LANDSCAPE OF THE SMALL-MEDIUM SAWMILLING SECTOR IN SCOTLAND 2022

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Nomenclature & Abbreviations

Term/Abbr.	Description
ASHS	Association of Scottish Hardwood Sawmillers
CNC	Computer Numerical Control (machining)
CPD	Continuous Professional Development
EN	Euro-Norm (standard)
FC	Forestry Commission
FCS	Forestry Commission Scotland
FLS	Forestry & Land Scotland
FPG	Forest Policy Group
FR	Forest Research
FTE	Full-time Equivalent (Employment/staffing)
HIE	Highlands & Islands Enterprise
RHI	Renewable Heat Incentive
SE	Scottish Enterprise
SF	Scottish Forestry
SIRT	Strategic Integrated Research in Timber (Napier University Project)
SLFB	Small Local Forest Business
SMSE	Small and Medium Sawmilling Enterprise
SoSE	South of Scotland Enterprise
SRDP	Scottish Rural Development Programme
SRUC	Scotland's Rural College
UHI	University of the Highlands & Islands (which includes Scottish School of Forestry)

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Executive Summary

The aim of this report is to better understand the landscape of small and medium sized sawmilling enterprises (SMSEs) in Scotland, to review the background statistics, to develop an improved estimate of the size and impact of the sector, and to hear directly from SMSEs on the context, challenges and opportunities within which they are operating.

The key findings are laid out as follows, with further detail in the main report:

An under-reported sector

- The number of SMSEs uncovered in this report for Scotland is greater than the total number of equivalent size that Forest Research had sight of for the whole of the UK.
- The work done here indicates a sector size of at least 118 SMSEs, directly employing 420 FTE staff, and processing 91,500m^3 of timber annually
- With statistical information predominantly coming from larger mills, the under-reporting of small and medium sawmill enterprises (SMSEs) at present leads to a lack of understanding about their needs and also their potential. Previous support programmes are seen as inflexible, arguably resulting from lack of sufficient knowledge and understanding of need.
- Statistical information on historical number of mills by size, is only available at a complete UK level, but this shows a significant decrease in number of mills, particularly small ones.
- Under-reporting of what looks like a significant contribution of SMSEs to the vast majority of hardwood processing in the sector.

A diverse and resilient sector

- **Flexibility**: Well balanced between static and mobile operations. Just 15% of SMSEs are purely sawmilling, the majority also operate other business activities to suit individual circumstances; meet local market demand; have the agility to respond to arising opportunities. 50% operating on a seasonal pattern reflects integration into other rural economic activity.
- **Market**: 77% of sales are directly to customer, just 9% selling on via timber merchants. SMSEs operating sustainable business models with minimal advertising/marketing costs (word of mouth and social media).
- **Diversification**: 33% of SMSEs are involved in upstream forestry activities, and 50% in downstream utilisation of timber for applications such as joinery/decking/fencing/sheds
- **Sustainability**: 60% source within 50-mile radius, where local supply can meet local demand there is a sustainability benefit in carbon transport miles, however just under half (44%) have had to increase their catchment to maintain the sufficient sourcing of quality logs.
- **Resilience**: Although there has been decline in the total numbers, remaining SMSEs appear to have been operating sustainable business models with 70% reporting no engagement with public sector for support. SMSEs are often combining sawmilling operations with other complementary economic activity, either directly in forestry, or other rural needs.
- **More than a job**: Ahead of purely commercial motivation, the reported main drivers are job satisfaction and environmental and community sustainability. A passion for wood, and championing its appropriate use was a repeated theme.

A sector at the heart of rural communities

- **Rural location:** As expected, sawmills are predominantly located in rural/semi-rural areas, providing vital rural jobs, and serving integrated local supply chains.
- **Ecologically responsibly:** Low transport miles from forest to customer, supports diverse use of range of timber species

A sector with untapped potential

- **Resourcing**: Upskilling of existing workforce is a must to future-proof the SMSE sector. Survey highlighted a lack of formal apprenticeships and training.
- **Workforce**: Demographic composition is fairly equally split by age which is quite remarkable given the distinct lack of apprenticeship-type entry routes for young people. Younger demographic within SMSEs need to see there is a future in SMSE otherwise they will move on.
- **Demand**: Decking and fencing is the most common end product, followed by construction and furniture. Demand for each of these end products is increasing, anecdotally since lockdown – with demand increases SMSEs need to be resourced to meet that demand.
- **Forward-looking**: 50% of SMSEs are interested in expanding, the main barriers to expansion are:
  - capital (case for targeted public sector support/initiatives)
  - log sourcing (case for sectoral operational partnerships, see below)
  - staffing (case for educational partnerships, see below)

A sector that collaborates, and is open to further partnership

- **Operational**: Vast majority of SMSEs see other sawmillers as potential collaborators rather than competitors, and sourcing quality logs is one of their top concerns. Collaboration needed to help SMSEs source quality logs whether from public, private or community sources. Lack of access to Forestry & Land Scotland (FLS) resource was a regularly cited concern – worth re-examining **models of cooperative purchasing** or further enabling **smaller scale sales** from public forest resource. As Scotland's combined forest resource is currently approaching peak production of logs, this challenge will become increasingly significant.
- **Symbiotic**: While there is certainly some overlap in the sourcing of quality logs, SMSEs are able to process timber which is outwith the range of species (particularly hardwood), sizes or quantities that are of interest to larger mills due to the inherent adaptability and flexibility of SMSEs
- **Educational**, indications of a need to develop/extend partnerships with organisations like SRUC, UHI etc for training – both for new entrants/apprenticeships but also Continuous Professional Development (CPD) for existing workforce.

The small-medium sawmilling sector has a significant role to play in rural communities, with impact and benefits which stretch beyond the immediate economic impact of local jobs. There is space, and indeed a need, for both small and large timber processors to optimally make best use of the available timber resource. Well-being benefits from job satisfaction, combined with economic recirculation in the local economy, and the support of species-diverse forestry makes the SMSE a vital part of thriving rural communities. The challenge to government and the public sector is how to ensure targeted support makes a real difference, to sustain and grow the sector, while overcoming challenges around funding, regulatory compliance, access to timber and access to new markets/developing new products.

Introduction

Context

Forestry is a key part of the Scottish rural economy, and provides vital employment, particularly in rural and remote areas. The larger sawmilling sector is relatively visible, and therefore is reasonably well understood in terms of key metrics such as turnover, volume processed, timber species, geographical areas of operation and employment levels.

By contrast, the smaller sawmilling sector is less well defined and understood. Scottish Forestry (SF) wishes to get a better understanding of the landscape of the small sawmilling sector in Scotland. There is a particular interest in this smaller end of the spectrum, as smaller processors may be more likely to take diverse species, and to have a proportionally greater integration/impact on community woodlands. To this end Scottish Forestry has commissioned 4c Engineering to undertake a landscaping study into the small-to-medium sawmilling sector in Scotland.

4c Engineering have set out a four-fold approach to collecting and summarising the available information for the small-to-medium sawmilling sector, comprising:

1. A brief overview of prior relevant work
2. A summary of available relevant statistics
3. The compilation of a register of active small-medium sawmilling entities, to present the total number and distribution of those undertaking sawmilling across Scotland
4. The development and execution of a survey to uncover and report back on the condition of the sector in Scotland.

Definitions

For the purposes of this report, the small-to-medium sawmilling sector is considered to include any entity, other than major sawmills, which is undertaking the following:

- Converting felled logs into sawn useable timber for any purpose other than biomass
- Undertaking this commercially, ie for sale to others, or to incorporate into products that are then sold, or used as part of service provision in a commercial or community context

This may include

- individuals, partnerships, charities, community groups of privately owned companies
- entities that are sawmilling in addition to, or on the side of, other business activities

The bottom end of the scale could therefore be a crofter or smallholder who has a small chainsaw mill and provides cladding or fencing material for sale to the local community. The top end of “medium” in this report is considered to be everything other than the sawmills classified as “Major Sawmill” in the 2014 Forestry Commission Scotland map of Timber Processing Sites [1]
Enterprises fitting into this definition are referred to as SMSEs (small and medium sawmilling enterprises) throughout this report.

1 Overview of prior relevant work

1.1.1 Introduction

There have been several useful pieces of prior work that have considered aspects of the small sawmilling sector in Scotland. Table 1 summarises a few selected examples with clickable hyperlinks where available. A document-by-document review of the key points is available in Appendix B.

Table 1 - Summary of Prior Relevant Documents

Document Title	Author/Source	Year Issued	No of Pages
Getting Value from Local Woods - Summary Conference Report [2]	Forest Policy Group (FPG)	2016	4
Value from supporting local forestry businesses – a scoping study [3]	Anna Lawrence, Rick Worrell, Guy Watt, Willie McGhee Forest Policy Group	2017	52
Estimating the Size of the Economic Contribution of Small Scale Woodland Related Businesses in Scotland [4]	Guy Watt & Willie McGhee Forest Policy Group	2018	24
Small local forestry businesses in Scotland [5]	Rick Worrell, Anna Lawrence, Guy Watt, Simon Pepper and Willie McGhee, Scottish Forestry	2019	7
Survey of British Sawmills on “Alternative” Species – Report to the SIRT Management Board [6]	Steven Adams, Dan Ridley Ellis Napier University	2017	9
Scottish Forestry after Brexit [7]	Douglas C MacMillan Scottish Forestry	2021	3

1.1.2 Key points arising from prior relevant work

- The small sawmilling sector has a major role to play in rural communities, with impact and benefits which stretch beyond the immediate economic impact of local jobs
- There is space, and indeed a need, for both small and large timber processors to optimally make best use of the available timber resource
- Concerns noted on over-reliance on single species (Sitka Spruce) and on the lack of local direct economic benefit when industrial scale processing occurs remotely from the forest resource
- Well-being benefits from job satisfaction, combined with economic recirculation in the local economy makes sawmilling a vital part of thriving rural communities
- Targeted public sector support (in finance and/or advice) makes a real difference in overcoming challenges around funding, regulatory compliance, access to timber and access to new markets/developing new products
- A 2018 estimate reckons that there are ~6,000 people working in ~ 2,000 Small Local Forest Businesses (SLFBs) in Scotland
- Prior work has uncovered a lack of a comprehensive understanding of the size and shape of the small/local forest business in general and the smaller end of the sawmilling sector specifically.
- The membership organisation ASHS (Association of Scottish Hardwood Sawmillers) does a good job of representing its members and is proactive about engaging with them and representing their views which gives a good insight, This is naturally only for those who have chosen to join up as members (ie sawmillers primarily focused on hardwoods).
- Overall recommendation to conduct further research to better understand the sector.

2 Summary Review of Relevant Statistics

2.1.1 Forest Research Statistics

The Forest Research Statistics 2021 [8] provides a very useful baseline set of information for the sawmilling sector, in both the UK and Scottish contexts, a brief summary is summarised in the balance of this section.

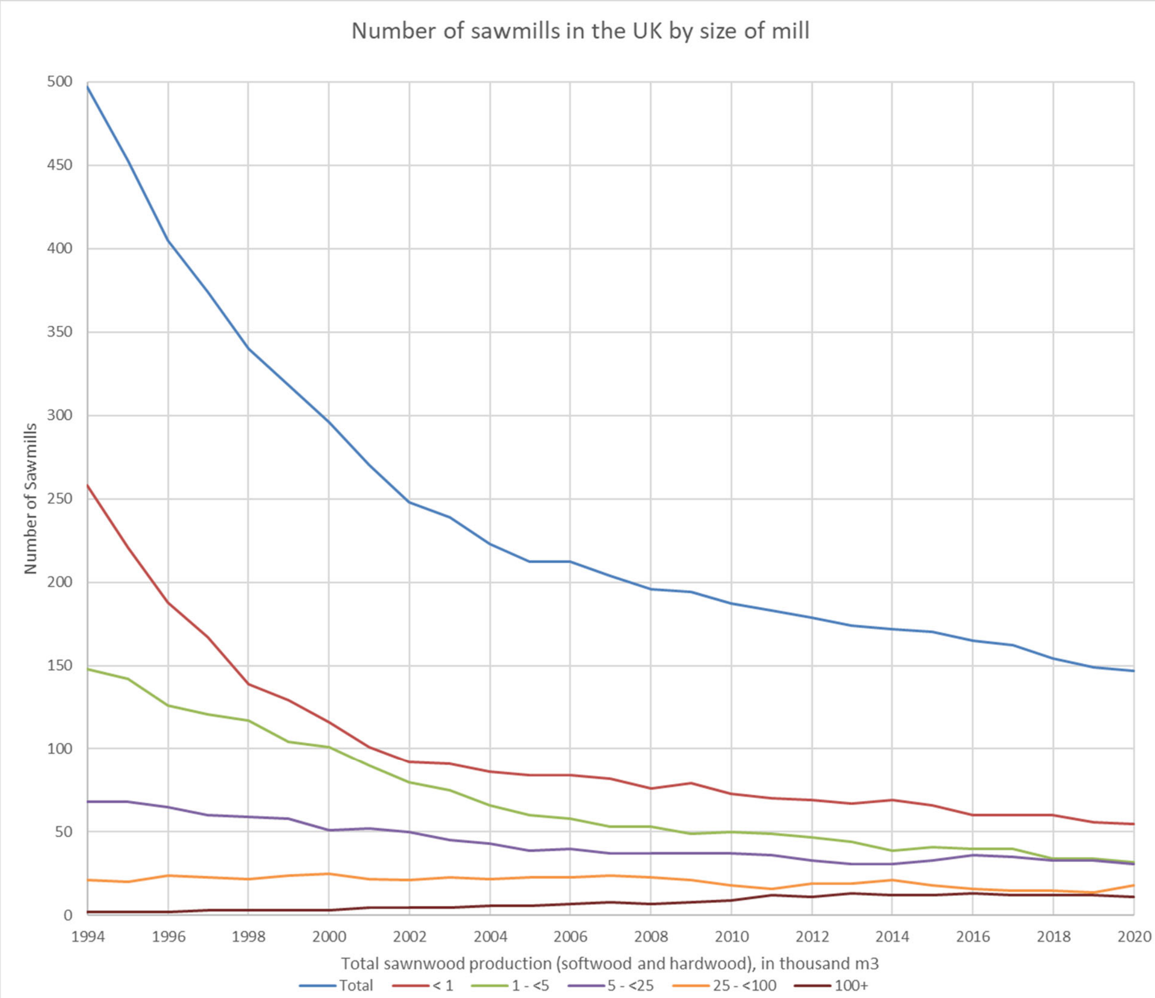


Figure 1 - UK sawmills by size

From this it is shown that over the past 26 years:

- The total number of mills has reduced from 497 to 147
- The majority of that reduction coming from the small (under 5,000m^3) end of the sector.
- The number of very large mills (over 100,000m^3) has actually increased from 2 to 11 (this will be due to growth/consolidation from the level(s) below, and the industry's response to the significant increase in resource becoming available)

The UK number of small-medium sawmills in 2020 was 87 – composed of 55 at less than 1,000m^3 and a further 32 between 1,000m^3 and 5,000m^3. This is reduction from 406 in 1994, a 78% drop.

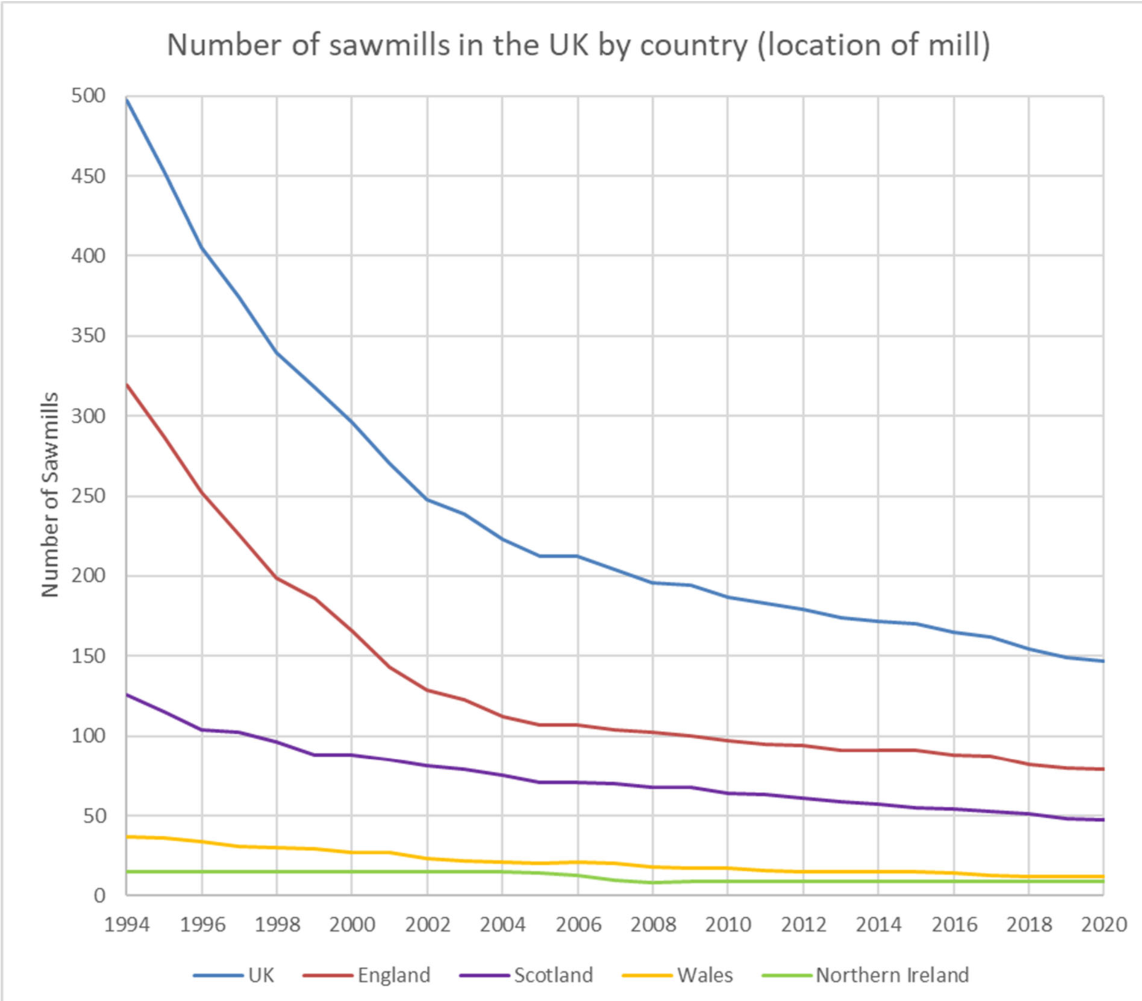


Figure 2 - UK sawmills by country

Over the same time period, the number of mills in Scotland (that Forest Research had sight of) had reduced from 126 in 1994 to 47 in 2020, a reduction by 63%.

Although there has been an overall decline in the number of mills that FR had sight of, in 1994 Scottish mills comprised 25% of the UK total, in 2020 the proportion was 32%.

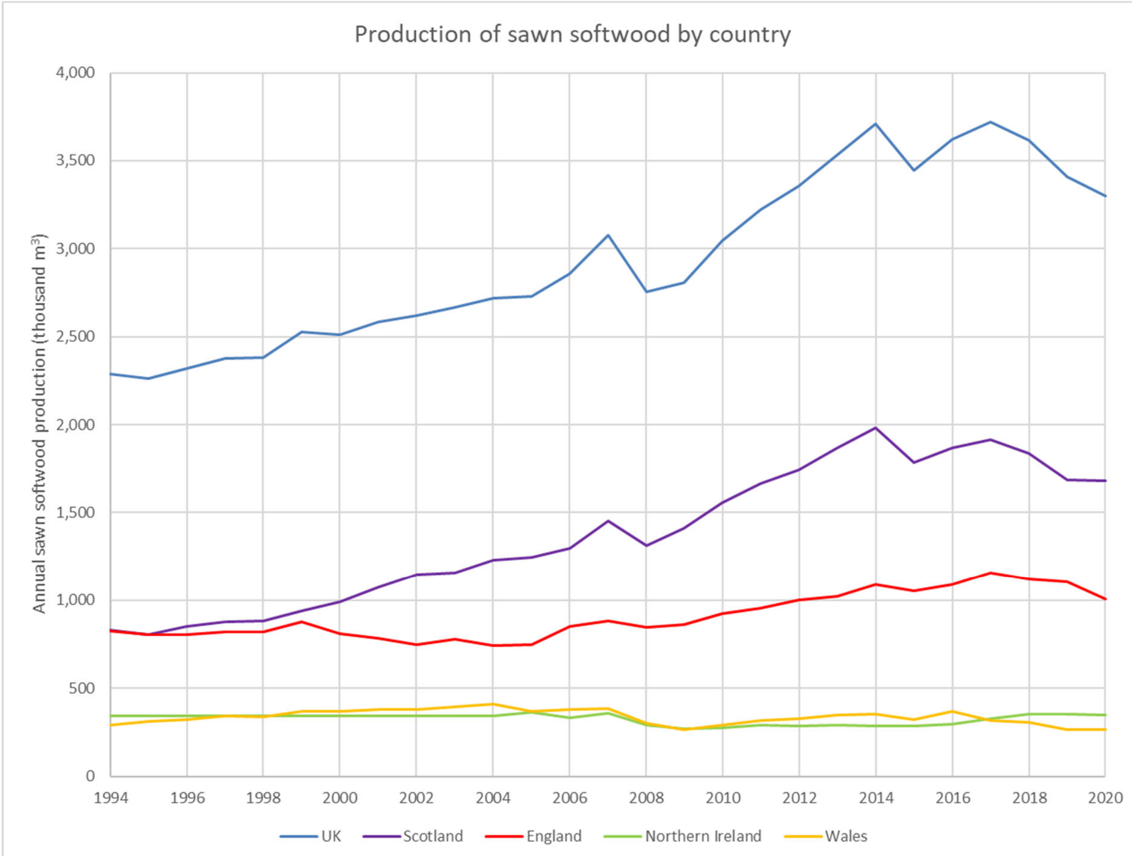


Figure 3 - UK sawn softwood production by country

The overall sawn softwood production figure show that while the number of mills has been reducing, the total production has not followed the same trend, so from this we can see how the processing capacity has responded to the increase in available timber as UK forests matured.

This increase is most marked in the Scottish component of the softwood production.

This is more directly demonstrated in the following chart, showing the decline of small to medium sawmilling total production, and the substantial increase in volume production.

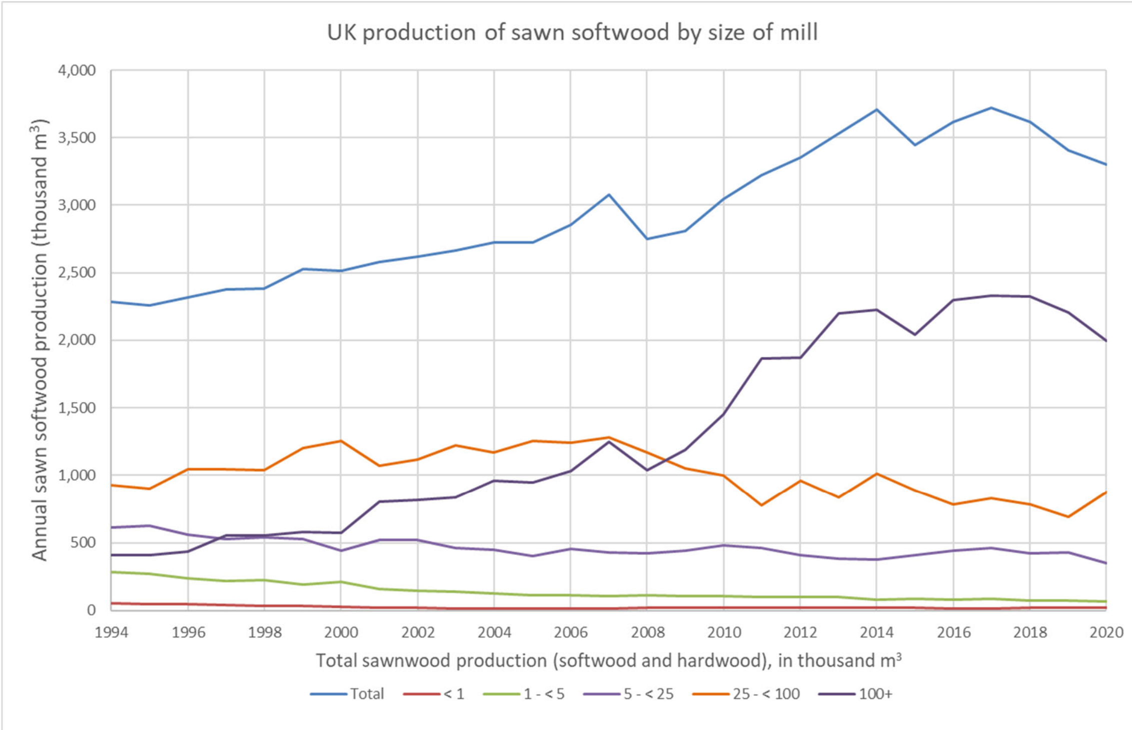


Figure 4 - UK sawn softwood production by size of mill

In 1994, small to medium sawmills (up to 5,000m^3) were responsible for 15% of annual production at a UK level, by 2020 this had dropped to 3%.

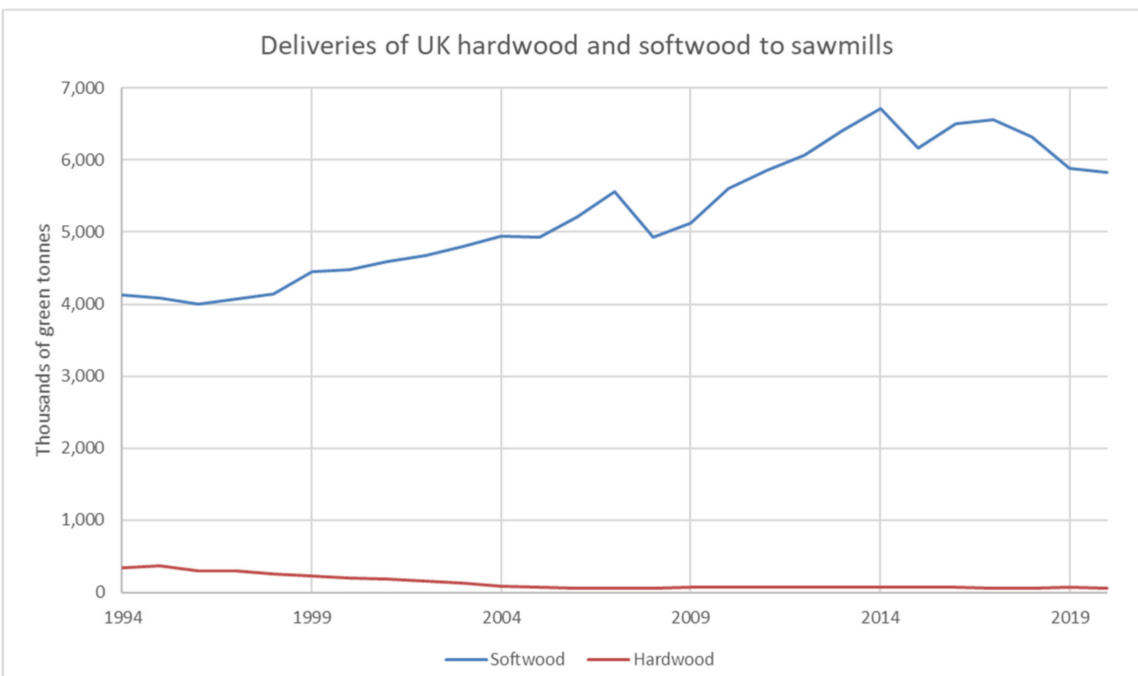


Figure 5 - UK hardwood and softwood deliveries to sawmills

Concurrent with the above trend, we can also see that hardwood deliveries to sawmills have dropped to almost negligible levels (a drop of 82% from 350 to ~60kT pa), this is likely related to the drop in the number of small sawmills which would have been more likely to process this material. Also worth considering the increase in hardwood timber going to fuelwood/firewood – Forest Research estimates that the hardwood deliveries for woodfuel have increased from 150kT pa in 2004 to 700kT pa in 2020.

The 2020 figures for total softwood production are as follows:

Table 2 - Average sawmill production by country

	England	Wales	Scotland	N. Ireland	UK
Total sawn softwood production (1,000 m^3)	1,007	263	1,683	349	3,302
Total number of mills	79	12	47	9	147
Average production (1,000 m^3) per sawmill	13	22	36	39	22

This is also reflected in the "Larger Mills" table from Forest Research.

Table 3 - Larger mills production by country

Large mills (producing at least 25,000m^3)	England	Wales	*Scotland*	N. Ireland	UK
Number of mills	10	3	14	2	29
Large mills Sawnwood production (thousand m^3)	827	218	1,497	327	2,869
Percentage of sawn softwood going through large mills	82%	83%	89%	94%	87%

From this we can see that according to the 2021 Forest Research statistics, Scotland and Northern Ireland both have a higher average production per sawmill, which indicates that they have a higher proportion of large volume sawmills, and lower number of small-medium mills.
The UK average is 87% of softwood going through the large (25,000m^3+) mills, Scotland (89%) along with Northern Ireland (94%) are above this average.

As a final piece of information from this very useful resource, we can get a snapshot of the direct employment contribution of **larger sawmills** in Scotland for 2020, note that this does not include contracted staff.

Table 4 - Scottish Larger Mills - employment

Employment type	Scotland
Line & production workers	1,086
Managerial & administrative staff	168
Haulage of logs to the mill	17
Total direct employment	**1,271**

The Forest Research data also provides the following insights into UK-wide employment and business figures:

- The Annual Business Survey (May 2021) reported average employment in 2019 of 18,000 in forestry, with 7,000 of these in sawmilling.
- There was estimated to be a total of 7,100 full time equivalent staff employed by primary wood processors in the UK in 2020 a 3% decrease from the total for 2019.
- There were ~200 establishments in the primary wood processing industries in the UK using UK-grown roundwood in 2020.

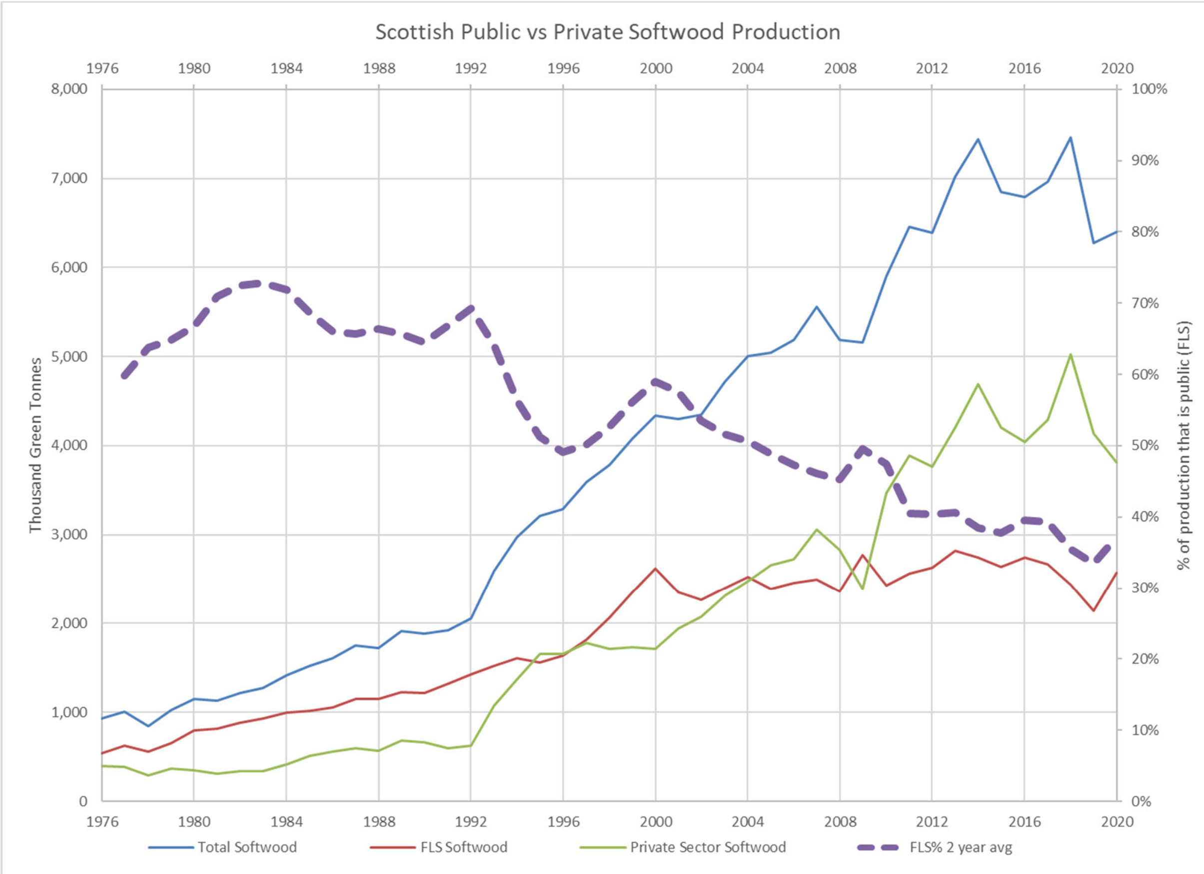


Figure 6 - Scottish softwood - public vs private

In terms of resource availability and composition, the overall softwood supply in Scotland has risen from ~1 million tonnes per year in 1976 to 6.5-7.5m tonnes in the decade from 2010 to 2020. During this period, the composition of this supply (heavy purple dashed line above) has flipped from being approximately 60% public forest (now FLS) to being 60% private estate supply.

2.1.2 UK government statistics

The Office for National Statistics (ONS) provides an annual overview of UK business; activity, size and location, broken down by legal status, industry, region, employment and turnover size bands. [9]
This provides an overview of the businesses, which are registered for VAT and/or PAYE, with the primary self-designated Standard Industrial Classification (SIC 2007) Category 1610 "Sawmilling and planing of wood".

Table 5 - Number of UK VAT and/or PAYE enterprises classified as SIC 1610 (Sawmilling), by employee sizeband

0-4	5-9	10-19	20-49	50-99	100-249	250+	Total
325	75	40	45	15	10	5	**515**

Table 6 - Number of UK VAT and/or PAYE enterprises classified as SIC 1610 (Sawmilling), by turnover sizeband (£000's)

0-49	50-99	100-249	250-499	500-999	1000-1999	2000-4999	5000-9999	10000-49999	50000+	Total
75	80	115	70	45	35	40	20	25	5	510

Table 7 - Number of UK VAT and/or PAYE enterprises classified as SIC 1610 (Sawmilling), by country

England	Wales	Scotland	Northern Ireland	United Kingdom
370	40	80	25	515

According to a review of previous annual releases of this ONS data by Forest Research in [8] the total number of SIC in this category fell from 605 in 2011 to 510 in 2020. Note that the discrepancy between 510 and 515 is believed to be due to rounding errors in the ONS data collection, which is presented in increments of 5.

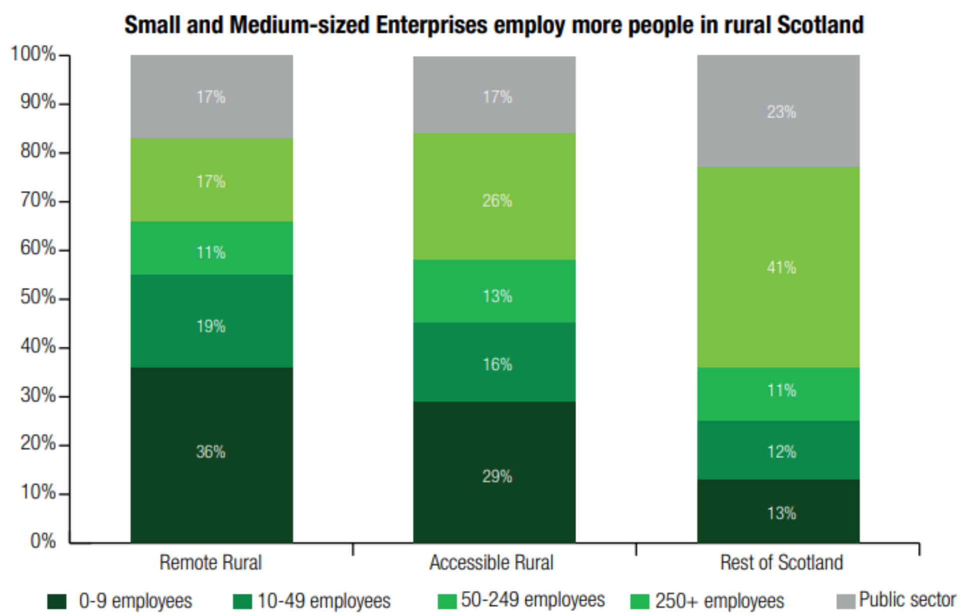
2.1.3 Scottish Government Statistics – Rural Scotland Key Facts 2021

As highlighted in the earlier section on prior work, the granularity of statistics that are available from Scottish Government sources is fairly low, however there is still potentially useful information to inform the overall landscape. From Rural Scotland Key Facts 2021 [10] we can see that that

> *"Micro businesses (0-9 employees) account for 36% of employment in remote rural areas and 29% in accessible rural areas, while they only account for 13% of employment in the rest of Scotland."*

Overall, Small and Medium-sized Enterprises (0-249 employees), which include Micro businesses, account for two thirds of employment in remote rural areas and 58% in accessible rural areas. The proportion falls to 36% in the rest of Scotland. The significance and prevalence of smaller companies in rural areas is worth noting for this report, due to the rural nature of the forest resource and sawmilling activity.

Figure 13 Employment by size of firm and 3-fold Urban Rural category, 2020



Source: Inter Departmental Business Register, as at March 2020
(Using Scottish Government Urban Rural Classification 2016)

Figure 7 - Employment by size and urban/rural category, extracted from "Rural Scotland Key Facts 2021"

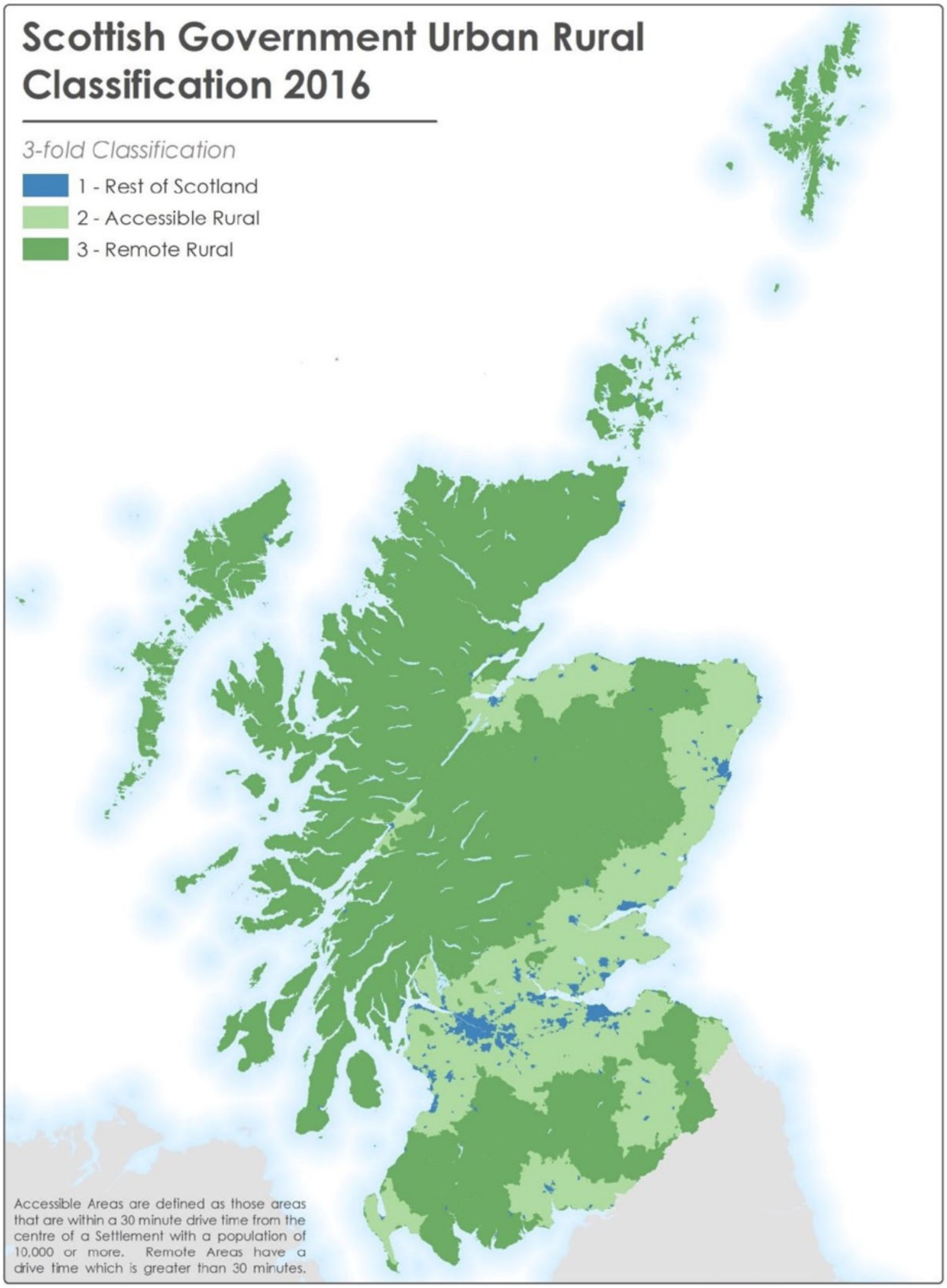


Figure 8 - Map of 3-fold Urban Rural Areas in Scotland

3 Sawmills Register

3.1 Methodology

Multiple sources were used to compile the register, a summary of these as follows:

- The ASHS membership directory as found at [12]
- The 2016 data set from Forest Research as found at [13]
- The smallwoodlandscotland list of known and potential sawmillers as found at [14]
- Keyword searches for “sawmills,” “sawmilling services”, “milled timber”, “mobile sawmilling” on the following platforms:
  - Facebook
  - Facebook marketplace
  - Yell
  - Kompass
  - Dentons
  - Google Maps
- Searching the Scottish Assessors Association for property type “Sawmill” from their portal at [15]
- Adding survey respondents (see next section) who were not already on the register

A spreadsheet was compiled, with all possible sawmills included, contact was then attempted with each of these, using various channels (mainly email, phone calls, Facebook Messenger contact) to confirm that they were still existing businesses, and were still processing timber as per the agreed definition of a sawmill above.

If contact was not achieved, then a review of the online presence, Companies House status and satellite imagery of the location was undertaken to assess if the business was still operating as a sawmill.

3.2 Results

A copy of the register can be seen attached in Appendix A to this document, in terms of headline figures, the register results are as follows:

Table 8 - Summary of Register Figures

Category	Count
Large Sawmilling Sites	24
Small to Medium Static Sawmills	76
Mobile Sawmillers, including Chainsaw Mills	42
Sub-Total Small-Medium (Mobile, Static & Chainsaw)	**118**
Total Active Sawmilling Entities	**142**
Sawmills or Sawmilling Operations that are now closed or no longer sawmilling	78

Some comments to these figures:

- The Large Sawmilling Sites are the processing locations, so some companies have multiple sites – there are 14 companies that are represented in these 24 sites.
- The register is not exhaustive, it has been compiled with open-source information, and includes organisations who conduct sawmilling as an ancillary activity to their core business.
- It is inevitable that there will more businesses, particularly those who are doing sawmilling at a small scale or as a semi-commercial/informal economy add-on to harvesting/tree surgery, who are not represented here.

- The categorisation of static vs mobile/chainsaw is not as clearly defined as the figures here would indicate – some mills have the potential to be used as mobile mills, but are run as static operations, where the timber is brought to the mill, some are used both at the owner's site and also travel closer to forest resource as mobile mills, so the split is quite arbitrary.
- The mills which have been marked as closed or no longer sawmilling include the following:
    - Sawmills which are still operational, but are now solely resellers of garden sheds, fencing/decking materials, garden supplies, run as a café etc, but are no longer primary processors of raw timber into sawnwood.
    - Sawmills which have closed completely.
- As can be seen on the maps, some sawmills are located directly adjacent to each other, this can be because:
    - The are genuinely two separate businesses that are co-located due to economies of scale/complementary offerings
    - They are different names/brands/sections of the one business
    - They represent historical change on the site, so prior business may have closed, have been taken over, or had a name change.
- The total number of small-to-medium sawmilling entities discovered is 118.

Taking into account the above comments, and the nature of the information collection exercise, it is best to view these numbers as representative indications, rather than absolute figures.

3.3 Location & Mapping

3.3.1 Distribution

In terms of the locations of the active sawmilling organisations (the first three categories in the list above) the distribution of these by Local Authority and Enterprise Agency responsibility can be seen below:

Table 9 - Active sawmilling entities by local authority

Local Authority	Count	Percentage
Highland	40	28%
Argyll and Bute	10	7%
Moray	7	5%
Na h-Eileanan Siar	1	1%
Orkney Islands	1	1%
Highlands & Islands Enterprise Sub-Total	**59**	**42%**
Dumfries and Galloway	19	13%
Scottish Borders	8	6%
South of Scotland Enterprise Sub-Total	**27**	**19%**
Aberdeenshire	8	6%
Perth and Kinross	8	6%
Stirling	7	5%
Fife	6	4%
East Lothian	5	4%
Midlothian	4	3%
Angus	3	2%
East Ayrshire	3	2%
South Lanarkshire	3	2%
Falkirk	2	1%
South Ayrshire	2	1%
West Dunbartonshire	2	1%
Clackmannanshire	1	1%
Glasgow City	1	1%
West Lothian	1	1%
Scottish Enterprise Sub-Total	56	39%
Grand Total	**142**	**100%**

Table 10 - HIE, SoSE & Rest of Scotland comparison

	Population	Land Area	Sawmilling entities
Highlands & Islands Enterprise	9%	48%	41%
South of Scotland Enterprise	5%	14%	20%
Rest of Scotland	86%	37%	39%

From this we can see that HIE & SoSE have around 60% of the active sawmilling operations located in their regions, although they only account for 14% of Scotland's population, so would naturally be expected, rural areas with forestry, which have lower population concentrations are where these entities are predominantly based.

3.3.2 Existing Forestry Commission Mapping

The Forestry Commission Open Data set from 2016 had 81 locations in Scotland in the categories of Sawmill, Fencing & Main Sawmill, link:
https://data-forestry.opendata.arcgis.com/datasets/e3950cc2d09f47a4ad60871797c83ea9_0/

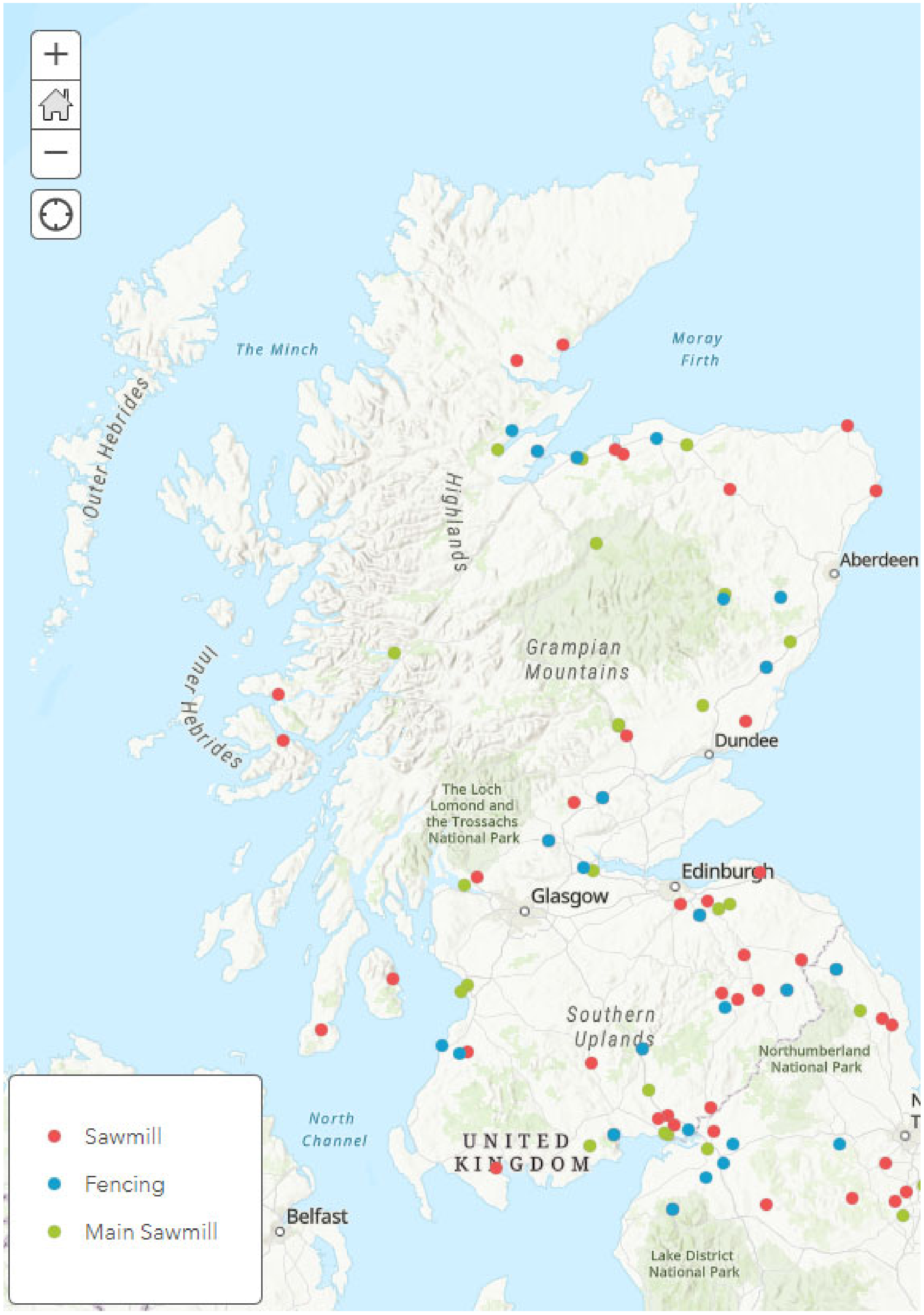


Figure 9 - Map of Timber Processing Sites from FC Open Data

Forestry Scotland also hosts an online map of "Timber Processing Sites" from 2016

Figure 10 - Timber Processing Sites (Forestry Commission Scotland 2016)

3.3.3 New Mapping

A new map was created using the sawmill register information collected in this study with the postcodes for the different organisations identified in the register, using the Google "MyMaps" application. A link to this map can be found here:
https://www.google.com/maps/d/edit?mid=1l1GqdXT87Sll49oBOzOOiMEIYKtZ8KHt&usp=sharing

The following versions of the map have been included screenshots below:

1. An overview map – this is quite "busy" but does give the complete picture for the entities on the register.
2. A map filtered to show the closed/no longer milling entities
3. A map which solely shows the small-to-medium sawmilling entities, the main subject of interest in this study.

A separate map showing the Large Static Mills has not been included, as this is simply the locations from 2014 Forestry Commission Scotland "Timber Processing Sites" map as per [11]

The light green shading on the map shows recorded areas of forestry.

Mobile/Chainsaw Mill
Small-Medium Static Mill
Large Static Mill
Closed/No longer milling

Figure 11 - Key to Mapping

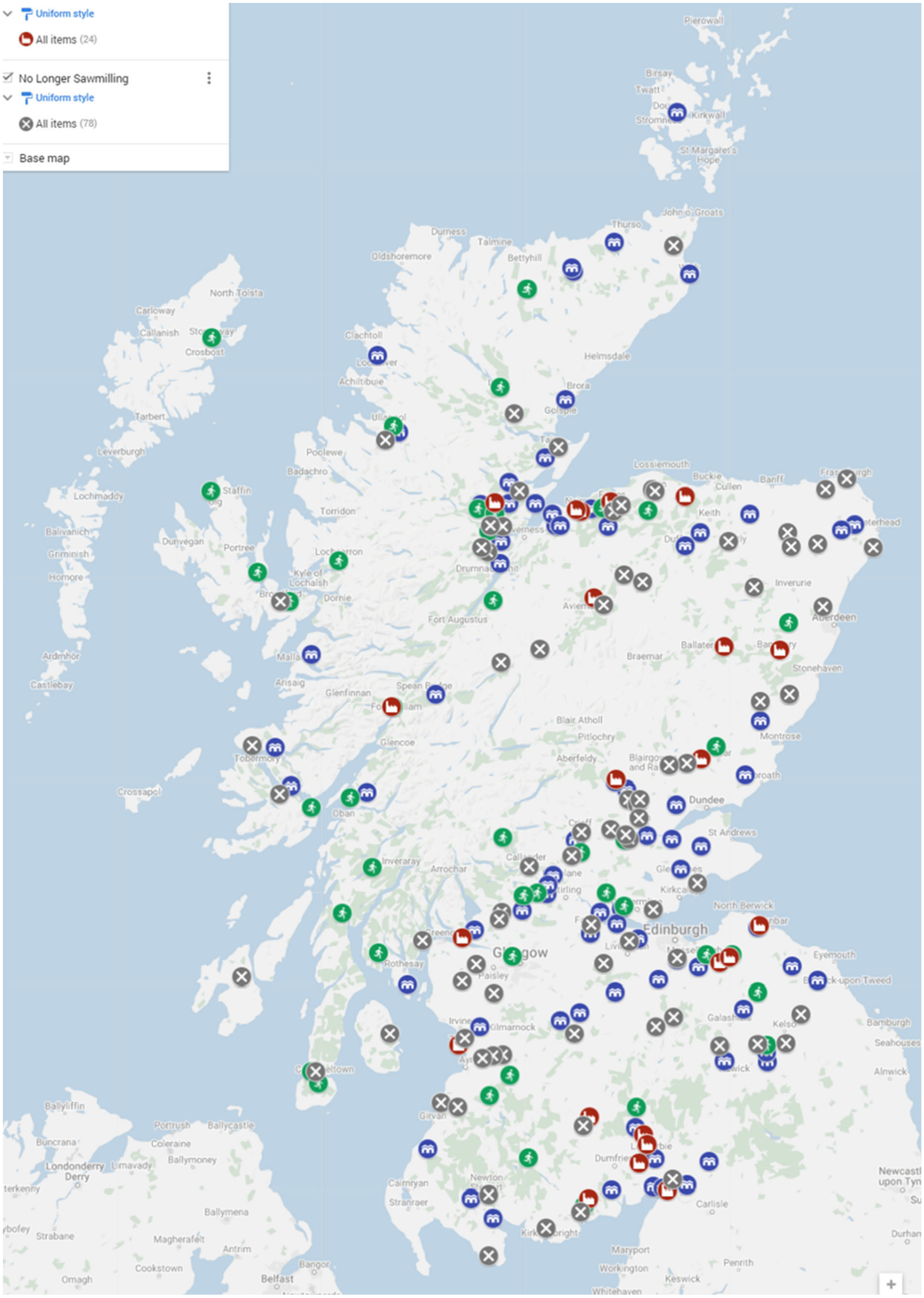


Figure 12 - Overview Map from Sawmilling Register

Note that Shetland is not including on this map, or any of the following, as the study has not found any sawmillers operating in Shetland.

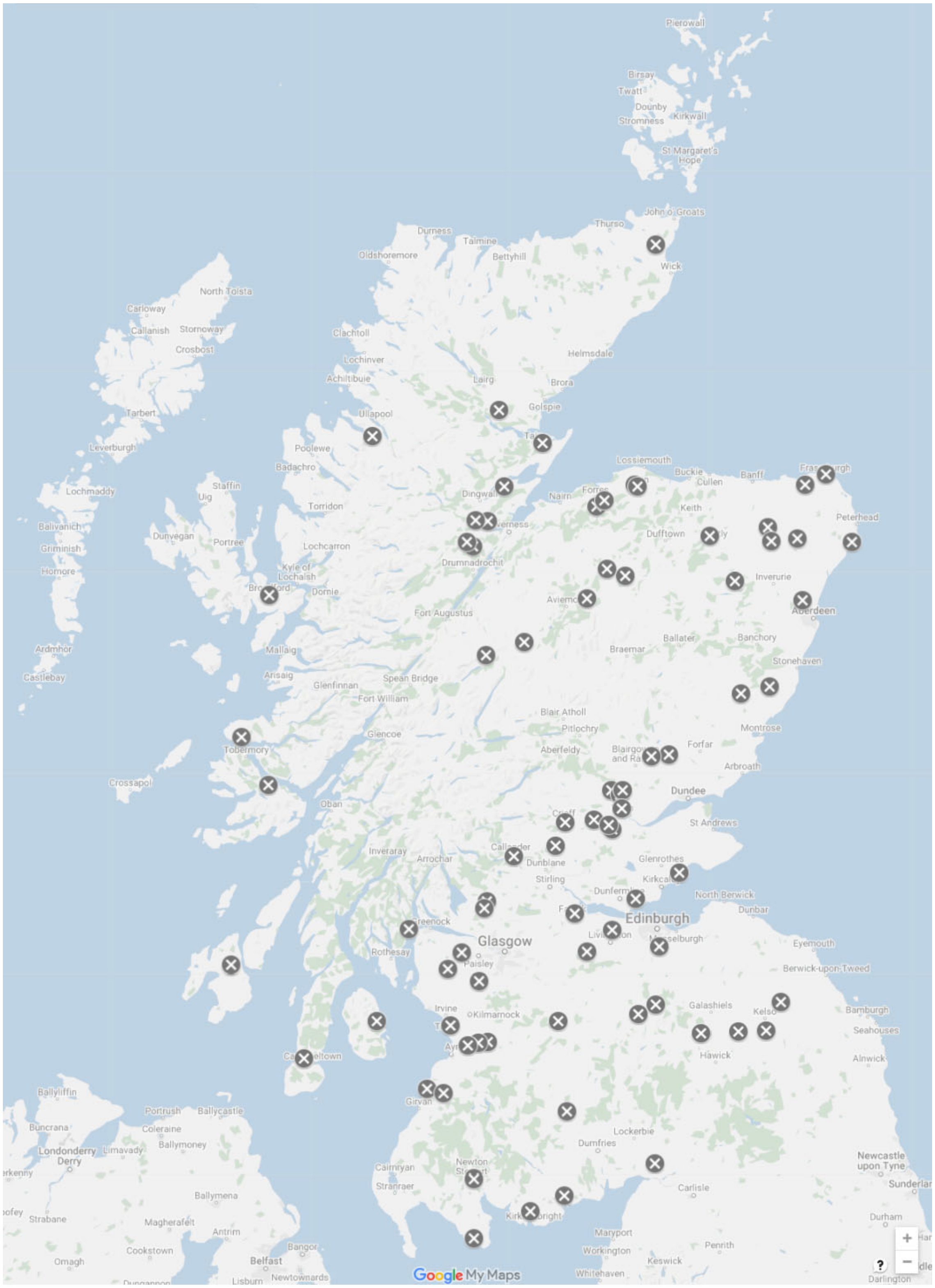


Figure 13 - Closed or no longer milling

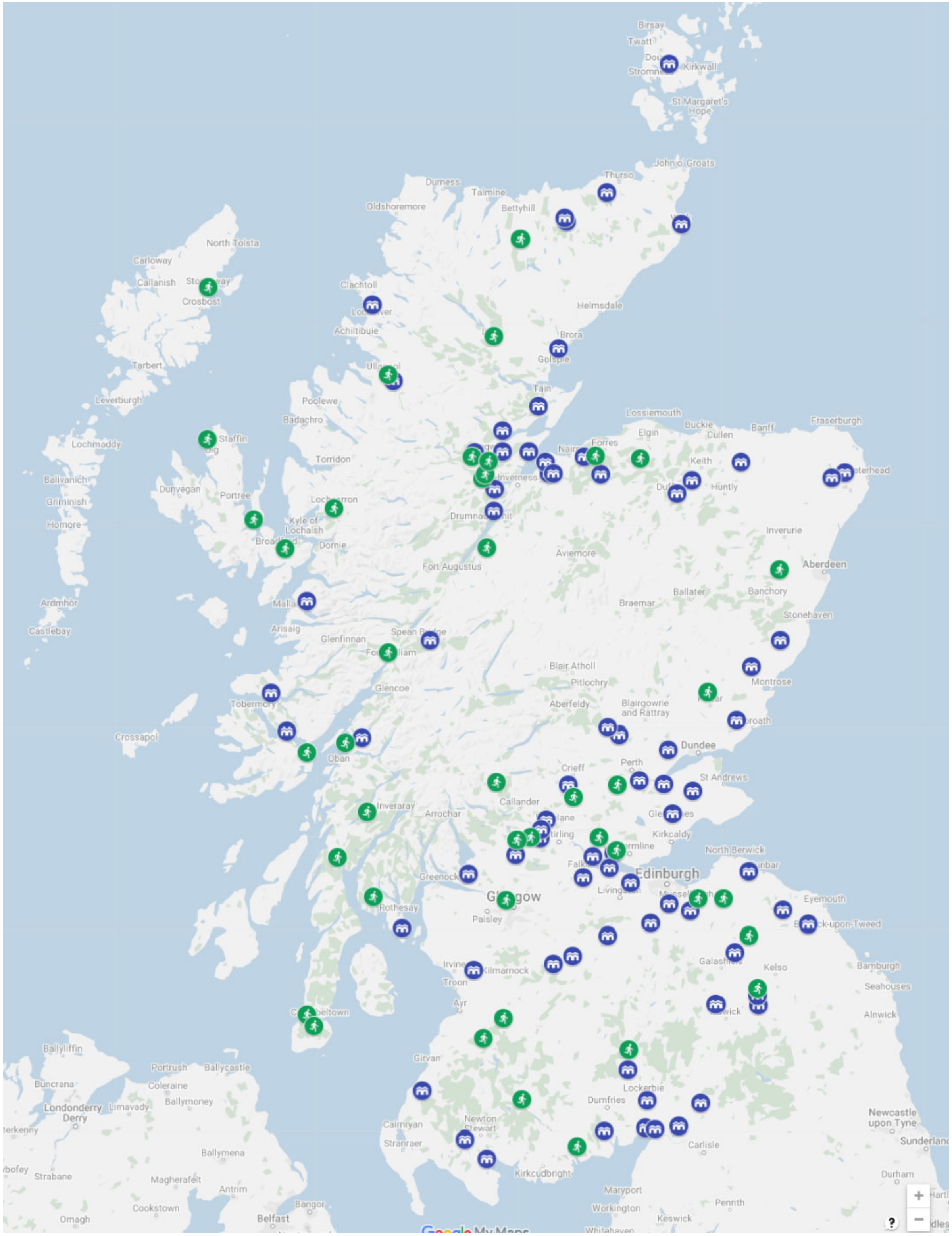


Figure 14 - Small to Medium Sawmilling Entities

4 Survey

4.1 Methodology

As a starting point, at a UK level, the number of companies contacted at the response rates for the Forest Research work referenced in the earlier chapter can be seen below (from this link: https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/forestry-statistics-2019/sources/timber/sawmill-survey/

Sawmill Survey Response Rates (all questionnaires), 2009-2018

Year	Forms issued	Responses received	Response rate[1]	Weighted response rate[2]
2009	219	122	56%	87%
2010	211	93	44%	85%
2011	200	84	42%	82%
2012	196	86	44%	84%
2013	191	83	43%	80%
2014	178	82	46%	84%
2015	179	84	47%	79%
2016	173	74	43%	83%
2017	170	73	43%	86%
2018	155	64	41%	79%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates are an estimate of the proportion of total UK sawnwood production that is accounted for by respondents.

Figure 15 - Survey Response (UK wide for Forest Research)

It was also known from the prior work done by SIRT in [12] that responsiveness from sawmillers could be varied, so a strategic approach was required to maximise engagement.
The survey was designed to uncover as much useful information as possible, with minimum free-text answering. The questions were drafted, reviewed and then agreed between Scottish Forestry and 4c Engineering over the course of remote correspondence and a virtual meeting.

As the work to compile the register above was being undertaken, when companies were identified as being active in the sector and meeting the definition of small-to-medium sawmiller as set out earlier, they were then invited to complete the survey.
For those who did not want to do it online, it was carried out over phone by the team at 4c Engineering. Over several weeks, those who had agreed to carry out the survey were gently reminded/encouraged via various channels, so that responses were not predicated on a single provision of the survey link.
In addition to the directly contacted entities, the survey link was shared via social media by Scottish Forestry, and this was then reshared by other interested organisations and individuals, which resulted in several submissions from entities that had not been directly contacted by the team.
The link to the survey was also shared in relevant forums.

4.2 Business Overview

4.2.1 Top level

In total, from the 118 entities that were identified as small-to-medium sawmillers, 79 good quality survey responses were received, which is a 67% response rate.

The total number of responses was higher, but this included:

- Duplicate responses from the same entity
- Responses from entities that were not actually undertaking sawmilling
- Responses from entities outwith Scotland
- Responses that did not provide name/location information

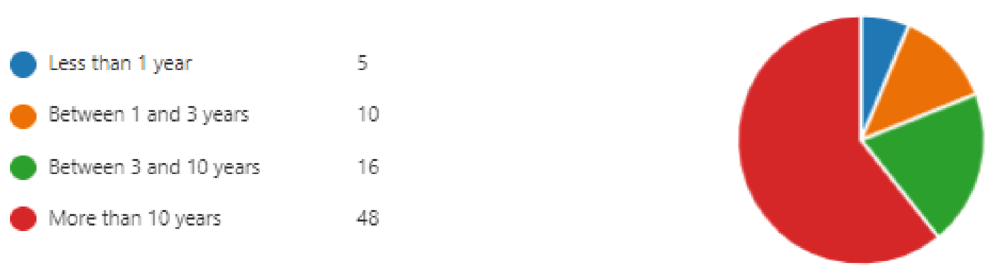
Results were received from 23rd January 2022 through to 8th March 2022.

4.2.2 Location

This point has been covered in the mapping above.

4.2.3 Age of Business

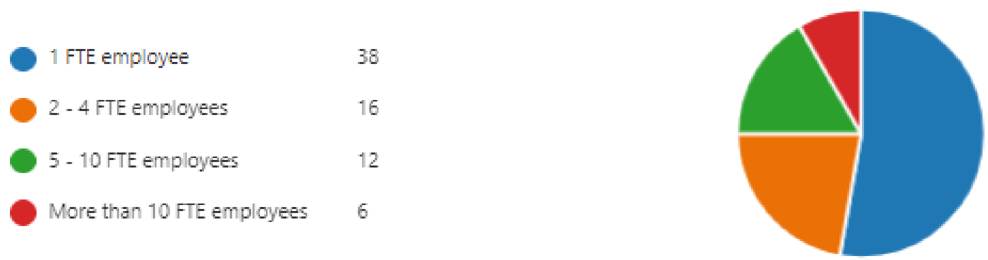
Q. How many years has the organisation/business been established?



From this, we can see that a **significant majority (60%) of the entities are well established** (ie over 10 years old), but there are new entrants coming into the sector- 19% have been set up in the last three years.

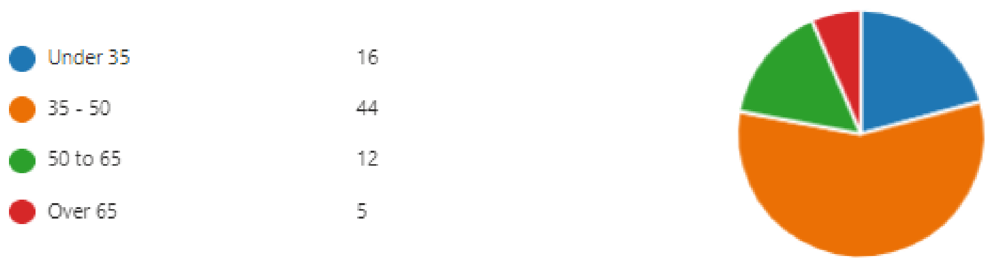
4.2.4 Employment, Employees & Training

Q. How many full-time equivalent (FTE) staff are employed in your organisation?



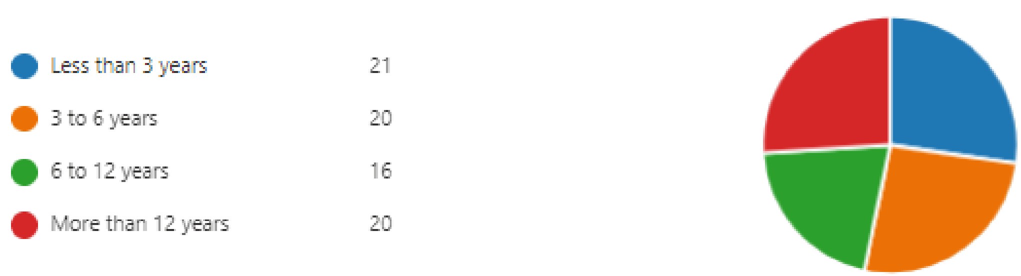
About half of the respondents were one-man-band operations, or possibly a couple of people working part-time together to make up an FTE role. On average, the employment of each business is around 3.5 FTE employees, which is roughly comparable with the results in [4]

Q. What is the average age of your staff? (approximation is fine)



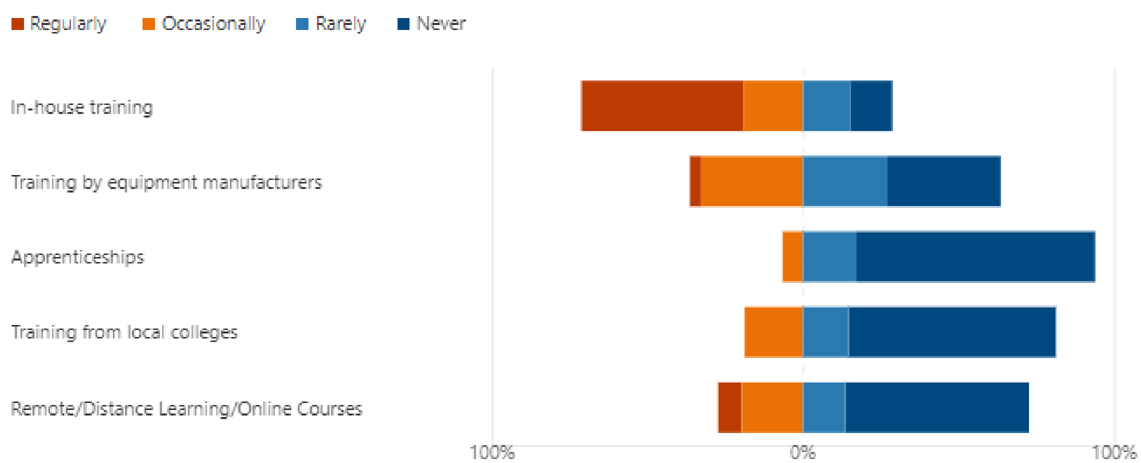
Average age of staff was mainly in the 35-50 age range.

Q. What is the average sawmilling experience of your staff? (total experience in years divided by number of staff)



Experience was fairly evenly split between the banded options provided.

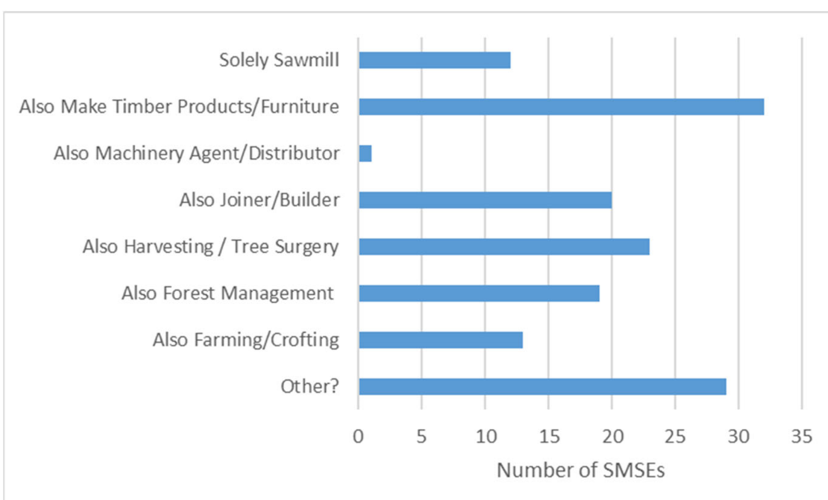
Q. What type of staff training does your business undertake?



By far the majority of the training that was provided was in-house, with some equipment manufacturer and remote training also being part of the mix. Apprenticeships was last with only ~6% saying that they occasionally undertook the training of apprentices – this matched in with qualitative feedback which was received in regard to the challenges of arranging suitable apprenticeship training with a direct sawmilling focus.

4.2.5 Sawmilling alongside other business

Q. Is sawmilling the sole function of the business, or only part?



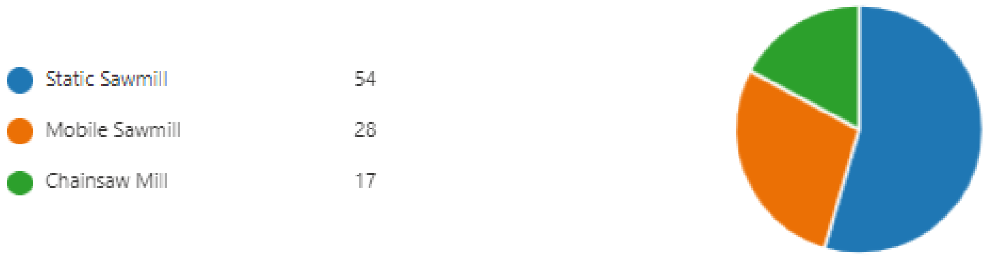
From this we can see that **only a small proportion (~15%) of the entities surveyed are purely sawmilling**, most are also doing other tree/timber related activities, either upstream of the sawmill (forest management, harvesting/tree surgery), or downstream (joiner/builder, making timber products). Note that respondents were able to select more than one option.

For those who selected "other" the responses included 13 responses referencing firewood/biomass production, and others such as fencing contractors, amenity/community provision, haulage, engineering, retail shop, food production and path building.

From this we can see that sawmilling is **more often than not an integrated part of a small rural business**, rather than a pure logs-to-sawnwood operation.

4.3 Sawmilling Operations

4.3.1 Type of Sawmill Operation



As mentioned earlier in the Sawmill Register section, some of the SMSEs which have selected "Static Sawmill" for this question, may in fact be mobile sawmills which are predominantly/solely used in single location. In the survey, SMSEs could select more than one option for this question.

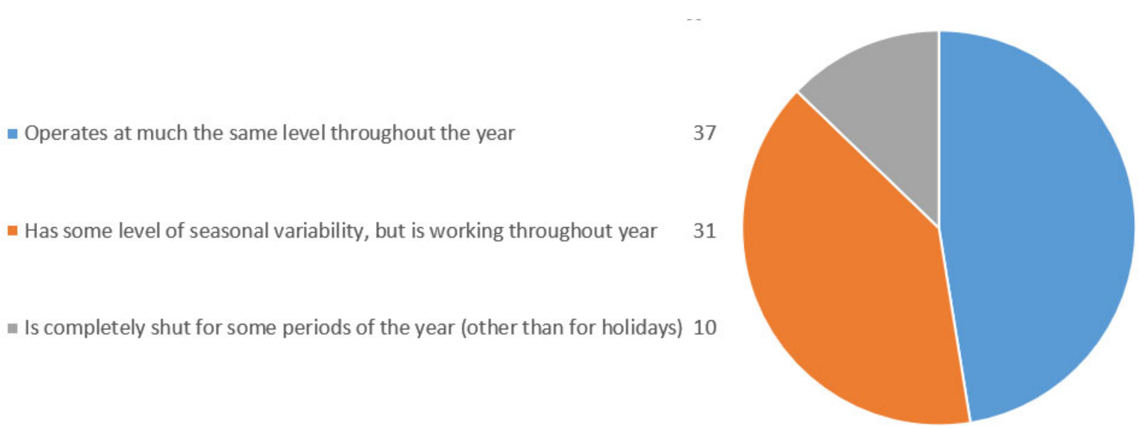
4.3.2 Sawnwood production

Q. What is your annual sawnwood production?

56% of the respondents are processing less than 250m^3 per year. A simplified calculation using the mean values in each of bands, across the distribution provided here, gives an average annual production of 775m^3 per SMSE.

4.3.3 Annual variability in operating patterns

Q. Does your sawmill operate throughout the year or is there a seasonal operating pattern?



From these results, we can see there is a range of operating patterns, which matches with the earlier point on integration with other businesses – some of these, such as farming/crofting, have periods which demand higher levels of attention, and the sawmilling operations may be fitting around these.

4.3.4 Strength Grading of Timber

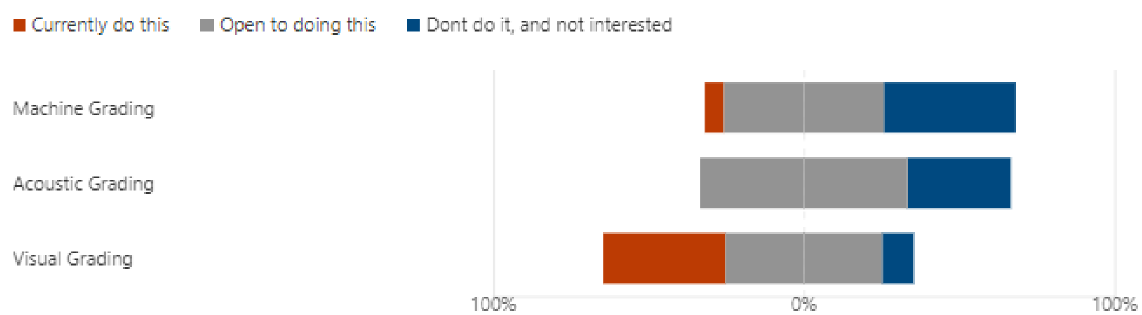
An initial filtering question was asked so that the strength grading* questions were only presented to those sawmills who regularly supplied into the construction sector.

43 of the mills surveyed regularly supplied wood for construction, the remaining 35 responded that they did not.

Only the 43 respondents who reported sales into the construction sector were then given the following questions on strength grading.

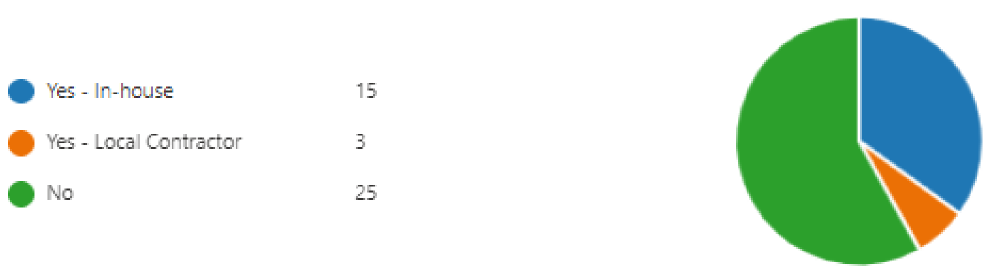
*A useful primer to strength grading can be found on Edinburgh Napier University's Centre for Wood Science & Technology site [17]

Q. Do you undertake grading of timber?



A very small proportion currently do machine grading, none do acoustic grading, and 40% currently undertake visual grading. 67% of the respondents were open to doing acoustic grading.

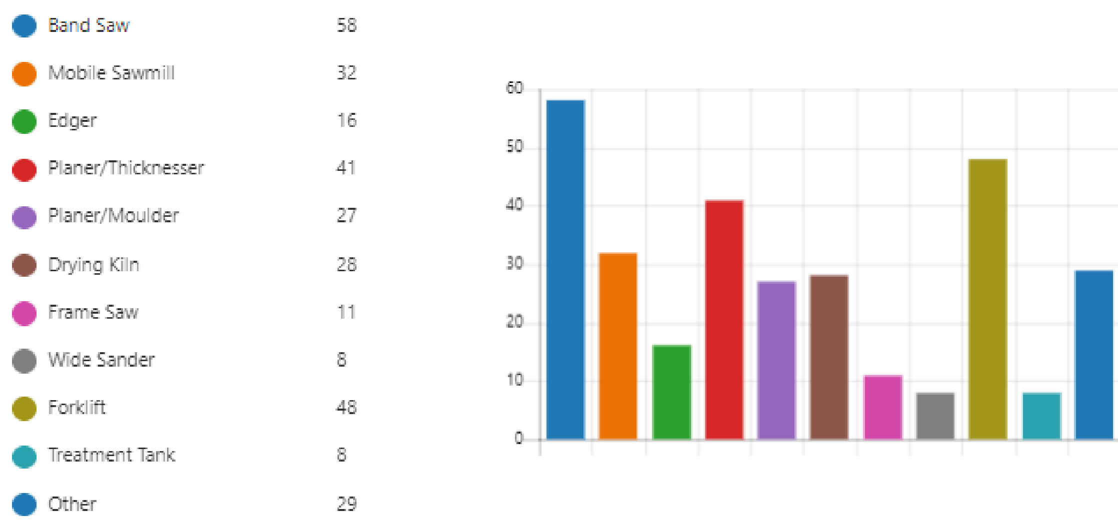
Q. Do you have access to a visual grading resource?



Of the 43 respondents who were supplying into construction sector, less than half (18) had access to visual grading resource.
58% currently have no access to visual grading resource, those who do have access are mostly in-house staff with a few sawmills using contract graders as/when needed.

4.3.5 Equipment

Q. What equipment do you currently have?



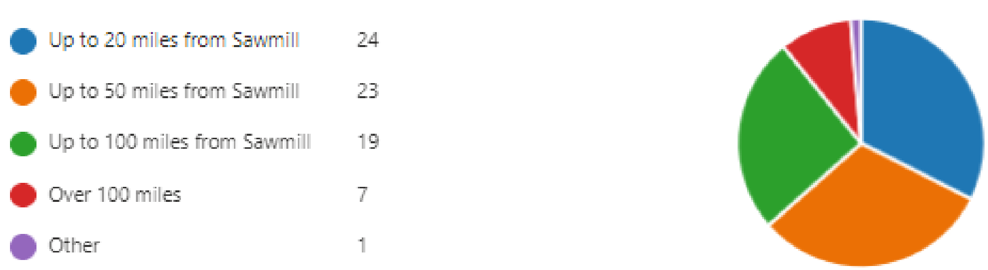
Under the “other” heading , the following equipment was also referenced, in order of frequency:

- Tractors/Excavators & Trailers
- Cross-cut, re-saw, table saws, circular saws
- Firewood Processing Equipment
- CNC/Lathe/other woodworking machinery
- Debarker
- Full-log moulder for cabin building

4.4 Timber handled

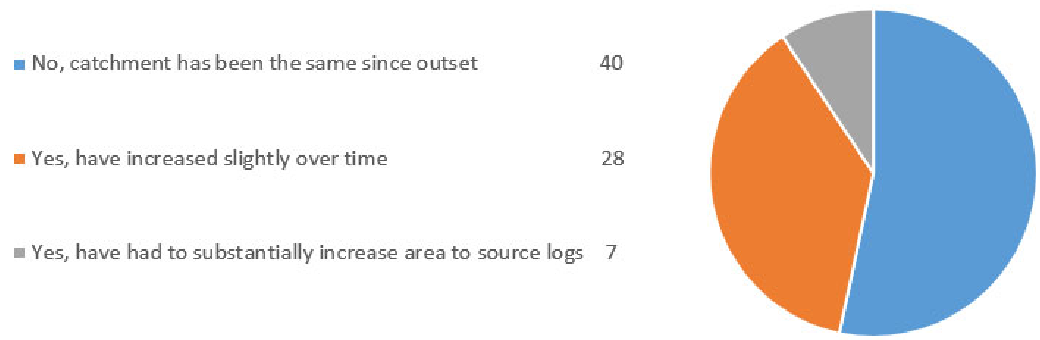
4.4.1 Log sourcing distance

Q. From what distance would you typically source logs for the sawmill?



60% of the sawmills are sourcing their logs from within a 50-mile radius of their base of operations.

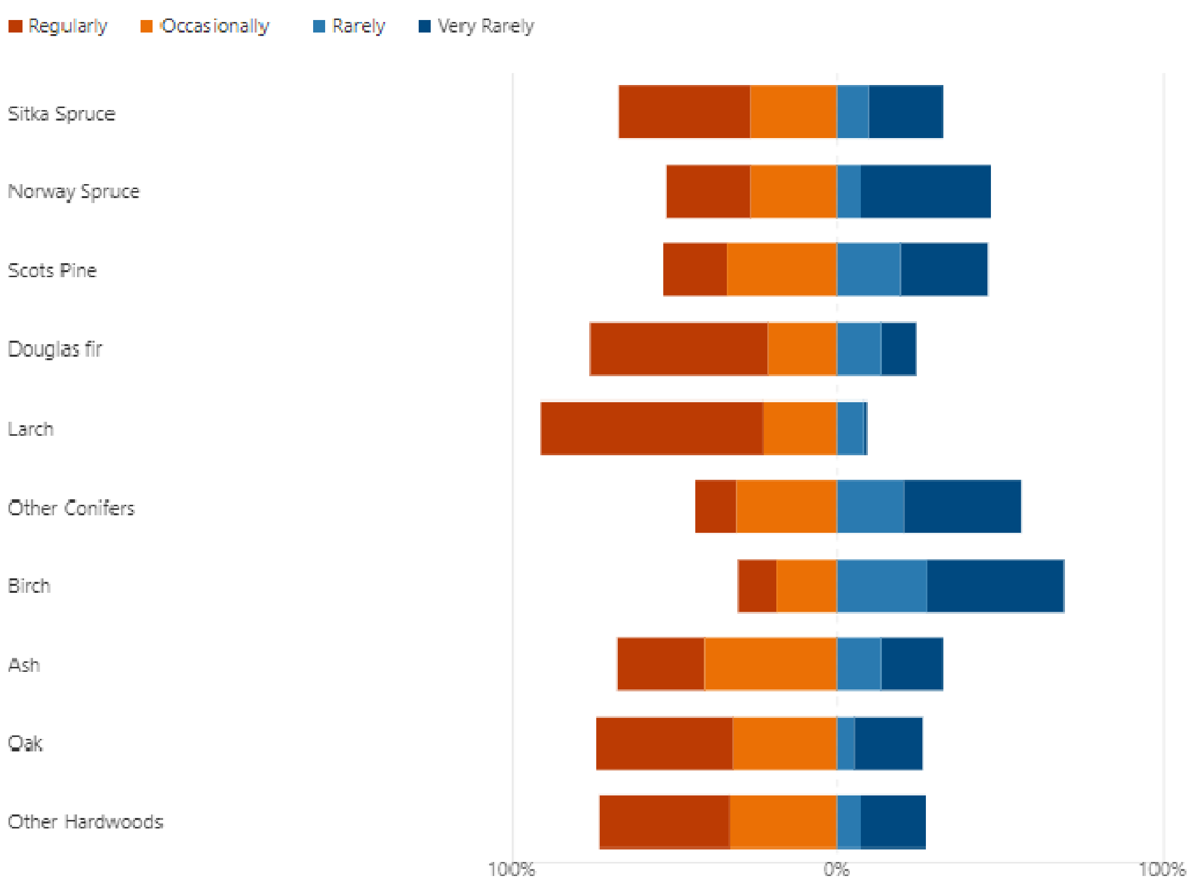
Q. Have you found yourself extending your catchment area to source more logs?



Regardless of the starting "catchment area" 44% of the respondents have found themselves having to extend this radius in order to maintain a source of quality logs.

4.4.2 Species Handled

Q. What type of species do you process?



The dominant species reported from the available options was Larch, followed by Douglas Fir, Oak and Sitka Spruce.

Noting the point from SIRT Survey [6] about the sawmiller's preference for Scots Pine, and its first place in "currently processing" for the UK wide survey, this is not reflected in the frequency of processing Scots Pine compared to other coniferous species here.

35% of the sawmills were exclusively softwood (only marked rarely/very rarely for any hardwoods).
5% of the sawmills were exclusively hardwood (only marked rarely/very rarely for any softwoods).
The remaining 60% milled both hardwood and softwood – for comparison, Forest Research statistics indicate that at a UK level, only 27% of mills handle both – the flexibility of SMSEs to handle both unlocks productive value from more diverse forest resource.

When given the opportunity to add in other species by name, the results were as follows, in order of popularity.

Table 11 - Species entered under the "other" category

Species	Respondents
Elm	28
Beech	20
Sycamore	18
Western red cedar	12
Cherry	11
Yew	7
Western hemlock	6
Chestnut (inc Sweet & Horse)	5
Cedar	4
Grand fir	3
Maple	3
Poplar	3
Alder	2
Lime	2
Cypress, Fruit wood, Gean, Leylandii, Lodgepole pine, Noble fir, Other fruit trees, Rowan, Sequoia	1

Several respondents mentioned that they would mill anything that they could source, or that they were milling on a contract basis, so tree species would be whatever the client wished to process.

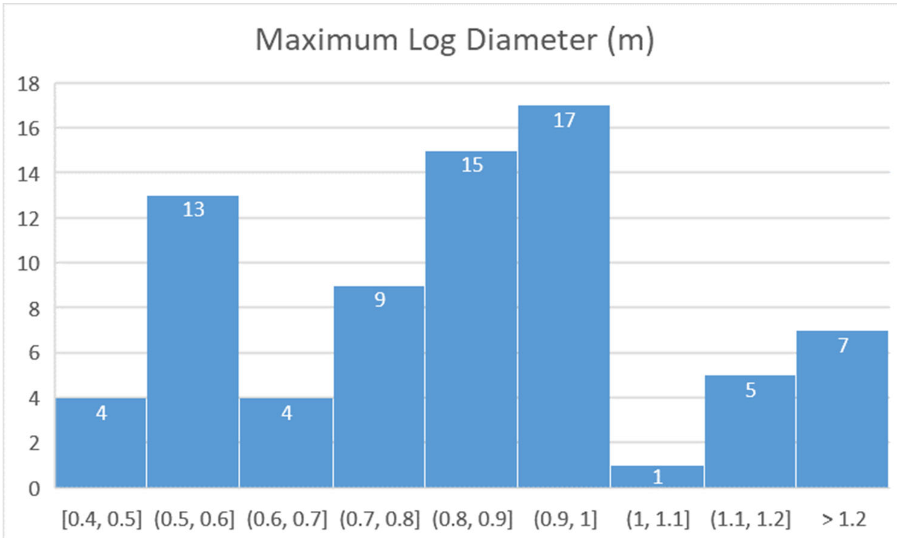
4.4.3 Attitude to new species

Q. What are your thoughts on processing new/different timber species?

Only a small proportion (less than 10%) of respondents were completely committed to the species that they currently process, about 50% would explore other species on case-by-case basis, and the balance were keen to expand the range of timber that they processed.

4.4.4 Log diameter processed

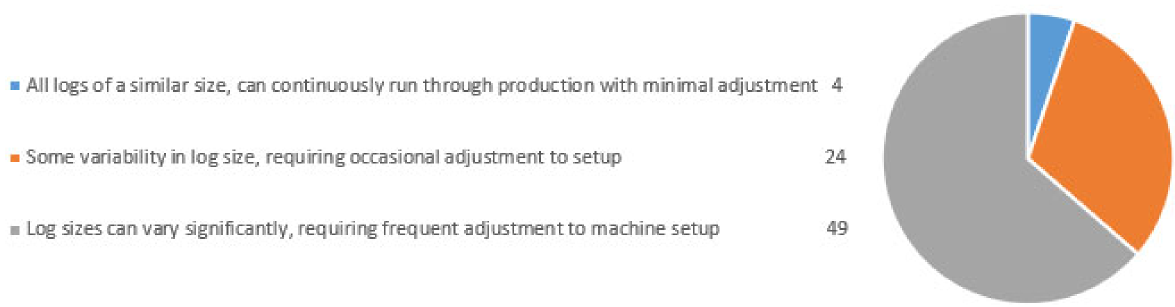
Q. What is this maximum log diameter which you can process with your equipment?



The smallest diameter was 0.4m, and the largest was 2.0m, as can be seen here, most of the respondents, maximum diameter that they could process was in the band between 0.8 and 1.0m 16.5% of sawmillers could handle logs of more than 1.0m in diameter.

In terms of variability of the log diameter, the response was as follows:

Q. Which of these best describes the variation in dimensions for the logs you process?

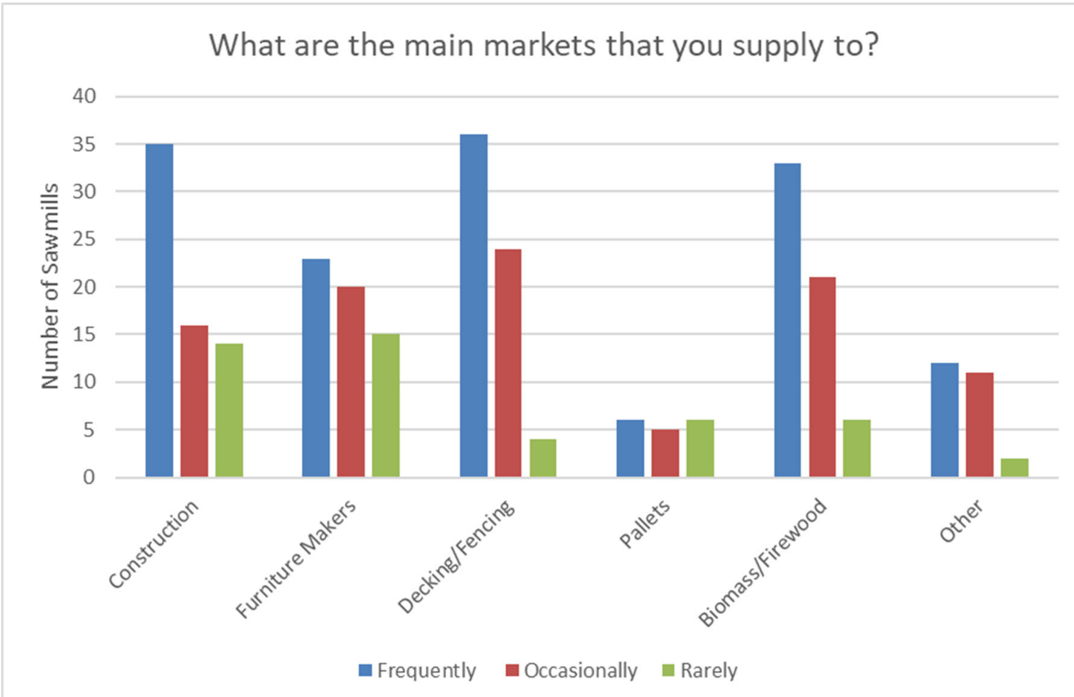


Large variability was experienced for most operators, which reinforces the flexibility of SMSEs, as they are regularly processing timber of different sizes, in contrast to the larger mills which are well optimised to run on fairly tight dimensional range. This ability to process a wider range of timber is vitally important to allow the productive utilisation of a wider selection of logs than a forest economy which was solely reliant on the larger mills.

4.5 Markets & Customers

4.5.1 Markets & Customers

Q. What are the main markets that you supply to?



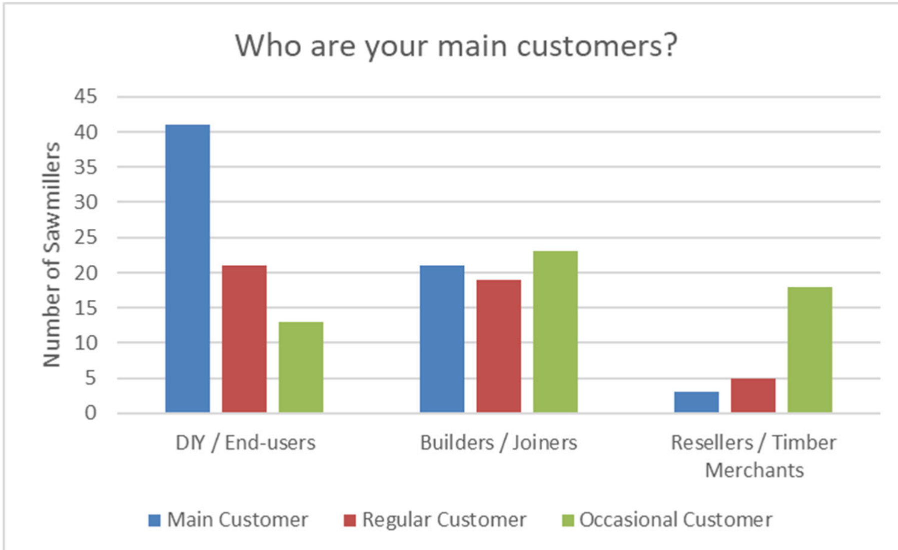
From this we can see that decking/fencing is the single most served market, with 81% of sawmills providing fencing or decking either frequently or occasionally. Firewood is a close second and reflects the point above that firewood is often an ancillary service to productive sawmilling – many sawmills will be selling offcuts/poorer form timber as firewood. Given the sharp cost of energy increases in early 2022 it is possible that more productive timber may be diverted into logs for domestic burning as cost of energy increases.

Pallet making is not something that is a market that is served by the small to medium sawmillers that responded here, the larger mills are likely a more cost-effective option for pallets.

Other markets that were referenced were as follows (in approximate order of prevalence):

- DIY & hobbyists
- Crafts & Wood Turners
- Boat Builders
- Benches/Picnic Tables
- Landscape type garden projects
- Log Cabins
- Packaging/Frames, Whisky industry, flooring, chopping boards, biochar & woodchip for farms, lobster creels, BBQ charcoal

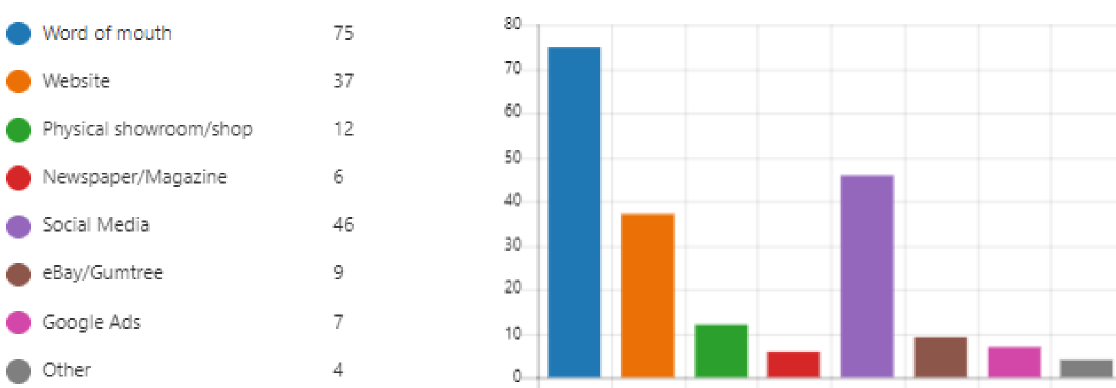
Q. Who are your main customers?



In terms of the main customers, the weighting was definitely towards the final user - 77% of SMSEs marked the DIY/End-user market as main or regular customer.
There was also a significant element of selling to building trade at 49% having this as main/regular customer. This is expected to be an increasing part of business as imported timber/mainstream sawmilled timber prices have increased significantly.
For the SMSEs surveyed, the reseller/timber merchant customer was not a major sales route (only 9% selected this as main/regular customer).

4.5.2 Marketing

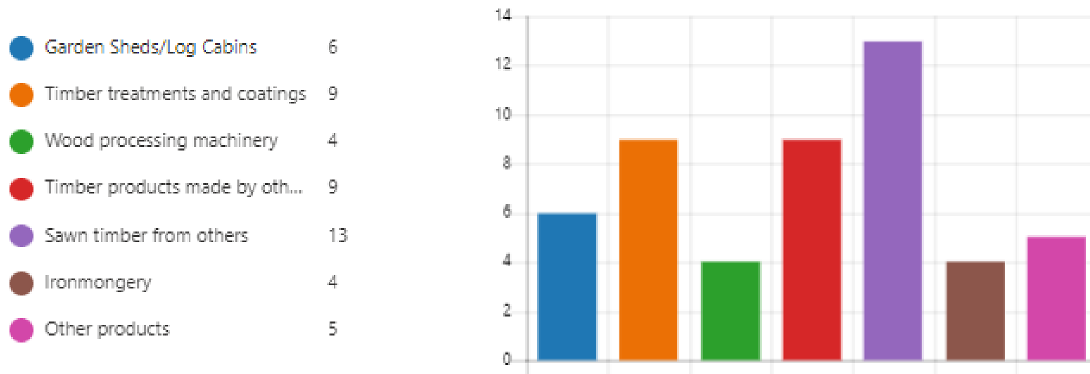
Q. How do you market your products at the moment?



Respondents could select multiple options for this question. Setting aside word of mouth, which was used by virtually all respondents, the two main marketing avenues used by the entities surveyed were social media and website, nearly 60% of the respondents using social media to market their timber shows that the sector does engage with modern digital communications already, so there is a baseline level of online marketing/digital skills which can be built on, and this provides a useful counterpoint to the narrative that the industry is particularly non-digital.

4.5.3 Retailing products from others

Q. Is your sawmill a reseller of products produced by others?

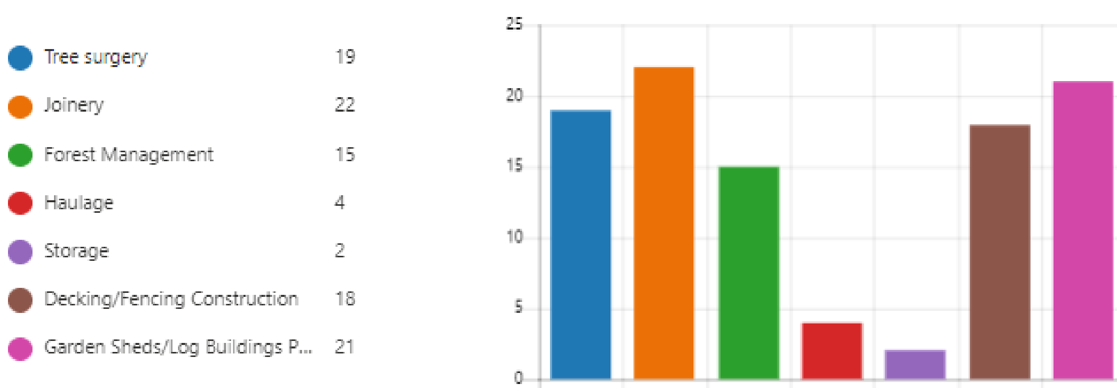


From the 79 respondents, only 25 (32%) advised that they sell goods other than their own timber. As can be seen here, the most common products were timber from other sawmills (reinforcing the point in earlier section on collaboration between sawmills.
The "timber products made by others" may be treated timber components (gates/fencing/shed panels) from larger mills, or bespoke/crafted/artisan items from other SMSEs, or related enterprises.

Following this was timber products made by others, and timber treatments and coatings.

4.5.4 Ancillary Services

Q. Does your business offer any ancillary forest/timber related services?



Two thirds of the respondents replied that they did offer related services, as can be seen here these took the form of upstream activities like Forest Management and Tree Surgery (33% of respondents) and downstream products/use of timber like Joinery, Sheds/Log buildings and Decking/Fencing construction (50% of respondents). There was some overlap as entities offered both.

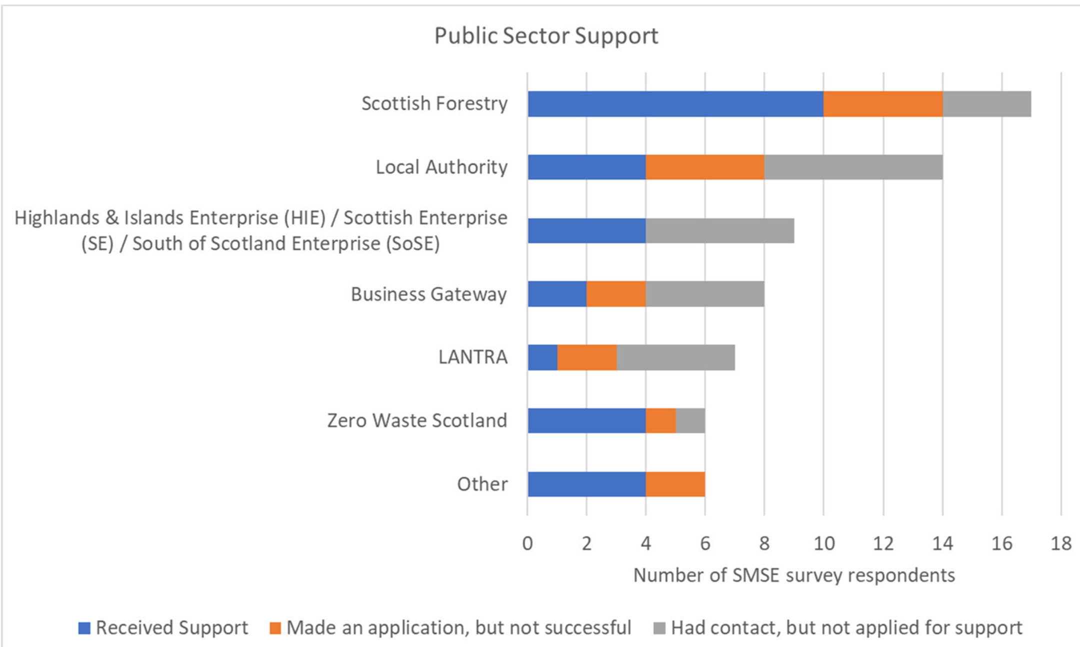
4.6 Public Sector Support

4.6.1 Public Sector Engagement

A filtering question was used to ascertain if entities had engaged at all with public sector bodies, from this it was determined that 23 (~30%) of the respondents had engaged (whether successfully or not) with the public sector for support in the past 3 years.

Those 23 entities who had engaged with public sector had been contact with various bodies as follows.

Q. Which public sector bodies has your business engaged with in the past 3 years?

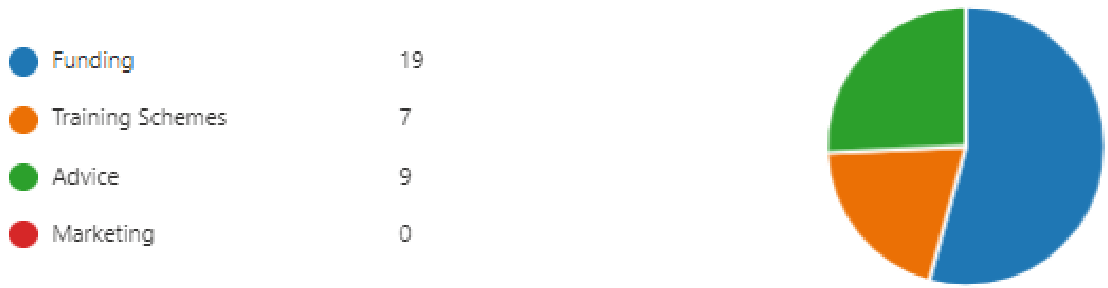


Of the 23 SMSEs that reported engaging with the public sector, the most common body was Scottish Forestry, which had been contacted by 17 SMSEs and provided support to 10 of them (58% of the SMSEs who had engaged with them).

4.6.2 Experience of Support

The type of support provided breaks down as follows:

Q. If you have received support, what kind of support?



The main support that had been received was funding (19 of the 23 SMSEs reporting engagement with public sector)

In answer to a follow up free text question on the respondent's experience around public sector support, the answers received can be seen in Appendix A, but some highlights from these include:

> *"HIE are very easy to deal with, lots of paperwork but always very worth the time if you work out your hourly rate put in for the amount of funding received.*
>
> *Scottish Forestry is the same but you do have to go hunting for the funding more and the turn around times can be very long if you get the application in at the wrong time."*

There were several respondents who noted that at a frontline level, individuals were helpful, but the system/bureaucracy once actual applications were underway caused frustration.

> *"Helpful on the phone and for guidance, then when the form filling comes in to play the usual wall of bureaucracy put me off. (Eg a requirement for three quotes when only two manufacturers made the equipment I needed, or the requirement for training on a particular machine when no course exists in the UK)"*

In addition to this, there were one-liner responses – four effectively saying "good" and two saying "bad."

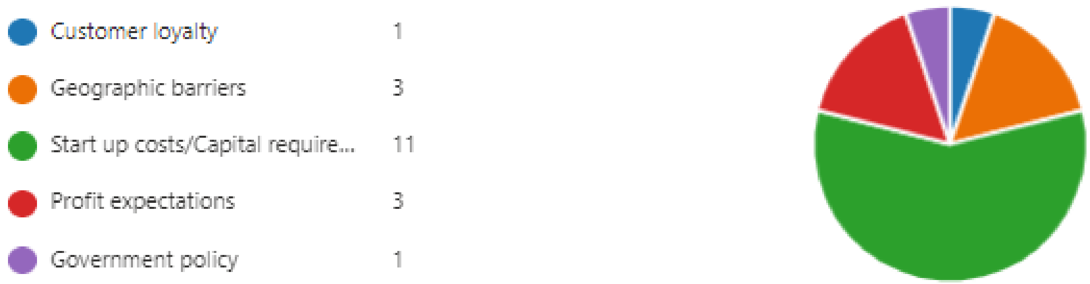
Key themes from above were positive relationships with individuals in the respective organisations, but frustration with bureaucracy hurdles to actually access support. Log supply concerns were shoe-horned into this response by sawmillers who were keen to highlight this particular issue, see further in Section 4.7.5

4.7 Motivations, Attitudes & Concerns

4.7.1 Barriers to Entry

A specific question was asked to those companies who had started up within the last 3 years:

Q. As a relatively new entrant, in your view what are the barriers to entry for the sawmilling sector?



Start up costs were seen as being the most significant barrier to launching a new business.

4.7.2 What motivates those involved in small to medium sawmilling?

This as a free text question, and 61 different responses were received.

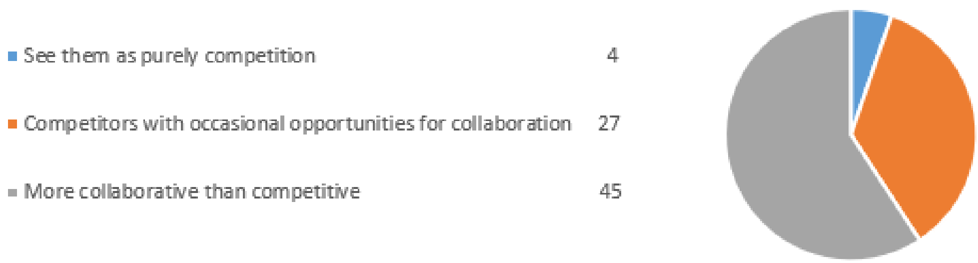
"Not the money! once you get in it grabs you"

These could be grouped into themes, and these were in order as follows:

- 22 respondents advised variations on the theme of enjoying the work/job satisfaction
- 17 were mainly motivated by sustainability – either environmental or the contribution to the local community
- The next three factors all had 9 respondents:
  Being outdoors, pride in the product and having a life-long involvement in the sector
- 4 replies advised that they were doing this work because they happened to own some woodland
- 3 replies mentioned money, although it should be noted that several other replies specifically mentioned that this was not a suitable sector if motivation was purely financial!

4.7.3 Attitude to other sawmills

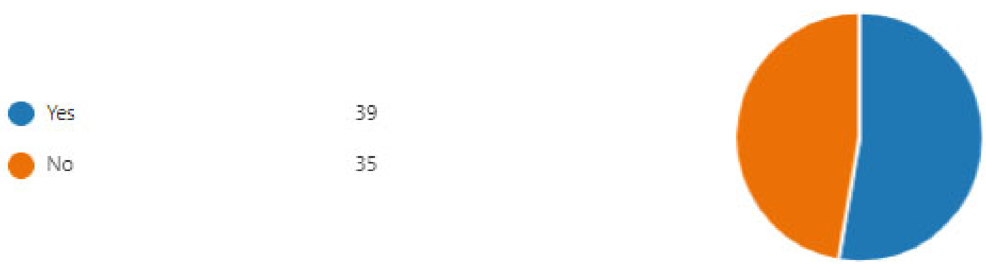
Q. What is your general mindset towards other sawmills?



Only a small minority (5%) of the SMSEs that were engaged saw other sawmills as purely competitors, by far the majority were open to collaboration on some level, showing that there is a willingness to work together, and reflecting the reality that sawmills can have symbiotic relationships where different mills play to their individual strengths/customer requirements, and also showing that mills may be willing to collaborate as a cluster/co-op to source logs with greater purchasing power than they have individually. The cooperative model may also be worth exploring for investment/collaboration for further processing of downstream timber products, to achieve critical mass/rationalise capital/deliver volume/economies of scale.

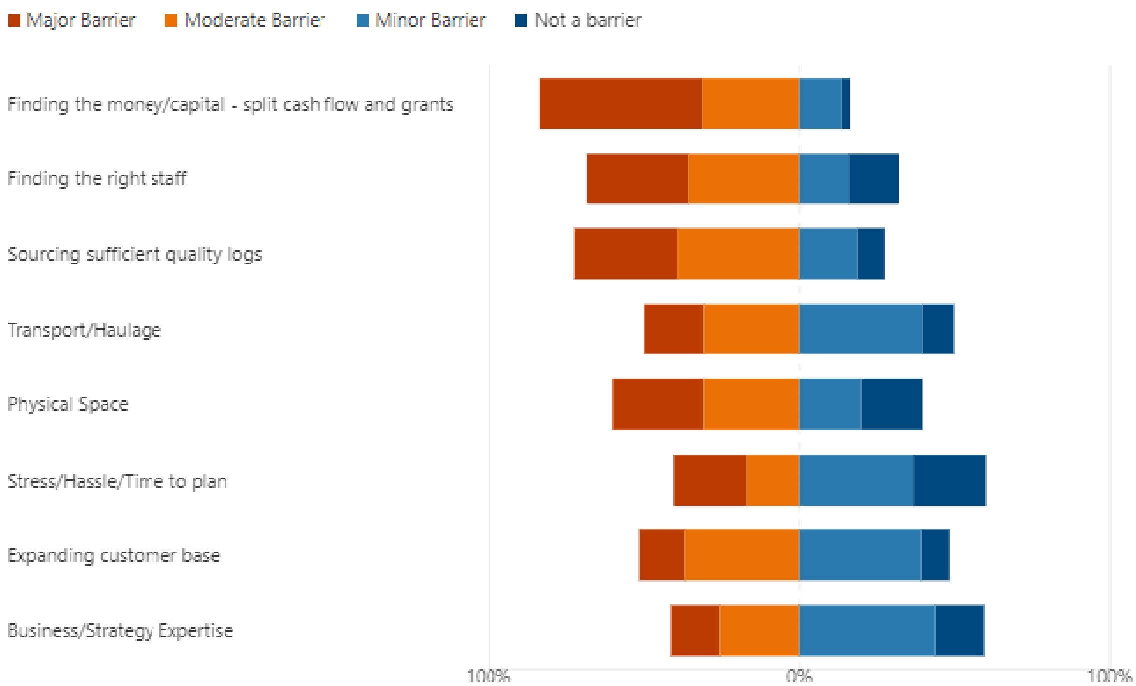
4.7.4 Expansion, barriers and priorities

Q. Is expanding the business a priority (Yes), or are you content with your current scale (No)?



As seen in the prior section, commercial motivation was not reported as a major driver by most respondents, however a little over 50% of the SMSE's surveyed would see expanding the business as a priority, conversely just under 50% are content with the current scale of their operations.

Q. If you want to expand what are the most significant barriers to expansion?

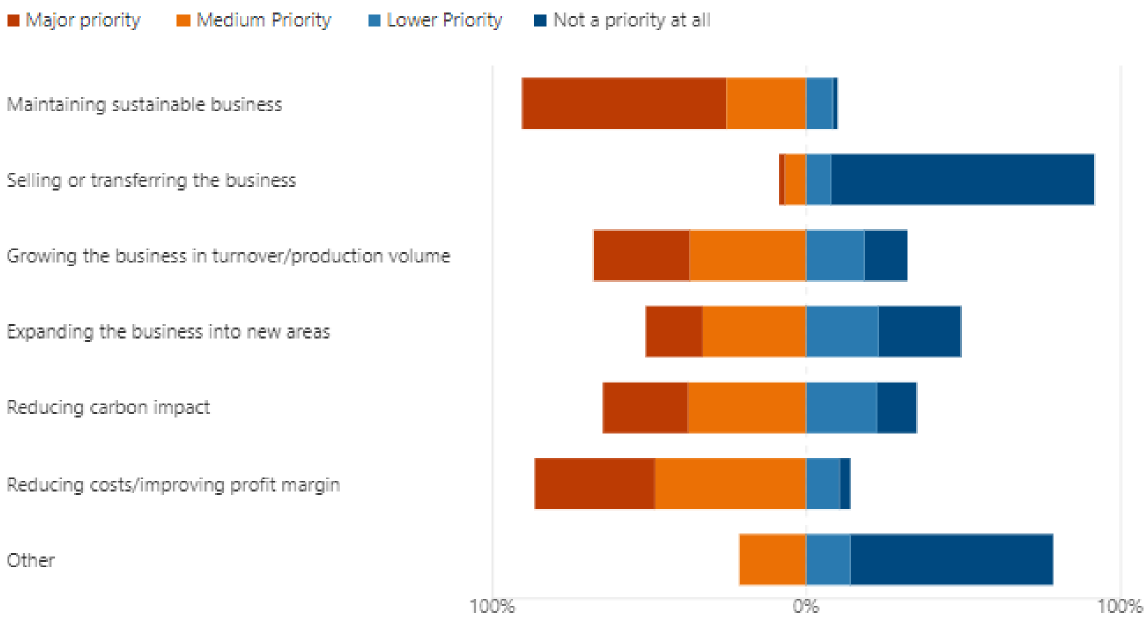


The biggest barrier to expansion was financial – the sourcing of cash to invest in required equipment/facilities. Following this was securing a source of suitable quality logs, then finding the right staff and having enough physical space for expanded operations. One respondent advised that:

> *"Current employment law is the only thing preventing me from employing anyone else. It's too onerous currently, until there are several employees to make it worthwhile."*

This may be an area where enterprise agencies (HIE, SE and SoSE) could provide some additional support, in the form of coaching, guidance, graduate schemes or other creative transitional pathways. This may allow sole-traders to experiment with taking on an initial employee, but without having to take a direct leap to the commitment and responsibility that is a full-time, permanent member of staff.

Q. What are your priorities for the next 3 years?

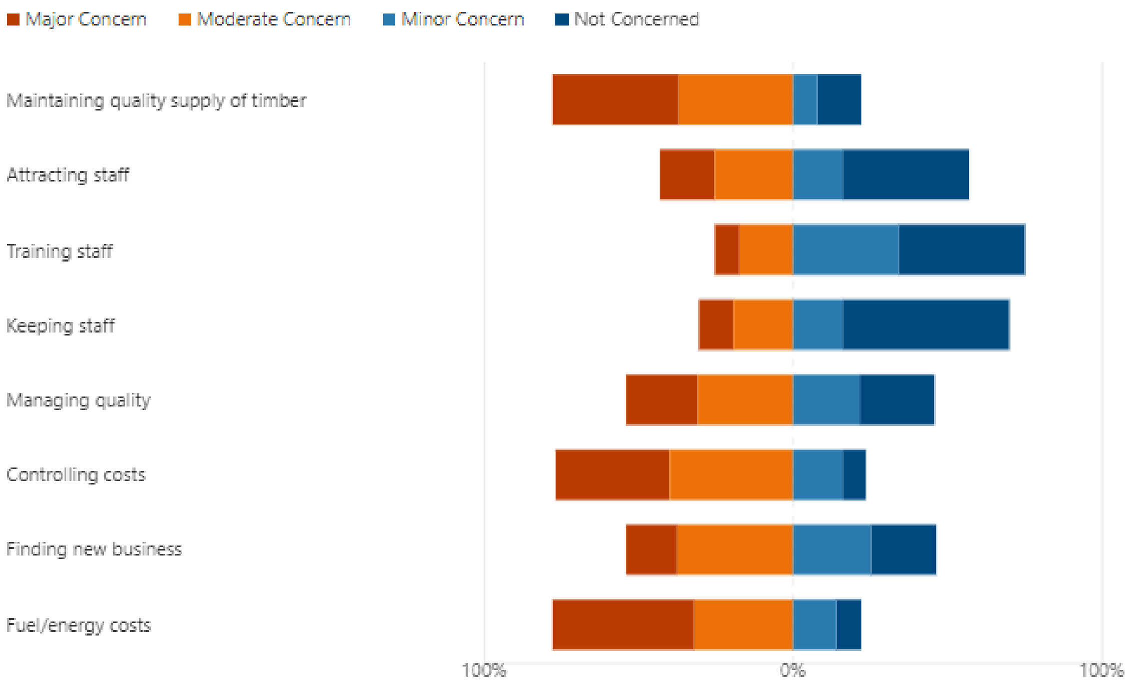


In terms of priorities, the standout was maintaining a sustainable business, followed by reducing costs/increasing profits, and growing the business volume.

Selling/exiting was not on the radar for most respondents, however from anecdotal information from those who were aware of others who had left, the challenge of succession planning was a factor, as due to their size SMSE's are frequently family businesses. When it comes for one generation to retire, if the next generation does not share the passion for the industry, then the challenges of raising investment for modernisation vs the opportunity to sell what is often a highly valuable site (usually in attractive rural area, near to transport links etc) in a market with high land values can make exiting the industry an appealing option at that stage, but this has not been reported by *current* sawmillers who have been the subject of this survey.

4.7.5 Concerns

Q. How concerned are you about the following challenges for your business?



Firstly, it should be noted that this survey was conducted before the major energy price shocks of 2022 had worsened with the Ukrainian conflict, so it is notable that the fuel/energy costs were already a high concern.

The other major concern, which has been repeatedly referenced anecdotally in conversations with various SMSEs is the sourcing of logs, this seemed to be a pressing concern for many sawmills, who felt they could not compete with large sawmills in accessing timber and were often frustrated that they had no access to publicly owned forest resource.

Controlling costs was the third of the big three concerns and relates to both energy and log sourcing.

Managing quality and finding new business were both moderately concerning.

Staff training and retention were not (relatively) major concerns but attracting staff in the first place was more of a concern.

A free text opportunity was provided for SMSEs to note their concerns, nearly 50% of the respondents contributed some additional feedback, these have been grouped below into themes. Further responses received have been included in Appendix A below

4.7.5.1 Supply

This was the most commonly submitted theme, with 18 different entities providing a written response on this.

> *"The Forestry Commission also have some bizarre statement in their contract I am only allowed to buy 100 tons per year before I enter into a bidding scheme with other major buyers for lots of timber far greater than I am able to purchase at any one time store at any one time so once again we are left completely behind by the company that is owned by our country but is not actually servicing the small*

independent sawmills to operate in the country and who actually put money back into the country"

(as a side point, the rebranding of Forestry Commission in to FLS and SF has not fully passed into mainstream use with a lot of the respondents).

"Difficulty sourcing good quality sawlogs in appropriate quantities, large sales tends to be the norm. I generally need quantities of 25 or 50 tonnes at a time. Possible from various sources, but not FC in this area who are the main landowner here."

There were several respondents who specifically highlighted concerns on availability of Larch

"long term supply of Larch and it's future management. Lack of serious commitment from FLS to use all good-sized logs that are affected by Phytophthora for sawmilling and not destruction.
Also a commitment to use all sawlogs as sawlogs and not biomass."

4.7.5.2 Misuse of resources

The next most common concern (eight responses) was the misuse (or perceived misuse) of good quality timber

With the addition of the Biomass section (RHI scheme) we constantly see saw grade logs being consumed for biomass... wood prices have risen across the board.

Some respondents were keen to offer potential solutions, as well as highlighting concerns:

There should be more control over what species get sent for biomass, and there should be logs owned by the state ring fenced in small quantities that have to be offered to small sawmills first - a bit like developers having to build a percentage of affordable homes.

4.7.5.3 Scale

Challenges specific to being a smaller scale operation were the next most frequently referenced concern, with seven respondents, a typical comment as follows:

“Older and smaller mills closing down or being taken over by larger industrial scale mills. It then becomes more difficult for small businesses to source small quantities of quality timber”

4.7.5.4 Value/place of sawmills in the community/economy

Four respondents remarked on the visibility of local sawmills in their community:

“Ensuring that it's seen as a valuable part of the local economy and that it's not just a race to the bottom to be the cheapest possible. That does no good for anyone”

4.7.5.5 Other Concerns

There were assorted other concerns, around the lack of funding, access to funding, regulatory compliance, the lack of appreciation/understanding for the contribution that small sawmillers make to the local community/ economy, mental health of others involved in the industry, costs of energy/fuel (again, this was pre-Ukraine crisis)

“The change to white diesel is concerning as electric loaders are not yet available and the cost of replacing them with electric vehicles would be too high.”

4.7.6 Final comments

At the conclusion, in addition to thanking respondents for their time and patience in completing the survey, there was an opportunity to make any final points, comments, observations.
These could again be grouped into themes, and the most common one was again log supply (another five responses!), mainly around lack of access to the public forest resource:

“For my customers one of the biggest things is them getting timber, Forestry commission and such like have no interest in the smaller users, this needs to change going forward, it just can’t be big sawmills all the time, you need small to medium sized sawmills for the bespoke side of things and to cut what the big sawmills wont. This issue does need to be addressed!!”

The next two most mentioned areas were the Need for Support and Need for Education:

“My main gripe constantly is the entire lack of support on offer for small rural non-agricultural businesses. Also if the forestry grant scheme would consider ‘nearly new’ machinery in its remit that would be a huge help. They forget that those without a big single farm payment or diversification grant simply cannot afford to buy brand new machinery. Ex demo, year old stuff maybe within reach at a stretch but is not supported. I had tried to get a 40% grant on a £30,000 Mini Forwarder

to help us with low impact extraction, I was told they would not support this due to it being not EN certified. The one which they would support started at £80,000. Completely out of budget. So we now run a £15,000 quad bike trailer set up which works really well. We have worked hard over the last few years to make our business was green as possible and efficient. All done without support and though profits alone.
This is a grating point, as my business could be a bigger employer and a good green model for the governments COP26 and NetZero plans if it where to be helped by some support occasionally."

In the example about, this type of "frugal innovation" has been forced here by circumstance, but could funding programmes be more flexible to actively encourage this?

The remaining comments were a mixture of clarifications on earlier points in the survey, and quite a few mentioning that they were pleased to have been able to put their opinions across, that they were interested to hear what the outcome of the study was, and that they would be happy to engage further if that would be helpful.

5 Summary & Conclusion

5.1 Summary

5.1.1 Context

Prior work has uncovered a limited understanding of the size and shape of the small/local forest business in general and the smaller end of the sawmilling sector specifically.
The membership organisation ASHS (Association of Scottish Hardwood Sawmillers) does a good job of representing its members and is proactive about engaging with them and representing their views which gives a good insight, this is naturally only for those who have chosen to join up as members (ie hardwood sawmillers). The overall recommendation from prior work has been to conduct further research to better understand the sector.

A 2018 study for Scotland estimates that there are **~6,000 people working in ~ 2,000 Small Local Forest Businesses (SLFBs)** (which includes a wider range of enterprises than this report)
This sits in the context of the statistical information from Forest Research:

- The small to medium sawmilling sector has declined significantly from 406 to 97 (78%) at a UK level since 1994.
- The total number of mills in Scotland dropped by two thirds in the same period
- Hardwood deliveries to sawmills have dropped by 82% between 1994 and 2020
- The average production per sawmill in Scotland is higher than the wider UK, which indicates Scottish production is more weighted towards large sawmills than the UK average.

It has also been shown from Scottish Government statistics that Micro businesses (0-9 employees) account for 36% of employment in remote rural areas and 29% in accessible rural areas, while they only account for 13% of employment in the rest of Scotland.

5.1.2 Size & Composition

From this piece of work, a clearer picture of the specific sawmilling component of the forestry sector has been established - a register of sawmilling entities, along with an interactive map has been created, and a survey was created and circulated to sawmillers, with 79 responses received from across Scotland.

- **142 active sites** were identified as running sawmilling operations
- Of these **118 were identified as small-medium sawmilling (SMSE)** operations
- These are located across Scotland, with 41.5% in the Highlands & Islands Enterprise Area, and a further 19% in the South of Scotland Enterprise Area.
- The above areas account for over 60% of the sawmilling entities, but only have around 14% of Scotland's population.
- The average employment for these SMSEs was approximately 3.5 FTE, which would give an estimated total employment as ~**420 FTE across the country**, for the entities that were uncovered here – there will be other companies or individuals who are working in the sector, but have not been identified in this study, so the total number can be expected to be higher.
- Staff average age is weighted towards the 35-50 age band, with a virtually equal split on either side for younger and older staff. Experience levels are correspondingly mixed.
- Training for staff is mainly in-house, on the job training.
- Over 50% of the SMSEs are reporting static sawmills, however some SMSEs may have self-categorised as static operation when they are actually mobile mills operating from a single location.

5.1.3 Timber Supply & Markets

- The 118 SMSEs identified processed an average throughput of 775m^3 sawnwood, for an estimated **annual throughput of ~91,500m^3 per year**.
    - From the 2020 figures Scottish *softwood* sawn production was 1,683,000m^3 so this would represent ~5.5% of production
    - However 5% of SMSEs are milling hardwood only, and 60% are milling both hardwood and softwood
    - The *UK* production of sawn hardwood for 2020 is given in [8] as 37,000m^3 (which itself may be an underestimate due to the lack of visibility of SMSEs across UK) it seems probable that **a very significant portion of hardwoods are being processed by the small-to-medium sawmilling sector in Scotland.**
- 60% of the sawmills are sourcing their logs from within a **50-mile radius** of their base of operations, and regardless of the starting catchment area, 44% of sawmills have found themselves having to **increase their supply radius** over time in order to source sufficient quality logs.
- Larch was the most commonly processed species referenced, this is likely due to the fact that there has been significant felling of larch due to *phytophthora ramorum*, along with the fact that hardwood sawmillers will process larch as well as hardwoods due to its characteristics.
- **1 in 6 SMSEs can handle logs with diameter greater than 1.0m**, and most sawmillers had a significant variability in the log dimensions which they processed. This ability to process dimensionally variable logs is a significant benefit as it means that timber which could not be effectively processed in larger automated sawmills which are optimised for a core range of sizes can still be processed to generate value-added material.

All of these points reinforce the vital role of the SMSE in processing timber which is outside the mainstream (typical example of mainstream being 20-40cm Sitka from large plantations) – taking smaller quantities, varied species and outsized logs means that there is a local, economically-productive benefit from more diverse forestry, which is only provided by these SMSEs, who are adaptable and flexible to process a wide range of species, sizes and quantities.

- **54% of the respondents were supplying into the construction sector**, however of these, only **23% had access to in-house or contract visual grading** resource – if this can be increased, then the use of timber product from SMSEs in construction, at a higher value, can grow.
- **Decking and fencing** is the single most referenced market in terms of productive timber use, closely followed by **construction** and furniture makers
- For most of these entities, they are selling directly to the **end customer (77%)** with **49% servicing builders/joiners**. Only 9% used timber merchants/resellers as their main/regular sales channel.
- Word of mouth and **social media** are the main marketing channels used.
- 32% sell goods other than their own timber, including some reselling of timber from other sawmills. Some of this may be treated timber components (gates/fencing/shed panels) from larger mills.

The mix of customer types, and the high proportion of sales to end user further demonstrates the flexible and diverse composition of the SMSE sector.

5.1.4 Community & Adaptability

The small sawmilling sector has a key role to play in rural communities, with impact and benefits which stretch beyond the immediate economic impact of local jobs. Well-being benefits from job satisfaction, combined with economic recirculation in the local economy makes sawmilling a vital part of thriving rural communities

The majority of these organisations are doing more than solely sawmilling – only **15% of respondents were purely sawmilling**, a range of ancillary/complimentary services were carried out, this diversification likely reflects the nature and requirements of the local economy
Approximately 50% of the sawmills operate at the same level throughout the year, the remaining 50% either shut completely or have variability, due to the ancillary business commitments eg farming/crofting.

There is significant diversification within many of these businesses, **33% of entities were involved in upstream activities** (Tree Surgery/Forest Management) and **50% were involved in downstream activities** (Joinery/Deck & fence building/shed construction)

5.1.5 Motivations, Attitudes & Concerns

The main motivation for those involved in the sector is **enjoyment/job satisfaction**, with sustainability (both environmental and community) coming in second.
Although commercial **motivation** was not indicated as a major driver, the main **priorities** were all of a commercial nature maintaining a sustainable business, controlling costs and growing the business

In terms of concerns, the three stand out concerns were **controlling costs**, **sourcing quality logs** and **cost of energy/fuel**. When given an opportunity to write in specific concerns, by far the biggest concern was the supply of logs (more than double the next largest concern), with multiple respondents specifically frustrated with lack of access to the public (FLS) resource.

The log supply issue raises some questions about the parallel roles of private and public forest resource, larger mills tend to be more concerned with security of large supply (with a presumed element of transport), while smaller are more dependent on local provision and smaller volumes. There may be a long-term role here for public forest to address market failure and/or pioneer novel approaches/demonstrate best practice, growing more quality hardwoods and softwoods, of the type particularly suitable for local processing/value-adding. This could provide direct economic benefit in rural areas. Addition there was strong encouragement for FLS to considering any potential mechanisms to allow for additional allocation of the current timber resource to go towards SMSE processors.

Other concerns highlighted were around misuse of the resource, **good timber going to biomass**, a lack of support/attention/focus on **smaller mills compared to larger ones**, the burden of regulation, **lack of recognition**/understanding of the value of small sawmilling sector, **costs increasing** and **inflexible support programmes**.
The vast majority saw **other sawmillers as potential collaborators**, rather than pure competitors.
A little over half of the entities were interested in expanding, with the remainder happy at their current scale.

5.1.6 Public sector support

Targeted public sector support (in finance and/or advice) can make a real difference in overcoming challenges around funding, regulatory compliance, access to timber and access to new markets/developing new products. In spite of this, less than a third of the entities surveyed reported that they had engaged with the public sector for support.

Of those who had engaged with the public sector, the most common avenue for support was from Scottish Forestry, followed by the Local Authority and the relevant Enterprise Agency.

Survey responses on engagement with public sector highlight the positive impact good personal relationships, but also indicate frustration with bureaucracy and variable experiences within the same agency.

The primary barrier to new entrants to the sector is start up costs, and similarly for established SMSEs, the main barriers to expansion were capital/finance. Additionally the recurring challenge of sourcing quality logs was referenced as a barrier to expansion, as was finding the right staff.

By far the majority of training undertaken is in-house/informal, there is virtually no formal apprenticeship activity, which has been highlighted as a concern in terms of bringing in the next generation of sawmillers and giving them a solid training foundation.

From this, the challenge to the public sector, in terms of support and policy can be summarised as:

- Accessibility for SMSEs to engage on a relational level with real people in the relevant bodies, rather than purely online systems/forms. This may take the form of account manager type long-term relationships with named, experienced individuals, who are directly advocating for the interests of the SMSEs and are able to follow applications through the system.
- Provision of support/guidance on training, in particular a reviewing what is on offer in terms of practical, useful apprenticeship scheme with relevant training.
- Increasing awareness in SMSEs for schemes which they are entitled to participate in, with clear and simple advice, avoiding reams of reading.
- Support schemes which are flexible and encourage scale-appropriate innovation.
- Facilitation of further log sourcing from the public resource and provision of support/mechanism for some level of cooperative purchasing (either from public or private resource).

5.2 Concluding Remarks

Larger sawmills are well understood, as can be seen with the employment and productivity statistics from Scottish Government, however there is **little corresponding quality data** for smaller and medium sawmilling entities.

The overall production of sawnwood has increased, as production has consolidated in fewer, larger mills - In 1994, small to medium sawmills (up to 5,000m^3) were responsible for 15% of annual production at a UK level, by 2020 this had dropped to 3%. This is mainly driven by the expanded requirement of the increased harvest, and modernisation leading to economies-of-scale-driven larger modern mills. The large mills have grown symbiotically with that change and growth in investment forestry, leading to large mills efficiently processing a narrow range of timber (a significant part of the reason for their efficiency).

It is worth nothing that the timber industry broadly reflects the forest ownership patterns that have changed over time. 40 years ago the traditional estates were providing a greater % of the timber in the private sector, now private sector forestry is dominated by investment clients with fairly limited objectives. The variety of timber & forest practices of the estates meant there was a need and opportunity for a greater range of mills, which has now reduced, however as forest ownership patterns are broadening, with increasing community woodlands and broadleaf planting, this trend may reverse somewhat over time.

The variety of timber & forest practices of the estates meant there was a need and opportunity for a greater range of mills, which has now reduced, however as forest ownership patterns are broadening, with increasing community woodlands and broadleaf planting, this trend may reverse somewhat over time.

It should be noted when considering the distribution of mills by size that there are economies of scale and different markets – although there is certainly some overlap, SMSEs are offering a different service to the larger mills, serving different markets (furniture, crafts, boatbuilding, direct to end user etc), using different resource – smaller sites (farm and community), different species (hardwood and less common softwoods), dimensionally variant (predominantly oversized)

Although regenerative, forestry is also an extractive industry. When comparing the impact on local communities with regards to the location of processors, smaller processors are more widely distributed, with staff who are living and making economic contribution in their local areas, larger processors are somewhat more town/node based. There are some areas, such as Argyll, which are well-forested but do not currently have a “Major” sawmill, which means that the local community sees less direct economic benefit from its forest resource.

The spatial distribution of sawmills, and their size, in some respects mirrors the power generation ecosystem – historically, there were many individual generators – watermills, human/animal power and early engine houses for specific industrial facilities. Then came a period of consolidation that led to the current landscape of fewer, larger plants producing each serving a larger area/number of consumers. However power generation is now somewhat returning to a decentralised approach. Should this be true of forest processing too? Modern technology can make it more feasible for smaller-scale operations to offer higher value products, such as the development of acoustic tools for certified strength grading, or CNC machining equipment becoming more accessible in cost and simplicity of use.

There is the related issue of road miles (which in a power generation analogue would be transmission losses) – consuming energy & producing carbon emissions, at a time of climate emergency.

In the case of timber, there is a challenge on balancing the shipping of bulky/heavy/low value material long distances to be processed very efficiently vs processing it locally (but perhaps less efficiently) first and only shipping lighter, higher value finished product.

There is space, and indeed a need, for both small and large timber processors to optimally make best use of the available timber resource. The future is likely a combination of large, efficient, consolidated producers at key nodes, and a mix of smaller to medium scale enterprises who are both producing and consuming on a local basis.

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Thanks to ASHS for encouraging their members to respond to the survey.

Finally, thanks to all of the sawmillers who took the time to respond to the survey, each contribution filled in a bit more detail, and the result is a much-improved understanding of the small sawmilling sector.

6 References

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Appendix A – Review of Prior Work

6.1.1 Introduction

There have been several useful pieces of prior work that have considered aspects of the small sawmilling sector in Scotland, a few examples of these are summarised as follows.

Table 12 - Summary of Prior Relevant Documents

Document Title	Author/Source	Year Issued	No of Pages
Getting Value from Local Woods - Summary Conference Report [2]	Forest Policy Group (FPG)	2016	4
Value from supporting local forestry businesses – a scoping study [3]	Anna Lawrence, Rick Worrell, Guy Watt, Willie McGhee Forest Policy Group	2017	52
Estimating the Size of the Economic Contribution of Small Scale Woodland Related Businesses in Scotland [4]	Guy Watt & Willie McGhee Forest Policy Group	2018	24
Small local forestry businesses in Scotland [5]	Rick Worrell, Anna Lawrence, Guy Watt, Simon Pepper and Willie McGhee, Scottish Forestry	2019	7
Survey of British Sawmills on "Alternative" Species – Report to the SIRT Management Board [6]	Steven Adams, Dan Ridley Ellis Napier University	2017	9
Scottish Forestry after Brexit [7]	Douglas C MacMillan Scottish Forestry	2021	3

6.1.2 Getting Value from Local Woods – Forest Policy Group – 2016 – 4 pages

Report from the FPG's November 2016 conference in Birnam.
This report discusses the meaningful impact local woods have on the economic, social and ecological environment.
A total of 17 case studies were discussed at a conference in Birnam on the 11th of November 2016.
Conclusions reported here in full (this is single direct excerpt)
"1. Locally based businesses can develop market opportunities not readily accessible to conventional forestry interests. They can create innovative products and services, and provide small but critical employment opportunities, often in economically fragile locations. These businesses can make forestry far more relevant and important for local communities.
2. Many community initiatives operate as small businesses. Commerce and community are not mutually exclusive constructs. Woodlands provide an environment that can provide both people and business with mutual benefits from a balanced approach.
3. Forestry is a means to an end; local forestry can meet a very wide variety of ends beyond timber and jobs. There is an increasing supply of good evidence to support the claims of this sector that it contributes positively to social, economic and environmental outcomes at a local, regional and national level.
4. The local forestry sector can thrive alongside, and often in partnership with, bigger forestry enterprises.
5. This was the first time that direct evidence had been brought together from such a wide range of local forestry case studies. Evidence is more diverse and sometimes harder to access than for large-scale business and projects, but it is there, in numbers, words and pictures, and should not be ignored.
6. The evidence points to special aspects of this contribution:

- ‘Sticky’ money, which recirculates in the local economy;
- Satisfaction levels from development of entrepreneurial skills, meaningful employment, volunteering, and connectedness with community and place;
- Interconnectedness between elements e.g. sawmills linked with previously neglected woods;
- ability to fill gaps and address market failures e.g. bringing ‘uneconomic’ woods into production;
- An emphasis on quality of provision – whether social care, furniture or houses.

7. Several cases highlighted the real value of local forestry for housing, particularly affordable housing using quality Scottish timber, and providing quality living space which can help to reconnect communities and place. It was in the area of housing, and urban forestry, however, that participants highlighted most stress – particularly in relation to insurance and the impacts of planning and regulatory systems.

8. Acquiring woodland is a real challenge for communities, small groups and individuals, because of the price of land and the tendency for land sales to involve very large areas. While many of the cases were based on community efforts, other models were also shown to be successful.

9. One example after another pointed to the invaluable role of FCS support through advice, grants, and research. There are good opportunities to target grants and support to help the sector tackle challenges including:

    a. Acquisition - getting hold of woodlands;

    b. Access to business know-how and advice;

    c. Avoiding the risks of burn-out, public liability, and regulatory burdens.

Relatively small amounts of funding were capable of starting some very interesting projects with real benefits. Small and very small businesses have to compete in a sector which receives very substantial subsidies and tax incentives, but they deliver value in terms of jobs, bringing woods into productive management, and community development.

10. There is enormous potential for growth in this sector, delivering local needs appropriately. Scotland will need smart strategic thinking and investment to make the most of this potential. Participants highlighted the need for space to grow and adapt. Factors identified which will help included: belief, mentors, and grants. Supporting or intermediary organisations are also invaluable, and the examples here highlighted the role of trust and equality of membership.”

A full list of the case studies is available at [18]

6.1.3 Value from supporting local forestry businesses – Anna Laurence, Rick Worrell, Guy Watt, Willie McGhee - Forest Policy Group – 2017 – 52 pages

This is a comprehensive piece of work which builds on the prior conference proceedings, and it sets out to cover the following objectives:

1. To provide a preliminary overview of the sector and data sources
2. Summarise lessons learnt from existing evidence
3. Identify knowledge gaps related to value of the local business sector

The report uses a useful visualisation for range of business types in the sector, which is helpful for the consideration in this report.

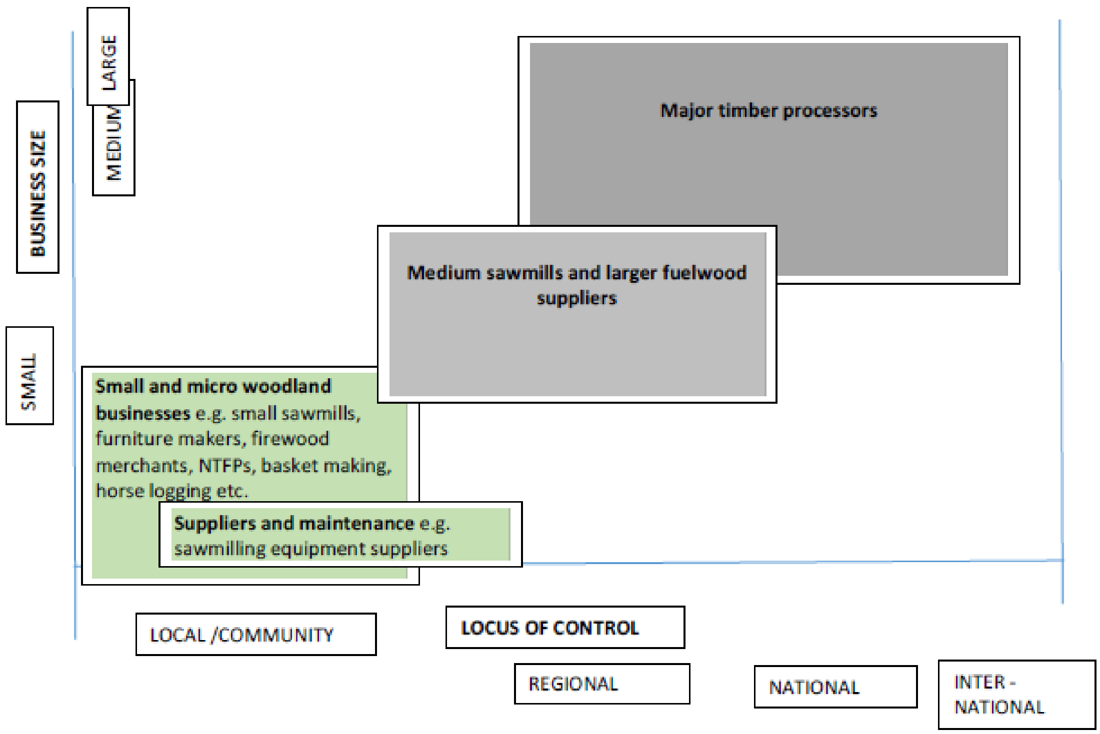

Figure 16 - Diagram from p12, showing business types in terms of their locus of control and business size – products and processing

The report does highlight the gaps in evidence/data that hinder deeper understanding of the sector, a table from p35 reviews the evidence in terms of how recent it is (age/currency), the range and the depth of information available, as can be seem, while some areas are well understood, there are definitely gaps – information is available in case-study form, but not systematic information on the size and scale of the sector, or the products and markets that they serve.

	Age (currency)	Range	Depth
Ownership	• Relatively recent	• Enormous • International • Lacks factual detail in Scotland • Community woodlands excellent detail	• Some in depth case studies of owners' motivations and activities • Lack of evidence on links between owners and business
Business	• Old (2000-2006)	• Wide, patchy, incomplete • Good UK study, whole forest industry sector; scope to take same structure and apply it to small business sector in Scotland	• Very few case studies describe the details of business innovation and development
Use / consumption of local forest products	• Recent	• Patchy	• Some in-depth case studies
Government incentives	• Relatively old	• Patchy	• Some case studies
Impact: jobs, well-being	• Inconsistent	• Scarce formal case studies • Numerous informal and uncollated case studies including those from Birnam conference, articles in Reforesting Scotland etc.	• Inconsistent

Figure 17 - from p35, currency, range and depth of evidence identified in relation to small/local forestry sector

6.1.4 Estimating the Size of the Economic Contribution of Small Scale Woodland Related Businesses in Scotland -Guy Watt & Willie McGhee - Forest Policy Group – 2018 – 24 pages

This was a desk-based study is to identify what data sources there are that could be used to estimate the magnitude of the economic contributions that small-scale woodland-related activities might be making to Scotland's rural economy and to estimate the scale of those contributions.
Findings were estimate of 2,035 enterprises involved in woodlands related activities in 2017 employing less than 10 people, total employment around 6,255 persons with annual income/local spend of ~£70m, which is particularly significant in rural areas. Three concluding points are lifted directly from the summary

- "National statistics do not offer any understanding of the scale and nature of the contribution that woodland related micro-businesses make to the local economies or how the money circulates locally in the rural economy.
- These findings suggest that it is important that national forestry, social and economic policies include measures to support woodland related micro-businesses given the fragile nature of the economies in rural areas.
- A better understanding is also needed of the scale and nature of the contribution that woodland related micro-businesses make to the local economies and how the money circulates locally in the rural economy."

6.1.5 Small local forestry businesses in Scotland – Rick Worrell, Anna Lawrence, Guy Watt, Simon Pepper and Willie McGhee – Scottish Forestry – 2019 – 7 pages

A further overview of Small Local Forestry Businesses (SLFBs) in Scotland, considering the following two questions:

1) What do we know about the numbers, scope, economic impacts and other benefits of such businesses?
2) How do they contribute to Scottish Government priorities and how can they be encouraged to thrive?

Estimates ~2,000 such businesses in Scotland (of which sawmilling will be a part).

> *"Qualitative information, and indirect inferences from available statistics, indicate SLFBs have impacts which are qualitatively and quantitatively disproportionate to their size. But there are clearly many gaps in our information on economic impact, and we still have a way to go to get a good understanding of this sector, particularly to get a clear picture of current activity, the motivations and aspirations of SLFBs, and the constraints they face."*

While recognising the value of existing support mechanisms, further support is recommended as follows:

- "Recognition of SLFBs as a distinctive sector delivering private and public benefits, and with specific needs to help it reach its potential"
- "Consideration of Scottish Government grant schemes and other intervention measures regarding the extent to which they are accessible (or otherwise) to this sector, and potential modifications to improve this"
- "Partnership facilitation to help build capacity, for example through events to showcase good practice, explore barriers and opportunities, help to generate a sector-wide share identity and spur the development of networks and collaborative initiatives"
- "Drawing in small business expertise from other sectors (e.g. the Enterprise Networks, Federation of Small Businesses, and from agriculture/ food production) to support growth."
- "Further documentation of the motivations and constraints of the sector, and a focus on the impacts including 'sticky money' generated by local businesses, the distinctive role SLFB plays in meeting Scottish Government's policy objectives, including ways that complement the role of larger scale forestry enterprises."

6.1.6 Scottish Forestry after Brexit – Douglas MacMillan - Scottish Forestry Spring 2021 – 3 pages

This is a short article written by Douglas C MacMillan, an Emeritus Professor of Forestry and Land Use Economics, reviewing the current landscape around Scottish forestry in the post-Brexit era.

- Highlights risks of extractive timber harvesting by large companies using external contractors, transporting timber long distances for value added processing elsewhere – little benefit to local community.

    - Identifies the sector is growing however states there “too many communities who do not benefit economically from forestry.”
- 10 out of the 17 UN Sustainable Development Goals focus on local contribution.
- Discusses to meet the UN sustainability goals, significant funding is needed however states public sector finances are in a “poor condition”.
    - Introduces the idea that Scotland considers New Zealand's 1% levy on standing timber.
    - “A levy of just 1% of gross timber revenue (standing) would generate around £3 million per annum in Scotland alone (Forest Research, 2020).”
- Notes the centralization and single-species (Sitka Spruce) focus of the current plantation model, and the risks that this brings.

Objective is “creating a more diverse and resilient forest estate that can also make a significant contribution to the health and well-being of people in rural areas, many of whom feel increasingly isolated and abandoned by an urban-focused modern economy”

6.1.7 Survey of British Sawmills on “Alternative” Species – Report to the SIRT Management Board – Steven Adams, Dan Ridley Ellis - Napier University – 2017 – 9 pages

This survey was conducted in 2017 to “gather information about experience, perception and knowledge of processing and marketing timber from these less common forest species”
The survey was sent to sawmills across the UK, and 44 responses were received.
An interesting visualisation of the “ease of working” with different timbers was produced which saw Scots Pine as a clear leader across all metrics, Scots Pine was also the single species with the highest number of respondents selecting “currently processing” (Sitka was not on the survey as it was presumed to be the default that the alternatives were being compared to).
Sawmillers were asked about market awareness and openness to using a range of alternative species and there was a corresponding range of responses depending on the species, with broadly a more awareness of markets and interest in better known coniferous species like Norway Spruce and Scots Pine, with a mixed picture for the hardwoods, and less awareness of less common conifers.

6.1.8 Conclusion of prior relevant work

- The small sawmilling sector has a key role to play in rural communities, with impact and benefits which stretch beyond the immediate economic impact of local jobs
- There is space, and indeed a need, for both small and large timber processors to optimally make best use of the available timber resource
- However, notes the concern with a tilt towards over-reliance on single species (Sitka Spruce) and industrialised extractive economy based on processing remote to the standing resource
- Well-being benefits from job satisfaction, combined with economic recirculation in the local economy makes sawmilling a vital part of thriving rural communities
- Targeted public sector support (in finance and/or advice) makes a real difference in overcoming challenges around funding, regulatory compliance, access to timber and access to new markets/developing new products
- A 2018 estimate reckons that there are ~6,000 people working in ~ 2000 SLFBs
- Prior work has uncovered a lack of a comprehensive understanding of the size and shape of the small/local forest business in general and the smaller end of the sawmilling sector specifically.
- The membership organisation ASHS (Association of Scottish Hardwood Sawmillers) does a good job of representing its members and is proactive about engaging with them and representing

their views which gives a good insight, this is naturally only for those who have chosen to join up as members (ie hardwood sawmillers).

- Overall recommendation to conduct further research to better understand the sector.

Appendix B – Feedback Received in Survey

6.2 Feedback from Public Sector Engagement Question

HIE not fit for purpose F&L Scotland has helped with supply of logs
Our grant for the sawmill and timber processing was won in competitive SRDP bid
HIE are very easy to deal with, lots of paperwork but always very worth the time if you work out your hourly rate put in for the amount of funding received. Scottish Forestry is the same but you do have to go hunting for the funding more and the turn around times can be very long if you get the application in at the wrong time.
The support grant for processing is very good, however it is not backed up by government intervention in small operators buying logs from forestry so you might have the equipment but good luck buying a single load of Larch or Oak from the commission.
We sent a member of staff on the starting a new business course through the Business Gateway in Inverness a few years ago.
Varied. Forestry and Land Scotland are particularly unhelpful for small scale operators. Very keen to help on a local level, which is then being blocked from higher levels due to varied red tape issues. Happy to explain in detail if a meeting was setup to actually take some decisive action to change these issues. The fact is that it would take hardly any work from management to cut red tape issues and let local offices deal with smaller operators on a small scale (single lorry loads or over). There should be no issues with doing this, yet the barriers are significant.
Helpful on the phone and for guidance, then when the form filling comes in to play the usual wall of bureaucracy put me off. (Eg a requirement for three quotes when only two manufacturers made the equipment I needed, or the requirement for training on a particular machine when no course exists in the UK)
Not a lot We usually just graft for cash and buy what we need
Erratic. We had one funding grant approved and another for similar equipment rejected for reasons I couldn't understand.
When asking for advice or trying alternative practices, bodies seem to adopt a belt and braces, plus an extra pair of braces without being able to justify it. I take it as punishment for even asking in the first place.
Successful application for grant towards harvesting and processing machinery through Rural Payments system

6.3 Feedback on Concerns

6.3.1.1 Supply

This was the most commonly submitted theme, with 18 different entities providing a written response on this.

long term supply of Larch and it's future management. Lack of serious commitment from FLS to use all good-sized logs that are affected by Phytophthora for sawmilling and not destruction. Also a commitment to use all sawlogs as sawlogs and not biomass.
Support for a central marketplace would be good. Timber auctions exist but generally they are for timber ‘pre milling’. An auction for planked timber would be a useful annual event for me.

The Scottish forestry organisation has sold all the larch wood available for the next 2 year to Tillhill or Scottish Woodlands or another major timber purchaser for example our prices went from £29 a ton from the forestry commission last year to now being told there will be no Larch timber from the Forestry Commission Aberfoyle for the next two years however when I go to buy larch timber from till hill (because I've been told Scottish Forestry have none)I'm going to buy it from the Forestry Commission ground in the queen Elizabeth Forest Park and I'm paying 3 times the price £75 a ton plus VAT this is an absolute scandal . All these prices where including delivery for the same quality of logs The Forestry Commission also have some bizarre statement in their contract I am only allowed to buy 100 tons per year before I enter into a bidding scheme with other major buyers for lots of timber far greater than I am able to purchase at any one time store at any one time so once again we are left completely behind by the company that is owned by our country but is not actually servicing the small independent sawmills to operate in the country and who actually put money back into the country I could go on :)
The supply of phytophthora affected timber and the additional cost of processing the timber and maintaining biosecurity.
Maintaining a supply of larch
Our biggest concern is the availability of large diameter/length Douglas fir and larch. it is getting more difficult to source as time goes on
supply to smaller / local sawmills not really considered by forestry commission.
Very difficult to source good quality mill logs in small quantities, i.e 25t loads at a time
Difficulty sourcing good quality sawlogs in appropriate quantities, large sales tends to be the norm. I generally need quantities of 25 or 50 tonnes at a time. Possible from various sources, but not FC in this area who are the main landowner here.
now that the availability of timber has been restricted to the cartel, its becoming difficult to source good timber locally
We are incredibly small scale and use a lot of our products internally so sawmilling is not a major concern. However quality of future timber supply would be a concern if we were larger scale. Too much ground being removed from productive forestry and quality of what is restocked is sometimes poor. Not enough thought or resources given to making native broadleaves productive.
supply to smaller / local sawmills not really considered by forestry commission
Larch Supply is becoming a major concern, ref decent sized Larch to use
The availability of quality timber for large section timber construction is not currently viable in Scotland on a large/sustainable scale for the construction sector. We would welcome a shift in land and timber policy, away from fast yield non-native timber species to native timber of higher quality for use in construction. A rigorous replanting scheme and a realistic period from planting to yield would be necessary, and almost certainly counter to the short-medium term aims of the majority of Scottish landowners. This decision needs to be taken back into the public realm and considered within Scotland's response to the climate crisis.

Number one challenge is sourcing the timber– doesn't matter how much you will pay, problem is availability • Lots of nice trees, FLS land will come up – never offered anything, opaque, goes out to massive contractors • If you get into a stack and a big sawmiller hears, they will cut you out. • Larger mills don't want small sawmillers to have access and will cause problems for sellers if they hear that timber is going elsewhere, so any sales have to be on the QT. Means that to survive you need to be an estate with your own timber, or you need a benefactor, who you are then dependent on / vulnerable to them retiring/changing their mind. • Even when paying top dollar can't get access – volume buyers always win. • Pretty corrupt business – everyone knows this. Large mills will take estate managers on yachts/hospitality etc, to ensure that timber resource goes to them • Forestry Commission don't have their own guys felling, so big parcels go to big companies – there is no room for the smaller companies, fighting for scraps. Guys who we bought the sawmill from had been there since 1930s – pit props, then fencing – thousands of tonnes from local area, had to pay off staff as they couldn't get the wood – only half loads and leftovers.
Sustainable Supply in our area
Larch supply
Supply of locally grown Larch of a reasonable size is one of the biggest concerns for us as this is a popular timber for us.

6.3.1.2 Misuse of resources

The next most common concern was the misuse (or perceived misuse) of good quality timber

Lack of stress grading training for small producers so limiting access to higher value markets.
grading and marketing of timber that should be used for higher value uses, but currently goes into lower value, more temporary uses (eg fencing instead of joinery)
With the addition of the Biomass section (RHI scheme) we constantly see saw grade logs being consumed for biomass... wood prices have risen across the board.
There should be more control over what species get sent for biomass, and there should be logs owned by the state ring fenced in small quantities that have to be offered to small sawmills first - a bit like developers having to build a percentage of affordable homes.
Educating tree surgeons to the value of logs and saving them from waste.
As a whole I find the use of biomass energy such as Balcas completely inappropriate. So much timber lost, just burnt for so-called energy which is readily available in other eco forms.
Quality timber being used for biomass
Reason for many sawmills closing down – biomass kicked in, farmers getting grants, could spend £100/tonne, chipping and spending on RHI, sawmills couldn't afford to buy timber.

6.3.1.3 Scale

Challenges specific to being a smaller scale operation were the next most frequently referenced concern

Small sawmillers are at the mercy of larger competitors, little funding is available to shorten that gap .
forcing out of the small guy by the big players
General concern over forestry practices in Scotland. Very high demand right now, my concern is the larger companies will put smaller ones out of business.
Very little interest or support for small scale sawmilling from government

Older and smaller mills closing down or being taken over by larger industrial scale mills. It then becomes more difficult for small businesses to source small quantities of quality timber.
Retailers dropping prices during leaner periods
Forest Scotland not interested in selling to small sawmills

6.3.1.4 Value/place of sawmills in the community/economy

Visibility, I find that few people know to look out for their local sawmill.
Insufficient distribution of sawmills throughout Scotland
Ensuring that it's seen as a valuable part of the local economy and that it's not just a race to the bottom to be the cheapest possible. That does no good for anyone.
I have a local businessman who wants to invest in my business. I've had to turn him down because of the unpredictability of timber supply. It would put too much pressure on the business having an investor that needed a return on their investment instead of somebody like me who can ride out the rough patches because I love working with wood.

6.3.1.5 Other Concerns

There were assorted other concerns, around the lack of funding, access to funding, regulatory compliance, the lack of appreciation/understanding for the contribution that small sawmillers make to the local community/ economy

The increasing price of Timber.
The change to white diesel is concerning as electric loaders are not yet available and the cost of replacing them with electric vehicles would be too high.
Lack of Collaboration
Lack of help/funding
Not really any money about – all gone to covid recovery. Leader grants – all finished with Brexit. Paying the guys from local area, treating them better than they would be in big mills, sourcing timber from within 20 miles, selling all over the UK, Isle of Man, get no help from anyone, treated like dirt.
Major concern for the mental health of those involved, especially the contractors - Everyone is broken
Other concerns, as ever, are increased regulation.
All the H&S, necessary, in a small business want to get staff to get ticket for forklift – 3-day course (wages) lost work + £1000 per person – as a small business how can you afford that. Risking it with H&S if there is an accident, you're in trouble.

6.4 Feedback from Final Comment Section

At the conclusion, in addition to thanking respondents for their time and patience in completing the survey, there was an opportunity to make any final points, comments, observations.
These could again be grouped into themes, and the most common one was again log supply, mainly around lack of access to the public forest resource:

With the larch disease killing off large quantities of trees it is a concern where the next fencing material is going to be produced from. It is my guess they are not planting any more with the concern of them dying. Spruce doesn't give the same desired life span of Larch when in ground contact. With what we have seen with disease in trees in the past years, it is of concern that if spruce had a similar fate, it would be disastrous for the UK forestry industry.

I am very keen to see if this will lead to any serious discussions with FLS about small scale and then leading to tangible results in the near future. Also then maintaining and improving FLS relationships to small scale producers in the future years.
Pretty please can someone come up with a system that makes sense about how our own timber company the Commission sells wood to use the small sawmills cause as a small sawmill it's not a very great system and it would appear is taken advantage off by the largest competitors Thanks for involving me in this process if you have any others in the future, I will be more than willing to help
Sourcing logs that exist locally but can't be obtained easily due to FC policy of large sales is a frustration. Sometimes companies resell, but direct sales difficult to organise due to bureaucracy.
For my customers one of the biggest things is them getting timber, Forestry commission and such like have no interest in the smaller users, this needs to change going forward, it just can't be big sawmills all the time, you need small to medium sized sawmills for the bespoke side of things and to cut what the big sawmills wont. This issue does need to be addressed!!

The next two most mentioned areas were the Need for Support and Need for Education:

6.4.1 Need for Support

My main gripe constantly is the entire lack of support on offer for small rural non-agricultural businesses. Also if the forestry grant scheme would consider 'nearly new' machinery in its remit that would be a huge help. They forget that those without a big single farm payment or diversification grant simply cannot afford to buy brand new machinery. Ex demo, year old stuff maybe within reach at a stretch but is not supported. I had tried to get a 40% grant on a £30,000 Mini Forwarder to help us with low impact extraction, I was told they would not support this due to it being not EN certified. The one which they would support started at £80,000. Completely out of budget. So we now run a £15,000 quad bike trailer set up which works really well. We have worked hard over the last few years to make our business was green as possible and efficient. All done without support and though profits alone. This is a grating point, as my business could be a bigger employer and a good green model for the governments COP26 and NetZero plans if it where to be helped by some support occasionally.
Some help and funding is a must for the industry or it will fall apart due to cheap imports
The grant system should be available to much smaller holdings and support small scale forestry activities. Protecting the environment rather than using massive oil burner machine that destroy the environment. So much timber is wasted and left on site. Commission sites should allow local to collect firewood etc
A flourishing sector of smaller and more diverse sawmills is essential to fill the gaps left by our large sawmills which process standard spruce sawlogs with great efficiency but make poor utilisation of the rest of our timber resource.

Need for Education

There is a lot of potential but a real lack of knowledge on the practicalities of extracting timber, knowledge of how to plan and structure the forest for the future. It would be really helpful to have some practical demonstrations to see how it's done.
Failure in Scotland to realise the potential for hardwood production.
Scottish Forestry should do site visits to small scale sawmills to offer tailored advice.
It's important that the general public be educated and understand the whole forestry sector , from sapling to fell

Appendix C – Sawmill Register