Along with many of my parliamentary colleagues I have the great privilege of representing constituencies that rely on the 7,500 British jobs that are directly supported by the wood panel industry. As you may know one of these plants is located in Cowie in the heart of my Stirling constituency. The Cowie plant has been operational since 1973 and employs nearly 300 full time staff, making a vital contribution to the local economy in the Stirling area and beyond. Norbord has invested heavily into its Cowie operations and hopes to operate for many generations to come. I know this picture is mirrored in Inverness, Auchinleck, Hexham, Chirk and South Molton who are all fortunate to have a wood panel manufacturing facility within their community.

The industry is a UK success story, with GVA in excess of £850m per annum and an ability to meet 65% of the UK demand for wood panel products. Wood Panel manufacturers operate on a business to business basis, supplying some of the UK’s biggest brands, including B&Q, Jewson, Wickes, Travis Perkins and Howdens to name but a few. The contribution of the wood panel industry to the UK economy cannot be underestimated, with their products used in key domestic industries like construction, kitchen and furniture production, packaging and transport, amongst many others.

This is an industry that is answering the call to keep the UK at the forefront of global high value manufacturing. Post Brexit this industry has the capability to increase production to meet the UK’s demand for wood panel products and to do so with no reliance on imports of wood from elsewhere in the world. If achieved this would be the epitome of a sustainable UK manufacturing sector that we can all be truly proud of.

However, this is only possible if the industry has enough wood to sustain and grow their manufacturing capability. Woodland cover in the UK is equivalent to 13% of the total land area which is just under a third of the EU average. Only 11 million tonnes of sustainable wood are delivered each year from UK forest sources meaning the wood panel industry has to rely — when supplies are tight — on imports to sustain its manufacturing.
Importing wood to make panels is unsustainable and not a viable option for the industry in the long term.

The UK Government’s target of another 11 million trees planted by 2025 in England is mirrored by similar commitments in Scotland and Wales. This will help to increase the supply of UK grown timber and wood security in the long-term. However, we will not see the long term benefit until 2040 to 2060. With peak wood fast approaching within the next decade it will not alleviate the immediate pressure faced by the wood panel industry, sawmilling and other wood processing sectors. There can be little doubt that the rise of the wood fuel sector — which itself consumes around 25% of the UK annual wood basket — has distorted the market and created shortages in UK supply.

I understand the case made for the wood fuel sector, but its growth cannot come at the expense of the wood panel industry. It is right that the UK Government considers how all wood users can coexist without detriment to each other. I am delighted to have had the opportunity to chair an Expert Working Group which will consider the contribution made by the wood panel sector to the UK economy. I was joined on the group by Alastair Kerr, Director General of the Wood Panel Industries Federation, and a number of leading experts on the wood panel industry, forestry and energy policy. The group assessed the supply and demand issues facing the wood industries sector and the policy options available to improve wood security. Our group recognises the need for the UK Government to honour the commitments it has already made to the wood fuel sector. We are clear in our view that the security of wood supply must be protected for all wood users. The group has developed a series of policy recommendations that were presented to the Rt Hon Claire Perry MP, Minister of State for Energy and Clean Growth in November 2018. Given the forthcoming energy policy review, this paper is well-placed and well-timed to make a meaningful contribution to future UK energy policy.”

Stephen Kerr MP

Conservative, Stirling
Chair of the Expert Working Group and APPG for the Wood Panel Industry
Executive Summary

This policy paper explores the challenges facing the wood panel industry and their consumers in the furniture making, construction and house building industries. This paper presents a set of policy recommendations which were presented to the Minister of State for Energy and Clean Growth in November 2018 to consider in her forthcoming energy policy review.

Wood security within the UK is under considerable threat, a problem which has been exacerbated by UK Government renewable energy subsidies for wood burning technologies in recent years. This paper builds upon the appended Baseline Report which details the evidence base and articulates the policy challenge facing the wood panel industry as the UK approaches ‘peak wood’ availability within the next decade. Upon review of evidence, the Expert Group developed three immediate policy solutions in preference order, to be combined with a further commitment to increase forestry planting, in order to ensure that the UK industry is able to meet domestic demand.

The Expert Group recommends that following the completion of a comprehensive and robust assessment of renewable subsidies covering biomass, BEIS should consider either: removing subsidies altogether, pursuing a technology neutral approach to renewable subsidies, or restricting the quantity and/or type of wood which qualifies for subsidy. The paper concludes with a core message: the wood panel industry wishes to thrive and contribute to a flourishing manufacturing base post-Brexit. However, in order to make this a reality the UK Government must recognise the diminishing state of the domestic wood supply basket and commit to working with the Wood Panel Industries Federation (WPIF) in order to improve wood security prospects and enable this industry to flourish over the coming years.
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Profile of the Industry and the Wood Panel Industries Federation

Established in 1995, the Wood Panel Industries Federation (WPIF) is a representative organisation giving voice to the industrial manufacturers in the United Kingdom and Ireland of Chipboard, Oriented Strand Board (OSB) and Medium Density Fibreboard (MDF).

The world’s first commercial wood fibreboard plant opened in 1898 in Sunbury on Thames but the industry present today has roots going back to the mid–60s. With six manufacturing sites owned by three companies, the UK manufacturers of wood panel products make a vital contribution to the economy. They add significant value to the wholesale and retail markets within the UK, supplying essential materials to a wide range of industries, including construction, furniture, packaging and transport, amongst many others.

» The GVA of the industry is approximately £850 million per annum.

» UK manufacturers supply approximately 65% of the total UK annual consumption of these wood–based panel types.

» There are approximately 7,500 jobs dependent on the industry.

» The wood panel manufacturing sector uses around 25% of the 11 million tonnes of wood delivered from UK forestry every year.

Figure 1. Wood Cycle, European Panel Federation
Wood Panel Industry Products

The wood-based panel products manufactured within the UK include wood in the form of chips, strands or fibres. The categories usually recognised within this group of panel materials are:

» Chipboard
» Oriented strand board (OSB)
» Medium density fibreboard (MDF)

In addition to the rawboards, a multitude of overlaid and value added variants are produced. The consumption of these wood panel types in the UK is now almost 5 million cubic metres per annum, with UK production comprising a substantial portion of this figure. The wood panel industry is vital to everyday life, at home and in the workplace. Manufactured products can be found in virtually every home, office and shop, either as a component within the building fabric or within the furniture.

**Chipboard**
The major markets for chipboard products are in construction and furniture. In construction, chipboard has dominated as a floor decking material in both domestic and non-domestic construction. In furniture, chipboard is most usually overlaid with either decorative papers, foils or veneers, and although unseen, it is the base for a majority of kitchen and bedroom cabinets as well as featuring extensively in commercial office furniture. Often hidden by other materials, chipboard is used within other manufactured items such as doors or in shop fittings.

**Oriented Strand Board (OSB)**
With strength as a key attribute, a majority of OSB is used in load bearing construction applications. Common applications for OSB include flooring, wall sheathing and roof decking. Increasingly OSB is used as a component making up factory manufactured SIPS panels and floor cassettes. Available in a variety of grades, OSB can fulfil other roles such as in, packaging and furniture.

**Medium Density Fibreboard (MDF)**
With a fine dense structure, MDF is uniquely suited to applications where surface finish and profiling is important, consequently MDF is widely used in furniture and in applications where it forms the basis of the visual elements in construction, shop fitting, commercial interiors and in DIY. MDF is available in a wide variety of variants which gives it versatility in a multitude of applications.
Kronospan

With over 120 years experience, Kronospan is the leading manufacturer of wood-based panels worldwide of: Medium density fibreboard (MDF), Particleboard (PB), Laminate flooring, Oriented strand board (OSB) in Europe. Production also includes: melamine-faced panels, speciality and decorative paper, worktops, wall panels, compact boards, high pressure laminates (HPL), UF, MUF and MF resins and others. Currently, Kronospan consumes 1.5m tonnes of timber per year, all UK sourced. Globally, Kronospan has more than 40 sites and employs over 14,000 people.

EGGER

In the UK, EGGER has two chipboard manufacturing sites which in total produce approx. 1.1 million m3 of chipboard each year and employs over 720 people. EGGER in Hexham is Northumberland’s largest manufacturing company and EGGER in Auchinleck is one of Ayrshire’s largest manufacturing companies. Both UK sites produce chipboard and at Hexham it is further upgraded (Melamine Faced Chipboard) into products for the furniture and interior design markets and tongue and groove flooring for the construction industry. The company has invested approx. £250m in its UK operations since 2006, to ensure it remains at the forefront of chipboard production in Europe.

Norbord

Norbord Inc is the largest manufacturer of OSB in the world and is one of Europe’s leading manufacturers of engineered wood-based panel products. Norbord products are used extensively in the construction, DIY and furniture sectors with success coming from their pursuit of excellence in all areas. Norbord Europe Ltd has three mills in the UK where all three wood panel groups are produced — SterlingOSB Zero at Inverness, CaberWood MDF at Cowie, Stirling and CaberBoard also at Cowie and South Molton, Devon.
Wood Panel Manufacturing Plants in the UK
The APPG on the Wood Panel Industry

The APPG’s aim is to raise within Parliament issues of concern to the wood panel industry, and provide Parliamentarians with accurate information about matters relating to the industry. The APPG on the Wood Panel Industry was relaunched on 13 June 2018 at a reception in the Palace of Westminster.

Following the EGM held in the Churchill Room, House of Commons on 13 June 2018, the APPG group was confirmed as:

Stephen Kerr MP (Con, Stirling) • Chair
Bill Grant MP (Con, Ayr, Carrick and Cumnock) • Vice–Chair
Alan Brown MP (SNP, Kilmarnock and Loudoun) • Vice–Chair
John Stevenson MP (Con, Carlisle) • Vice–Chair
Drew Hendry MP (SNP, Inverness, Nairn, Badenoch and Strathspey) • Vice–Chair
Jim Shannon MP (DUP, Strangford) • Vice–Chair
Susan Elan Jones MP (Lab, Clwyd South) • Vice–Chair

EGM of the Wood Panel Industry All Party Parliamentary Group

From left to right: Jim Shannon MP, Susan Elan Jones MP, Stephen Kerr MP, Bill Grant MP, Alan Brown MP, Bob Stewart MP
The Expert Working Group

In order to ensure the sustainability of this industry, the All Party Parliamentary Group (APPG) on the wood industry announced the launch of an Expert Working Group.

The Expert Group are looking to:

1. Assess supply and demand issues facing the wood industries sector
2. Assess policy options which are available to address these issues.

The Expert Working Group’s assessment is outlined within this policy paper and is the product of constructive discussion over a three month period. The first of the Working Group meetings took place on Friday 10th August 2018 at Norbord, Cowie (as pictured below). The second of the Working Group meetings took place on Friday 14th September at Norbord, Cowie. The Group were joined by WPIF members Steve Roebuck — Director (Environment, Health and Safety) Norbord, and John Paterson — Director, EGGER Forestry Ltd, on both occasions. On Monday 5th November 2018, the Working Group presented this report to Claire Perry MP, Minister of State for Energy and Clean Growth, at the House of Commons.

From left to right:
Rt Hon Brian Wilson, George McRobbie, Alastair Kerr, Stephen Kerr MP, Steve Roebuck, Ian Ross and John Paterson.
The Expert Working Group members include:

**Stephen Kerr MP**

Chair of the Expert Group and APPG for the Wood Panel Industry.

Stephen Kerr is the Conservative MP for Stirling and has been since June 2017, having previously contested the 2005 and 2015 elections for this seat. Stephen Kerr is a current member of the Business, Energy and Industrial Strategy Committee, which he joined in September 2017.

**Alastair Kerr**

Secretary of the Expert Group on the Wood Panel Industry.

Alastair Kerr has been the Director General of the Wood Panel Industries Federation (WPIF) since 1999. Alastair Kerr has over thirty years experience in the timber industry, having held a range of technical positions before taking up his positions with WPIF.

**Rt Hon Brian Wilson**

Rt Hon Brian Wilson is a former UK Energy Minister, serving at the Department for Trade and Industry from 2001 until 2003. Rt Hon Brian Wilson also previously served at the Department for Trade and Industry from 1998–1999. Rt Hon Brian Wilson was the MP for Cunninghame North between 1987 and 2005. He is now a member of the UK Board of Trade, Chairman of Harris Tweed Hebrides, a Director of Celtic Football Club and Visiting Professor at the University of Strathclyde.

**David Sulman**

David Sulman has been the Executive Director of the UK Forest Products Association (UKFPA) since 1997. In January 2019, the UKFPA merged with the Confederation of Forest Industries (Confor), of which David is now Technical Director. David is also involved in numerous industry groups, notably the Forestry Engineering Group, the Forest Industry Safety Accord and multiple Forestry Commission groups. David is also a qualified wood scientist and timber technologist.

**George McRobbie**

George McRobbie is the Managing Director of Tilhill Forestry, having held this position since 2012. Prior to this he was a member of the Board since 2001.

George was formerly the Chairman of the UK Forest Industries Sustainability Strategy Group, which sought to improve the sustainability of the forestry industry.

**Ian Ross**

Ian Ross is currently the Independent Chair of the Caithness and North Sutherland Regeneration Partnership (CNSRP), a Vice–Chair at High Life Highland and Board Member at Scotland’s Rural College (SRUC).

Ian is a former Chairman of Scottish Natural Heritage and is a Chartered Forester.
The wood panel manufacturing industry depends upon the current and future domestic softwood supply. The wood panel manufacturing industry lies central to delivering upon the UK Government’s house building pledge of 1 million homes by 2020 and a further 0.5 million by 2022.[1] Without improving wood security, the needs of panel manufacturers’ consumers in the house building and construction industries will not be met. This has the potential to have a considerable impact upon the house building industry given that 50% of wood panel manufacturing products generated on an annual basis are used in construction and house building.

Wood panel manufacturers supplying these vital industries account for around 25% of the total 11 million green tonnes supply delivered to the market (Baseline Report p.20–21). The domestic virgin roundwood supply is forecast to decline rapidly over the period from 2035 onwards, which will reduce the wood materials available for domestic manufacturing and the domestic sawmill industry. The decline in supply is particularly concerning given that the UK already has a lower than average woodland coverage of 13% relative to the EU average of approximately 37%. The challenge is exacerbated further by wood fuel subsidies, which is leading to shortages within the market (Baseline Report p.24–26). Overall, the decline in domestic wood availability combined with rising demand has two implications: short-term and long-term.

Firstly, as the availability of domestic supply declines in the short-term (Baseline Report p.22), manufacturers are being forced to resort to importing raw materials. This solution is not sustainable as it undermines the ability of manufacturers to produce wood panels at a competitive price and increases the likelihood that the final panel product will be imported from elsewhere. Secondly, with the forecasted availability diminishing rapidly within the next decade, there is real investment uncertainty for wood panel manufacturers, construction, and house building industries.

With the policy challenge facing the wood panel manufacturing industry outlined, the Expert Working Group accepts current demand for wood fuel but wishes to see an end to the artificial stimulation of demand moving forward. The Expert Group also wishes to see the long-term prospects of delivering domestically grown wood to the market enhanced further. The combination of immediate policy change with longer-term policy action will improve the domestic demand and generate jobs both directly within the wood panel industry and indirectly across the building and construction trades. This declining forestry coverage will also see a deterioration in the public benefits afforded by forestry, which take the form of community development, recreational access and carbon and wind mitigation.

Current Policy Approach

There have been two drivers of UK energy policy since 1997 when the Labour party came to power: European and domestic. From the European side, the European Community Climate change targets as set out in the Renewable Energy Directive (REDI) placed greater emphasis upon the need to stimulate renewable technologies across the continent in a bid to move away from reliance upon fossil fuels. Looking forward, the revision of the Renewable Energy Directive (REDII) for the period 2020 to 2030 will commit to increase the EU’s renewable energy production as a total share of production by a further 7%, from 20% to 27%.[2] The role of biomass and particularly woody biomass has increased significantly over the period which has caused supply and demand pressures in regions across the EU. These pressures are starting to be recognised and in the output text from the triologue process to the revision of the EU Renewable Energy Directive (REDII) it was noted that financial incentives can distort the marketplace. From the domestic side, Labour sought to promote a diverse range of energy sources within the UK market from the late 1990s onwards as pledged within their 1997 General Election Manifesto. It stated “we are committed to an energy policy designed to promote cleaner, more efficient energy use and production, including a new

and strong drive to develop renewable energy sources such as solar and wind energy, and combined heat and power.\(^3\) The power of this drive has sustained through to present day Government, with share of UK energy being generated by renewables increasing from 1% in 1997 to 11.3% in 2017.\(^4\) With the policy direction remaining consistent from Labour to Conservative, the Department for BEIS now operates five renewable subsidy mechanisms which include provision for technologies consuming wood as fuel: the Renewable Obligation Certificate (ROC); Feed-In Tariff (FIT); Domestic and Non-Domestic Renewable Heat Incentive (RHI); Contract for Difference (CfD) as illustrated in Table 1. ROC supports large-scale renewable electricity projects, FIT supports micro combined heat and power (CHP), Domestic RHI supports biomass renewable heating systems, Non-Domestic RHI supports solid biomass boilers and CHP systems using biomass.

The Renewable Obligation Certificate (ROC) originated in 2002 as a result of powers incorporated within the Utility Act 2000. When the Utilities Act was first debated the Government positioned that the scheme would be to “ensure the energy sector contributes to [environmental] objectives”.\(^5\) A consultation was undertaken before the launch of the ROC, but it did not directly explore the anticipated wood fuel impact. The limited consultation on the impact of subsidy upon wood fuel consumption also characterised the Renewable Heat Incentive (RHI). Similar to ROC, RHI emerged out of political pressure to meet renewable targets and was first detailed in the Energy Act 2008. While renewable energy subsidies were intended to provide much needed stimulation to the market, conducting a robust wood fuel assessment is long overdue.

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Subsidy Status Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 April 2002</td>
<td>Renewables Obligation (RO) introduced to English, Welsh and Scottish markets.</td>
</tr>
<tr>
<td>1 April 2010</td>
<td>FiT (Feed-in Tariffs) scheme introduced.</td>
</tr>
<tr>
<td>1 April 2014</td>
<td>Domestic and Non-Domestic RHI opened to applications.</td>
</tr>
<tr>
<td>1 October 2014</td>
<td>Contract for Difference (CfD) first round initiated.</td>
</tr>
<tr>
<td>31 March 2017</td>
<td>Renewables Obligation (RO) closed to all new generating capacity applications.</td>
</tr>
<tr>
<td>3 April 2017</td>
<td>Contract for Difference (CfD) second round initiated.</td>
</tr>
<tr>
<td>1 April 2019</td>
<td>FiT (Feed-in Tariffs) scheme closed to new applicants.</td>
</tr>
<tr>
<td>1 April 2029</td>
<td>FiT (Feed-in Tariffs) agreements end and no further tariffs are provided beyond this date.</td>
</tr>
<tr>
<td>31 March 2037</td>
<td>Renewable Obligation (RO) ceases to operate. No further certificates are issued beyond this date.</td>
</tr>
</tbody>
</table>

While the accuracy of data available for wood fuel use under each of these regimes remains questionable, with the exception of ROC and future projections by a private consultancy on Non-Domestic RHI (Baseline Report, p26), there is a collective understanding among the experts that wood fuel use is heightened by subsidy rates. In order to better inform future discussion on this issue, the Expert Group has asked for further clarification on the quantity of wood used under each of the subsidy mechanisms from Ofgem. Alongside this is a request for data relating to both the destination of domestic wood (virgin and waste) delivered to the UK market every year and the forecasted delivery of stock to the market in the future. A prerequisite to articulating the exact workings of the policy solutions (i.e. reforming tariff rates, specifying

\(3\) www.politicsresources.net/area/uk/man/lab97.htm

\(4\) www.carbonbrief.org/six-charts-show-mixed-progress-for-uk-renewables

Policy Options

deployment caps) is the need for stronger baseline data on wood fuel and wood security. Overall, there is unquestionably an unsustainable demand for wood which cannot be met within the UK due to the policy context. The Expert Working Group wish to improve the level of wood security within the UK through contributing to a new policy direction. At an EU level, the trialogue process to the revision of the EU Renewable Energy Directive (Red II) identified the detrimental impact of subsidies upon the marketplace. The Expert Group encourages the UK Government to make similar reflections upon their existing energy policy at the upcoming review.

The Expert Working Group offers immediate and long term policy solutions. Firstly, the immediate solutions are directed for the attention of BEIS. Given that renewable subsidies are currently being considered for renewal beyond 2020, this is a critical point for BEIS to understand the operational efficiency and impact of these mechanisms over the last sixteen years. Secondly, the longer term solution is envisaged to improve the future wood supply prospects towards and beyond ‘peak wood’. The objective of the policy solutions is to limit the demand placed upon current wood supply, which will in turn enhance the sustainability of domestic manufacturing.

Immediate, Demand-Based Options:

The Expert Working Group outlines four immediate policy options for consideration, each of which work to limit wood fuel consumption from increasing beyond current levels. These solutions work from the understanding that wood security is under threat and while this requires longer term strategies in order to resolve, increasing wood fuel demand is exacerbating the immediate challenge facing the wood panel manufacturing industry. The policy choices detailed below should be considered with respect to the future of subsidies and applicants while honouring the commitments made to recipients before review.

The Expert Working Group requests that before any policy choice is exercised by the UK Government, BEIS should undertake a robust and comprehensive assessment of the impact that previous policies and subsidy regimes have had on both the energy economy and wider UK economy to date. The Expert Working Group recognises the important role that biomass subsidy played in establishing a diverse renewables sector in the early 2000s but believes that BEIS should reassess all subsidy mechanisms in order to ensure that they are justified for the current climate.

Upon completion of a review, the Expert Working Group recommends BEIS consider the following policy choices as prioritised:

1. **Remove the subsidies** which cover woody biomass and create a competitive, free market for all wood users competing for a finite resource base. Equalisation of the market would be the most desirable for wood-panel manufacturers and place all wood users on a level playing field.

2. **Adopt a technology neutral approach** ensuring that renewables subsidies are equalised and biomass does not receive a higher rate than is justifiable based upon the available evidence. This will involve reviewing the competitiveness of existing subsidy rates and reducing tariffs along with deployment caps. This technology neutral approach should be energy consumer funded and not paid for by the taxpayer.
3. **Restrict the total quantity of wood supply** that can be consumed as wood fuel by recipients of subsidy payments on an annual basis and/or **restrict the type of wood that biomass plants** in receipt of subsidies can use as fuel. This would involve establishing a hierarchy of wood use, whereby wood types facing competition (small/industrial roundwood, medium sawlogs, sawmill products and clean wood waste) would not be eligible for subsidy. Eligible wood for tariff receipt would cover primarily end of life wood waste. This solution has a dual benefit — carbon and economic. By restricting the wood materials which can be consumed as energy, the period that carbon is locked up for can be extended for decades and the economic value generated enhanced.\(^6\)

**Longer-Term, Supply-Based Options:**

The Expert Working Group outlines one policy option which, directed towards DEFRA and the Scottish and Welsh Governments, is vital as a long term correction given that ‘peak wood’ is coming within the next decade. In the UK, there has been a steady decline in the amount of planting since the 1970s. New planting rates have further fallen from the late 1980s, decreasing by 82% between 1988 and 2010.\(^7\)

![New Planting in UK since 1976](Figure 2: New Planting in the UK since 1976)

*Source: Forestry Statistics 2018*\(^8\)
The Expert Working Group recognises the progress that has been made in planting across the UK since 2010. ‘Over 1.5 million trees were planted in 2017-18 in England as part of the UK Government’s commitment towards planting 11 million by 2022 (Baseline Report p.20-21), while the Scottish Government have recently committed to planting 10,000 hectares of woodland every year with a view to increasing this by a further 50% by 2025. The Scottish Government are also in the process of developing a National Forestry Strategy which will map out a long term vision for Scotland’s forestry management due to come into place in April 2019.

The Expert Group supports DEFRA, the Scottish and Welsh Governments in expanding supply targets further, making them comparable to other developed nations and recommend that they:

4. Work with WPIF in recognising the historically low annual supply and woodland coverage across the UK, and commit to aligning policy across the UK with a focus upon improving long-term wood security through planting. This commitment should be developed into a sustainable forestry strategy detailing key planting targets from the coming twenty years.

Conclusion

This policy paper has provided an account of the policy challenge facing wood panel manufacturers dependent upon UK domestic wood supply, which is detailed further within the Baseline Report. With this challenge outlined, the paper then surveyed the current policy position and identified four policy recommendations for DEFRA and BEIS. The immediate and longer term solutions, pursued in conjunction with each other, will aid wood panel manufacturers in their efforts to co-exist with other wood users in a sustainable way moving forward. If the UK Government wants to see this sector sustain itself and flourish to meet 100% of UK demand, domestic wood security must be improved. This paper has outlined a series of policy options each developed with the objective of shaping the UK Government’s direction at the forthcoming energy policy review.
This report outlines the empirical baseline upon which policy recommendations have been developed by the Expert Working Group for presentation within the main policy report. This paper seeks to provide clarity over wood security and demand in the UK, addressing a number of key questions across two broad categories. Attention is dedicated towards the current evidence-based on domestic wood security. Secondly, it provides an assessment of wood fuel evidence available at present and where omissions in the publicly available data are.

How is wood supply measured and reported?

Supply is measured, and subsequently reported, by the Forestry Commission on an annual basis, with their overarching research methodology and analysis compliant with National Statistics standards and requirements. The Forestry Commission publish UK Wood Production and Trade provisional figures in May every year, followed by a final, robust publication in September. The Forestry Commission (2017)\(^\text{12}\) state that UK generated supply can be accurately measured and monitored by assessing green tonnes of UK grown round wood, and for the purposes of the APPG, these deliveries can be approximately traced to the wood panel industry manufacturers. All statistics related to the delivery of UK round wood and other sources to wood panel manufacturers are provided by the Wood Panel Industries Federation (WPIF) for the purposes of the Commission’s annual reports. Beyond UK supply, import statistics are provided to the Forestry Commission by HM Revenue and Customs who collaborate trade declarations and Intrastat reporting for intra-EU trade and present a succinct version.

Wood Security

What is the quantified state of the wood supply basket within the UK? How has this supply changed over the last five years? What is the direct/indirect delivery flow to wood-based panel manufacturers on an annual basis?

The security of domestic wood supply (and in particular softwood) is essential to manufacturers within the wood panel industry and a baseline understanding of this supply basket needs to be agreed upon. The wood panel industry is reliant on UK softwood delivery. According to the Forestry Commission (2018), the delivery of UK grown roundwood provides a useful benchmark for assessing direct supply (and reciprocated demand) on an annual basis and tracking changes across time\(^\text{13}\). Change in roundwood (softwood) being delivered directly is outlined in Table 2.


Nevertheless, the Forestry Commission (2018)’s direct delivery figures provide only a surface understanding of the supply to wood-based panel manufacturers, as this industry relies upon other supply sources beyond UK–grown roundwood being supplied directly as detailed in Table 3:

### Table 2: Direct UK-Grown Roundwood (Softwood) Delivery Basket (Thousand Green Tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>Thousand Green Tonnes of Roundwood (Softwood) to Wood Processors</th>
<th>% Change from Previous Year</th>
<th>Thousand Green Tonnes of Roundwood (Softwood) Directly to Wood Panel Manufacturers</th>
<th>% Change from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>10,478</td>
<td>(+0.5%) from 2016</td>
<td>1,059</td>
<td>(-15.1%) from 2016</td>
</tr>
<tr>
<td>2016</td>
<td>10,419</td>
<td>(+1.5%) from 2015</td>
<td>1,248</td>
<td>(-6.4%) from 2015</td>
</tr>
<tr>
<td>2015</td>
<td>10,265</td>
<td>(-5.8%) from 2014</td>
<td>1,334</td>
<td>(+3.9%) from 2014</td>
</tr>
<tr>
<td>2014</td>
<td>10,903</td>
<td>(+3.3%) from 2013</td>
<td>1,283</td>
<td>(+1.6%) from 2013</td>
</tr>
<tr>
<td>2013</td>
<td>10,547</td>
<td>(+7.2%) from 2012</td>
<td>1,263</td>
<td>(+0.5%) from 2012</td>
</tr>
</tbody>
</table>

### Table 3: Direct and Indirect Supply to Wood Panel Manufacturers

<table>
<thead>
<tr>
<th>Year</th>
<th>UK Grown Green Tonnes of Roundwood (Direct to Wood Panel Manufacturers)</th>
<th>Green Tonnes of Sawmill Products (Indirect to Wood Panel Manufacturers)</th>
<th>Tonnes of Recycled Wood Fibre</th>
<th>Green Tonnes of Imports (Hard and Soft Wood)</th>
<th>Wood based panel Production Mm³³</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1.0 million</td>
<td>1.7 million</td>
<td>0.9 million</td>
<td>22,000</td>
<td>3.17</td>
</tr>
<tr>
<td>2016</td>
<td>1.2 million</td>
<td>1.7 million</td>
<td>0.8 million</td>
<td>39,000</td>
<td>3.03</td>
</tr>
<tr>
<td>2015</td>
<td>1.3 million</td>
<td>1.7 million</td>
<td>0.9 million</td>
<td>17,000</td>
<td>3.08</td>
</tr>
<tr>
<td>2014</td>
<td>1.3 million</td>
<td>1.8 million</td>
<td>0.8 million</td>
<td>0</td>
<td>3.06</td>
</tr>
<tr>
<td>2013</td>
<td>1.3 million</td>
<td>1.7 million</td>
<td>0.9 million</td>
<td>0</td>
<td>3.03</td>
</tr>
</tbody>
</table>

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Given the flow of UK–grown round wood delivery indirectly to wood–panel based manufacturers, the supply of UK–grown green tonnes of roundwood, both directly to manufacturers and indirectly via sawmills, can be approximated and tracked over a five year period.

In 2017, of the 11 million green tonnes of roundwood (softwood and hardwood) being delivered to the UK market, approximately 25% was consumed by wood panel manufacturers. This is 1% less than in 2016, whereby approximately 26% of UK–grown green tonnes of roundwood (softwood and hardwood) were consumed by the panel industry; 3% less than in 2015 where approximately 28% of UK–grown green tonnes of roundwood (softwood and hardwood) were consumed by panel manufacturers; 1% less than in 2014 where approximately 26% of UK–grown green tonnes of roundwood (softwood and hardwood) were consumed by manufacturers; 2% less than in 2013 where approximately 27% of UK–grown green tonnes of roundwood (softwood and hardwood) were consumed by the wood panel industry. Overall, despite slight fluctuations on an annual basis between 2013 and 2017, the state of the domestic supply basket has remained fairly consistent (between 10.8 and 11.4 million) as has the supply availability to wood panel manufacturers.

Another input material that is important for the wood panel industry is reclaimed waste wood. Although the data available on waste wood is less than robust, there is an assumed supply of 5 million tonnes per annum. The slides presented at the Autumn 2017 meeting of the Wood Recyclers Association, which forecast the supply and demand for waste wood reaching an imbalance by 2019, are illustrated below.

### Impact on Waste Wood Market- Possible Scenarios in Medium Term / Post 2018

<table>
<thead>
<tr>
<th>Sector</th>
<th>Worst (000's Tonnes)</th>
<th>Best (000's Tonnes)</th>
<th>Likely (000's Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Board</td>
<td>839</td>
<td>839</td>
<td>839</td>
</tr>
<tr>
<td>Large Scale Biomass</td>
<td>3,771 (90% load)</td>
<td>3,050 (70% load)</td>
<td>3,428 (80% load)</td>
</tr>
<tr>
<td>Higher Value Products(1)</td>
<td>593</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Export</td>
<td>638</td>
<td>+250</td>
<td>+100</td>
</tr>
<tr>
<td>Small Scale / Power Only Biomass</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Alternative Fuels</td>
<td>0</td>
<td>+400 (c:10%)</td>
<td>+200 (c: 5%)</td>
</tr>
<tr>
<td>Total Demand</td>
<td>6,083</td>
<td>3,839</td>
<td>4,717</td>
</tr>
<tr>
<td>Long / Short (2)</td>
<td>-1,083</td>
<td>+1,161</td>
<td>+283 (BALANCED)</td>
</tr>
</tbody>
</table>
With the supply basket at present, from domestic and imports, clarified, forecasting the future availability of virgin softwood supply is crucial. The softwood forecast is decreasing as a consequence of the impending imbalance between supply and demand. As illustrated in Figure 3, the UK will reach 'peak wood' availability in the early 2030s — forecasted to reach 18.4 million m$^3$ overbark standing by 2031$^{(24)}$. It will subsequently face a sustained drop in the potential wood availability from 17.6 million m$^3$ overbark standing from 2032–2036 to 15.8 million m$^3$ overbark standing from 2037-2041$^{(25)}$. This decline is particularly marked for coniferous roundwood, which supplies much of the wood processing sector in the UK.

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$^{(24)}$ www.parliament.uk/business/publications/written-questions-answers-statements/written-questions-answers/?page=16max=20&questiontype=AllQuestions&house=commons%2clords&uin=176547

$^{(25)}$ www.parliament.uk/business/publications/written-questions-answers-statements/written-questions-answers/?page=16max=20&questiontype=AllQuestions&house=commons%2clords&uin=176547
As the supply/demand headroom restricts, this will have implications for business confidence and in turn continued investment within this industry. Already wood-panel manufacturers are being pressed to import raw materials predominantly from the Baltic States although approaches to take material have been received from Portugal and Brazil. Importing materials is particularly problematic for the wood panel industry given that it adds approximately 40% to the overall cost due to shipping and 50% of the raw material being wet and unusable. This reduces the UK manufactured product competitiveness and boosts opportunity for overseas markets to import the final product. With manufacturers having to rely upon import materials to prevent operations coming to a halt, the industry is concerned about the long-term implications of a growing import on competitiveness and manufacturing sustainability.

With the depletion of wood supply a prominent concern, one solution is to bolster forestry planting across the UK. This is appropriate given that the UK’s forestry coverage is lower the EU average (12% of land). The time–scales involved on maturing trees are major considerations for the UK wood processing sector. Given that existing forest areas are becoming notably less productive on a hectarage basis because first generation replanting has to be more diverse, the industry requires a clear, coordinated UK strategy. Such a strategy will provide long term certainty for UK forest industries, in terms of planting levels and to achieve the maximum public benefits for wood fibre use in Britain over the long term. These benefits are extensive, and include: community development, recreational access and carbon and wind mitigation.

Wood Fuel

What percentage of the wood basket is consumed by wood fuel? How do we measure and report usage?

Of the annual UK grown green tonnes of roundwood delivered to the market, the percentage claimed for domestic and non-domestic fuel purposes is illustrated in Table 4. The Forestry Commission (2017) receive data at requested intervals on the quantity of UK–grown supply being used for woodfuel purposes from annual sawmill surveys of round fencing manufacturers and woodfuel suppliers, and the estimates from the Expert Group on Timber and Trade\(^{(27)}\). The data does not provide a specific breakdown on the quantity of wood being used as fuel at each stage of the wood use hierarchy.

### Table 4: UK Roundwood Delivered to Wood Fuel \(^{(28)}\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Softwood deliveries (000 green t)</th>
<th>Hardwood Deliveries (000 green t)</th>
<th>Total (000 green t)</th>
<th>% change from previous year</th>
<th>% of all roundwood deliveries (total deliveries 000 green t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1600</td>
<td>600</td>
<td>2200</td>
<td>+12.8%</td>
<td>19.61% (11,216)</td>
</tr>
<tr>
<td>2016</td>
<td>1550</td>
<td>400</td>
<td>1950</td>
<td>-1.5%</td>
<td>17.70% (11,016)</td>
</tr>
<tr>
<td>2015</td>
<td>1600</td>
<td>400</td>
<td>2000</td>
<td>+5.2%</td>
<td>18.46% (10,831)</td>
</tr>
<tr>
<td>2014</td>
<td>1500</td>
<td>400</td>
<td>1900</td>
<td>+15.1%</td>
<td>16.60% (11,440)</td>
</tr>
</tbody>
</table>


\(^{(29)}\) [www.parliament.uk/business/publications/written-questions-answers-statements/written-questions-answers/?page=1&max=20&questiontype=AllQuestions&house=commons%2clords&uin=176544](http://www.parliament.uk/business/publications/written-questions-answers-statements/written-questions-answers/?page=1&max=20&questiontype=AllQuestions&house=commons%2clords&uin=176544)
The source of woodfuel has been recorded by the Forestry Commission as illustrated in Table 5, with UK roundwood the principal input for woodfuel.[29]

### Table 5: UK Sourced Inputs for Wood Fuel, 2013–2017 (Thousand Green Tonnes)

<table>
<thead>
<tr>
<th>Year/ Source</th>
<th>UK Roundwood</th>
<th>Sawmill Products</th>
<th>Recycled Wood</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,650</td>
<td>302</td>
<td>830</td>
<td>2,782</td>
</tr>
<tr>
<td>2014</td>
<td>1,900</td>
<td>439</td>
<td>1,340</td>
<td>3,679</td>
</tr>
<tr>
<td>2015</td>
<td>2,000</td>
<td>534</td>
<td>1,450</td>
<td>3,984</td>
</tr>
<tr>
<td>2016</td>
<td>1,950</td>
<td>624</td>
<td>1,550</td>
<td>4,124</td>
</tr>
<tr>
<td>2017</td>
<td>2,200</td>
<td>705</td>
<td>1,660</td>
<td>4,565</td>
</tr>
</tbody>
</table>

Moving beyond the transfer of supply for wood fuel purposes, the Department for Business, Energy and Industrial Strategy (BEIS) publish a comprehensive source on wood fuel usage in the annual Digest of United Kingdom Energy Statistics. BEIS reported the quantity of wood as a fuel consumption in the generation of heat over the period from 2012–2017 as illustrated in Table 6 (p.186).[30]

### Table 6: Quantity of Wood Fuel Used in the Generation of Renewable Heat (Thousand Tonnes of Oil Equivalent)

<table>
<thead>
<tr>
<th>Bioenergy Source/ Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>1,518.5</td>
<td>1,787.7</td>
<td>1,698.1</td>
<td>1,908.5</td>
<td>2,054.0</td>
<td>2,039.4</td>
</tr>
<tr>
<td>Waste Wood</td>
<td>309.1</td>
<td>315.4</td>
<td>319.1</td>
<td>319.0</td>
<td>319.0</td>
<td>319.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,827.6</td>
<td>2,103.1</td>
<td>2,017.2</td>
<td>2,227.5</td>
<td>2,373.0</td>
<td>2,358.5</td>
</tr>
</tbody>
</table>


BEIS reported that for the 2017 year, domestic wood combustion was responsible for 40% of heat generation, a source unmatched by any other renewable used for heat purposes (p.168)\(^{(31)}\). This percentage was confirmed by Ofgem who reported that wood combustion accounted for 58% of renewable heating fuel (p.83)\(^{(32)}\). The Digest of United Kingdom Energy Statistics confirms earlier findings by BEIS, who conducted an extensive survey into UK domestic fuel use and in particular domestic wood combustion and ultimately concluded that government officials have underestimated wood use by three times\(^{(33)}\). They did, however, highlight the complications associated with identifying domestic wood fuel use due to the fact that many sources are informal (p.176). With regards to non–domestic fuel use, from the introduction of the RHI scheme in 2011 until 2016, 9,365 GWh of heat has been produced by biomass, of which is predominantly underpinned by wood. This equates to 1.5 million oven dried tonnes of wood pellets\(^{(34)}\).

Beyond BEIS’ own reporting, Ofgem reported that the total consumption of biomass by dedicated biomass facilities, excluding imports, was 5.73 million tonnes over the 2016-2017 period, which was an increase of 0.37 million tonnes since the 2015-2016 period. Within the 2016-2017 period, 37 dedicated biomass plants existed with an installed capacity of 2.5 MW and processed 6.9% more biomass than the previous year. Virgin wood was the predominant source of these biomass plants (2.28 million tonnes) with recycled wood the second largest (1.63 million tonnes) (p.5)\(^{(35)}\). The total demand by RO supported facilities is estimated to be: (1) virgin wood (2.3 million tonnes in 2016/2017, and projected to increase to 2.77 million tonnes); (2) recycled wood (1.6 million tonnes in 2016/2017) (p.7)\(^{(36)}\). The total demand by RHI supported facilities is estimated to be: (1) virgin wood (1 million tonnes in 2016/2017, and projected to increase to 1.22 million tonnes); (2) recycled wood (0.06 million tonnes in 2016/2017). Despite these indications provided by the UK Dedicated Biomass Statistics 2017, the data is restricted to non-domestic plants. Furthermore, Ofgem did confirm that biomass direct combustion stations in receipt of RO, under 1 MW, burnt 41,149 tonnes of solid biomass. The majority of this was composed of woody-biomass, with waste wood contributing 74.1% towards this total, wood products contributing 12.9% and wood residues contributing 10.7% (p.30–31)\(^{(37)}\). Operations in receipt of RO, greater than 1MW but less than 25MW, consumed 1.8 million tonnes of woody biomass. Of this, 34.4% was waste wood, 18.8% wood residue and 15.8% wood product (p.31).

While no specific biomass breakdown is provided by the Committee on Climate Change in their report to Parliament, they do highlight that while low-carbon heat deployment is still below target (at 4.5% of the total heat demand), 82% of this is provided by bioenergy sources including finite domestic wood. The Committee on Climate Change emphasised that a reliance upon biomass is not a sustainable long-term policy solution, particularly as competition for finite resource is escalating market prices. Given that in

\[^{(35)}\] www.mrw.co.uk/download?ac=3120180
\[^{(36)}\] www.ofgem.gov.uk/system/files/docs/2018/04/ro_annual_report_sb_-_final_v0.2.pdf
2016 there were only 18,000 heat pump units deployed and in order to be on the correct path for 2030 the annual sales must exceed 30,000 units, there may be an opportunity to restate the Committee on Climate Change’s recommendation that heat pump deployment be bolstered, which may in turn reduce reliance upon biomass. The Committee also identified that burning biomass is contributing to diminishing air quality. As Therese Coffey MP, Parliamentary Under Secretary of State responded in reply to lodged parliamentary questions, domestic wood and coal burning contribute the most harmful particulate matter emissions to our environment\[38\]. This point was further developed within DEFRA’s Clean Air Strategy, with the Department highlighting that they will consult on removing biomass technologies from under RHI within urban areas on the gas grid due to pollution concerns (p.5)\[39\]. This demonstrates that in addition to consuming wood stock, biomass’ impact upon the environment is notable.

**Concluding Remarks**

This paper has provided the empirical baseline upon which the Expert Working Group were able to better understand the wood security situation within the UK market and make policy recommendations as outlined in the main policy report. After exploring a range of possible sources, the use of the Forestry Commission’s delivery statistics, that is the delivery of UK–grown green tonnes of roundwood, combined with UK imports statistics, provides the most comprehensive basis upon which supply can be discussed. Most crucially, it relies upon a range of industry based reportings and complies with the National Statistics’ standards. The paper also gives an overview of the proportion of the overall UK–grown green tonnes of roundwood supply which is delivered for wood fuel use, and while it has increased up to 25% in 2016, it has subsequently fallen back towards 2013 levels at 18%. Beyond the Forestry Commission’s report, the Department for BEIS DIGEST reports and survey provide baseline indications of wood supply consumption for fuel purposes in the UK. However, the data available at present does not identify the amount of wood that is consumed by technologies under each of the subsidy regimes over a five year period and this requires clarification from Ofgem and BEIS.