion of industry turnover, estimated to be around £394 million in 2011 by ProdCom, accounted for by the production of pallets was approximately 73%, or £287 million. It is within this sector of the total packaging manufacturing market that the greatest volumes of timber products are used. Therefore, changes in usage characteristics in the pallets sector will have profound consequences on timber usage and indeed, significant changes have taken place over the last three to four years.

In chart 9 on page 12 of this report, the quantity of new pallets as reported by ProdCom reveals a familiar pattern of trade as seen in many other markets between 2007 and the present day. However, further investigation into the packaging market, with particular emphasis on pallet making was conducted between 2009 and 2011 through studies sponsored by Timcon, the pallets and packaging confederation and the Forestry Commission. The latest report[2] revealed that quantities of newly manufactured pallets had declined substantially from the top of the business cycle in 2007 and the quantity of repaired and re-manufactured pallets had risen substantially.

This finding has cast doubt over the number of pallets produced in the UK, as reported by ProdCom.

Packaging is one of the markets quantified by official Government statistics through the series of 'PRODCOM' information sets. ProdCom is a comprehensive data series of production of PRODucts of the European COMmunity and is a European Union (EU) wide survey. This series covers around 3,900 products classified to over 230 industries in manufacturing, but also in service, repair and distribution industries. Companies involved in the annual ProdCom Inquiry supply sales data for the products they manufacture, as well as non-manufacturing income.

Further investigation into the ProdCom reporting of pallet manufacturing is planned to take place in 2012.

[2] Wood Packaging Study 2011 - Quantification of the Manufacture and Repair Wood Packaging in the UK, 2011

The Wood Packaging Studies have gathered information from Timcon members and from members of the Wood Packaging Material Marking Programme.

Timcon represents manufacturers and suppliers of pallets and other industrial packaging items. The Wood Packaging Material Marking Programme was established by the Forestry Commission (Great Britain) and Forest Service (Northern Ireland) to help manufacturers demonstrate compliance with ISPM15, the standard by which packaging is heat treated to reduce the risk of infestation. The United Kingdom Wood Packaging Material Marking Programme regulates the manufacture, repair, recycling and re-manufacture of ISPM15 compliant wooden packaging in the UK.

Through the Wood Packaging Study of 2011, it has been possible to determine the quantity of new pallets produced in the UK and the number repaired and re-manufactured pallets by member companies.

In 2011 it was estimated that around 30 million new pallets were manufactured in the UK and a further 42 million were repaired or re-manufactured. This conflicts with the 52 million pallets reported to have been produced in the UK by ProdCom.

It is believed that the results of the Wood Packaging Study provide a more realistic assessment of activity in the pallets sector in 2011 and this has been confirmed by the trade.

Also from the Wood Packaging Study, data was gathered on the volume of wood products used in the manufacture and repair and re-manufacturing of pallets and in the production of industrial packaging which provided an insight into the average volume used per type of activity.

This has enabled a realistic assessment of timber utilisation in the pallets and packaging industry.

Previous measures of the volume of timber products used in this industry utilised ProdCom data and therefore have over-estimated timber usage. With a reported production in 2011 of around 52 million pallets by ProdCom, average usage data derived from the Wood Packaging Study, if applied to these ProdCom quantities, would result in an over-estimation.

This method of (over)estimating timber utilisation in the pallets and packaging market has been employed for many years.

With a closer understanding of pallets and packaging output determined from the Wood Packaging Study, the volume of sawn softwood used in 2011 and revisions to previous years has been possible.

The Wood Packaging Study quantified the volume of all wood products (including hardwoods and panels) used in the pallets and packaging market in 2011 to be around 1,550,000m$^3$. Approximately 86% of this total was estimated to be softwood.

This measure is consistent with the estimates of sawn softwood used derived from the Sawmill Survey conducted by the Forestry Commission and estimates of imported sawn softwood used in pallet making.

Using these sources of information resulted in an estimate of sawn softwood usage for pallets and packaging of 1,333,000m$^3$ in 2011.

With such consistency, the volume of sawn softwood used specifically for newly manufactured and repaired and re-manufactured pallets can be determined with confidence. It is estimated that in 2011, around 1,022,000$m^3$ was used in new pallet manufacturing and repairs and a further 311,000$m^3$ for the manufacturing of cases, boxes, drums and other non-pallet packaging.

The incidence of pallet repairs has increased over the last three to four years.

The recession in 2008 and its aftermath of weak demand and rising costs induced buyers of pallets and packaging to keep a tight control on all types of costs, including the cost of pallets and packaging materials. The price of a new pallet is significantly higher than a repaired pallet, hence, in order to reduce cost of pallet purchases a change in usage away from newly manufactured and towards repaired and re-manufactured pallets took place.

This trend was first noted in the Wood Packaging Study of 2009 and confirmed by the subsequent studies.

Another driver of the growing proportion of repaired pallets in 2010 and 2011 was the increase in timber prices.

Average prices for imported sawn softwood in the year 2010 rose by around 19% and a further 3% in 2011 which, because of substantially less wood used in the repair of pallets, encouraged a greater amount of recycling and, in turn, helped UK producers to win market share.

Rising new pallet prices, mostly because of increased raw material costs; the need to maintain tight cost control and lower demand from pallet user markets were the main factors behind the greater quantities of repaired pallets produced and placed onto the market in 2010, at the expense of (the higher softwood consuming) newly manufactured pallets.

However, the Wood Packaging Study of 2011 revealed that both new pallet manufacturing and the number of pallet repairs fell in 2011. This had the effect of reducing the volume of softwood consumed by pallet makers - for manufacturing new pallets.

Against expectation, the volume of softwood consumed in the repair of pallets increased in 2011, as the quantity repaired fell. One of the main factors behind this has been the greater re-use of pallets through changed methods of pallet recovery. While reducing the numbers of pallets repaired, the longer intervals between repairs has resulted in greater material usage used in these types of repair. The condition of these pallets, once returned for repair, were often in a far worse state than previously and consequently, more softwood was used.

Nevertheless, despite more softwood used in repairs, the trend of sawn softwood usage in the pallets and packaging market continued downward in 2011.

With the greater insight into pallet making and repair activity, improved estimates of sawn softwood usage have been made for the last three to four years and estimates before this time have also been made, retrospectively revising previously reported data.

The revised estimates for sawn softwood utilisation in the pallets and packaging market are shown in chart 20 below.

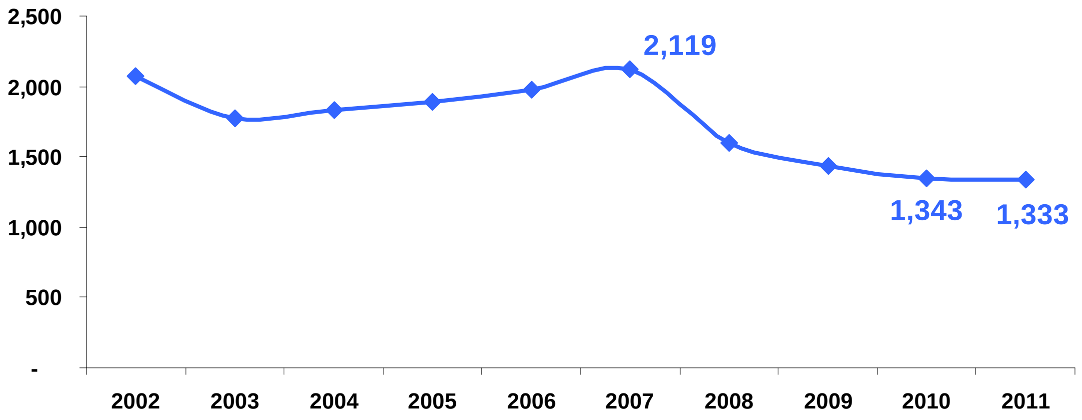



**Chart 20: Sawn Softwood Consumption in the Pallets and Packaging Market, 2002-2011**

## The Fencing and Outdoor Market

The fencing and outdoor applications market, as identified in the previous timber utilisation report, presents greater difficulty than some other markets in attempting to quantify sawn softwood utilisation. The products and activities in this market include not just the many varieties of fencing products, but also decking (residential and commercial), sheds, pergolas and similar landscaping constructions, but not garden furniture.

Information derived from the Forestry Commission estimated that in 2011 around 1,180,000m$^3$ of domestically produced sawn softwood was consumed by this grouped market.

Imported sawn softwood has lost market share to domestic producers over the last three to four years and the volume of imported material consumed in this market in 2011 was estimated to be in the region of 135,000m$^3$. Consequently, this market would have utilised around 1,315,000m$^3$ of sawn softwood in 2011.

Trade sources have estimated the volume of sawn softwood used for fencing. The nature of the market makes collection of industry data a difficult task and the extent to which primary market research can help quantify this activity is therefore limited.

Many fencing firms are very small operations and the ‘churn’ rate, whereby firms appear and disappear, is facilitated by the relative ease with which fencing businesses can be established.

This part of the market tends to service the residential market, although a number of small companies are also found in the agricultural fencing and security fencing sectors.

According to the research and training company, Lantra, there are over 3,150 known fencing businesses in the UK of which over two thirds have less than 4 employees.

The market for timber fencing, the great majority of which is sawn softwood, is concentrated in the residential and agricultural sectors. Consequently, seasonality is an important feature and the demand for sawn softwood for new fencing and fencing repairs and maintenance has peaks during the spring and again in the autumn, when this type of work is carried out.

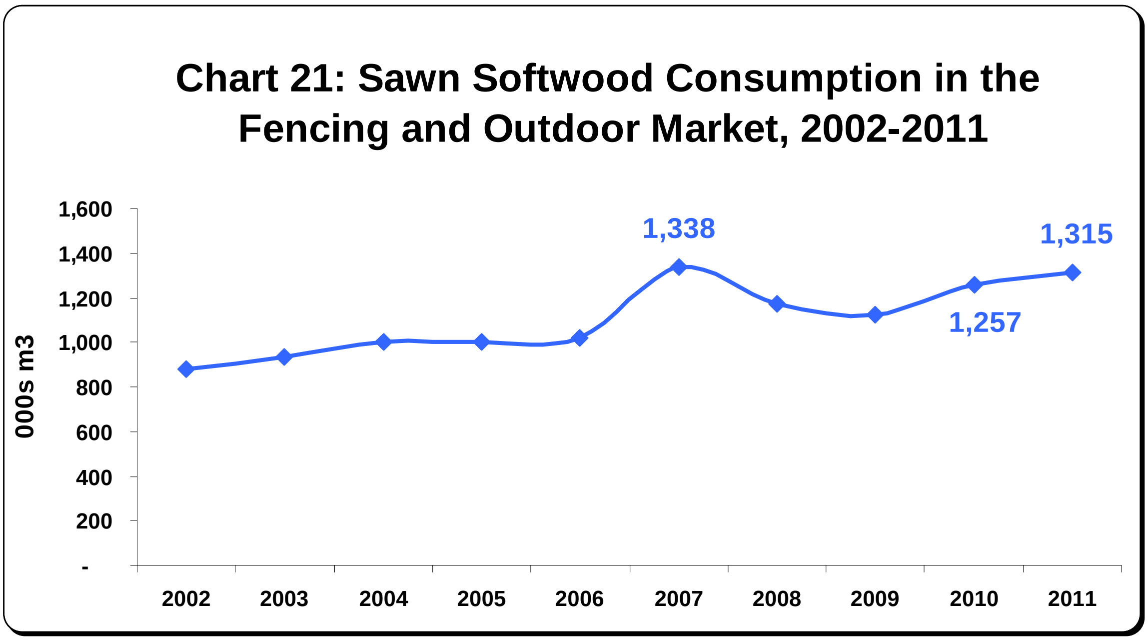
The market is also affected by adverse weather conditions and sawn softwood usage can vary according to the severity of the weather at different times of the year.

Over the longer-term, such fluctuations are evened-out and the development of sawn softwood used in this market can be measured.

The fencing market is one which is more ‘recession-resistant’ than many as the drivers of demand include not just new fencing projects which, in the residential market is closely allied to new house building, but repairs and replacement fencing also. The downturn in new house building over the last few years will have dampened demand for new fencing in the residential sector, but this has been offset by repairs and replacements and a steady demand from the agricultural fencing sector.

Sawn softwood consumed in this market in 2009 was around 16% below the levels of 2007, but has since grown and in 2011 has returned to volumes similar to those seen in 2007.

The development of sawn softwood consumption in the fencing and outdoor uses market is shown in chart 21 below.




## Other Markets

The collection of markets classified as ‘others’ comprise all that is not normally classified as construction, packaging or fencing and outdoor. This includes activities such as, furniture, mining, transport, boat building, ladders, signage and hoardings, exhibition contracting, theatre/concert/events set building, picture framing, domestic and commercial articles (clock bases, plaques, ornamentation) and model making.

Little or no published information exists on the scale and characteristics of some of these individual markets and little data is available on timber usage.

As with the previous timber utilisation report, estimates of sawn softwood utilisation are based upon the work of previous studies and from the response to the Forestry Commission Sawmill Survey which identifies the proportion of domestically produced sawn softwood that is accounted for by these other markets.

Acknowledgement of the organisations involved in previous work in this area is repeated below.

The Timber Trade Federation (TTF 1985 – updated for 1989) the work of Peter Grimsdale of the Trussed Rafter Association (TRA 1988), Anders Baudin, courtesy of Roger Cooper at the University of Wales (Baudin 1990) and the Timber Research and Development Association (TRADA 1995).

As previously reported, the scale of some of the markets has declined (e.g. mining) or the market demand for sawn softwood within these markets has declined. Many applications previously using sawn softwood have been replaced by other materials, notably aluminium and plastics and more recently composites have taken precedence over timber in some markets. Volumes consumed have fallen significantly over the last thirty to forty years with, especially, mining, vehicle production and other transport related markets substantially smaller or non-existent by 2011. The decline in volumes within this collection of markets is typified by the decline in UK furniture manufacturing in recent years and the commensurate fall in sawn softwood used in furniture making.

These other markets are believed to have accounted for nearly 3%, or around 89,000$m^3$, of all UK produced sawn softwood consumed in the UK in 2011. Although very small in comparison to the main markets, this is a substantial increase in consumption from the estimated 29,000$m^3$ in 2010. This requires further investigation.

The percentage of all sawn softwood imports used in these ‘other’ markets in 2011 was also estimated to be around 3% of the total, at 140,000$m^3$. In total, a volume of approximately 229,000$m^3$ was consumed by these ‘other’ markets in 2011.

## The Market for Wood Products Compared

This report has revealed that a high degree of volatility has existed over the last few years in the utilisation of sawn softwood and other timber products, especially material that has been imported.

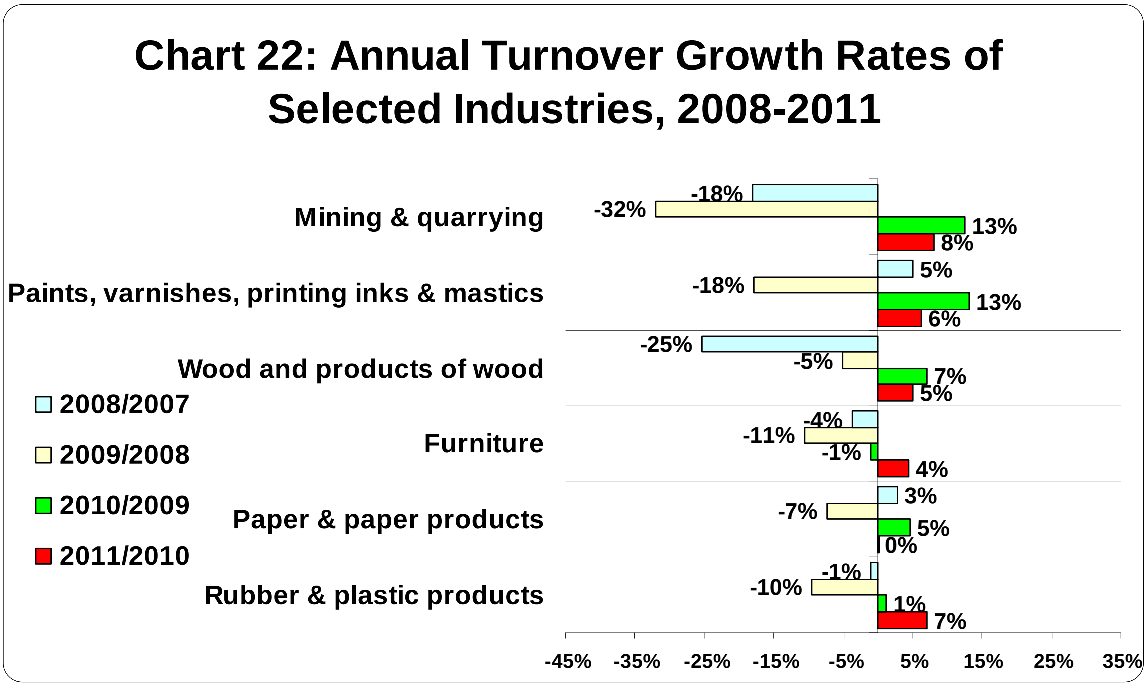
The Office for National Statistics (ONS) publishes turnover data for manufacturing and production industries, including wood and products made of wood. The total output of manufacturing in the UK was indexed and compared to the indexed output of wood and wood products in chart 10 on page 13 of this report, to provide an indicative measure of the wood products industry's relative performance in the UK economy.

A higher degree of volatility for wood products than for manufacturing in general was identified, especially around the time of the onset of the recession.

This suggested that wood and wood products may have experienced greater levels of variability in supply than some other industries. Further analysis has revealed that this has been the case over the last few years.

These ONS data on wood products includes both primary processing (sawmilling) and manufacturing (e.g. flooring) and provide an output measure in turnover that permits comparison with other UK industries.

Chart 22 below compares wood industry turnover against other selected industries.




With the exception of the mining and quarrying industry, the lower 'lows' and the higher 'highs' are clearly present in the turnover associated with wood and wood products.

The wood and wood products industry has been subject to greater volatility than many industries and all of the selected industries, as shown in chart 22.

At the start of the recession in 2008, wood and wood products turnover declined by 25%.

Other industries experienced much smaller declines and the paper and paper products industry actually grew by 3% in that year.

The continuing weakness in markets generally in 2009 resulted in the majority of industries declining and of those shown above, all experienced lower sales in that year.

The moderate recovery of the UK economy in 2010 saw many industries 'bounce-back' from decline of the previous year and the wood and wood products industry achieved a better growth in turnover than some others.

In 2011, all of the markets shown above grew turnover, but by varying amounts.

This finding suggests that wood products, and sawn softwood as the single largest volume supply into user markets, experience a greater degree of sensitivity to economic conditions than many other industries. One of the main reasons for this is probably due to the industry's (still) heavy reliance on construction.

At the end of 2012, following the update of the report for 2011 published in March 2012, this report continues to describe generally weak market conditions.

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