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Supporting Rural Craft Businesses: A Study of European Shingle Makers

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Der richtige baum,
die richtige zeit,
der richtige weg.

The right tree,
the right time,
the right way.

Contents

Rural Optimism: A Manifesto

At the very beginning of my travels for this report, Linda Lindblad of the Swedish **Hantverkslaboratoriet** exclaimed to me: "Ah! You are a rural optimist!" Rural optimism is a fantastic phrase to describe the philosophy of using rural craft to create resilient economies. The economy of the rural optimists can take root in the production of societally useful things which in themselves are rooted in natural materials and need not be a burden on ecology, indeed very often they can be very beneficial to it. It can inspire a shift change away from the disposable and enforce appreciation of things which require time and skill. Being around and possessing skill brings great meaning and contentment in life.

A resilient network of cottage industries creates and sustains a supply chain which keeps and brings money in local circulation. It would be in our cultural memory to think of cottage industries as archaic, the industrialists will be quick to say they are inefficient. Yet as a model it can be immensely productive. Our monolithic modern industrial systems strip away the human touch, and with it, connection and meaning. A cottage industry model can be very reactive to local needs and in conversation with a local community, in a way in which a large corporation cannot.

This mode can also circumvent the boom-and-bust storms that may come in intangible global financial markets. The deep root that these crafts have in unwavering natural materials couldn't be further away from crypto currencies or stock market derivatives. They are inherently peaceful. Craftsfolk don't start wars overseas. It does not take a great stretch of the imagination to see that with a comparatively small amount of good structure and support, *meaningful* work in rural crafts can be found for a great many, especially young folk, in a way which can be so much more fulfilling and more conducive to living healthy, happy lives – where the sum is greater than that of the parts. Inside of such a model surely lies a means to reduce many burdens on the health service.

The importance of sustaining the skills which come from traditional crafts is immensely important. This is not a glorified, whimsical or romantic lifestyle. In such skill lies a whole technology system which is highly sustainable (genuinely so, not in greenwash terms), is local in nature, has a low or even negative carbon footprint and is very harmonious if not beneficial to nature. Traditional craft businesses related to architecture and the building trades underpin the maintenance and repair of all the historic buildings we have in the UK. Without them, there would be no castles, stately homes, cathedrals, windmills or Tudor timber frames.

Such crafts make us appreciate what we consume. We are consistently divorced from the making of things and so craft provides a means for reconnection. Increased appreciation encourages us to take only what we really need. They gift and create beauty in our lives and the built environment. This sentiment is best summarised by the words of William Morris, "Have nothing in your house that you do not know to be useful, or believe to be beautiful."

In a time of climate crisis, biodiversity loss and the age of oil, the old ways hold so many solutions for the problems of our time, but they need a distinct sensitivity and broad, multi-faceted understanding to cultivate their continuation. They seldom satisfy the cost-benefit-analysis measure or the structure required of conventional business plans. If an emerging craft business takes a business loan in the conventional way, it can be disastrous.

This is why to make a living from traditional crafts and keep the spirit of these ways alive is always an uphill struggle. There are huge barriers facing someone wishing to start making a living in this way, to stay in practice, and to know what to do when it's time to pass it on. It is in this myriad of factors I hope to find the successes and make some suggestions for a better way forward.

Introduction

A Roof Made of Wood

Much of this research is inspired by the challenges I have faced in following my own chosen craft of shingle making.

A shingle is a roof or wall tile made from wood, and before the advent of the industrial revolution, could be found across the UK right back to Roman times, often adorning the roofs and sometimes walls of many cathedrals, churches, barns and cottages, particularly in areas with historic forests and forest culture.

Scotland has a significant history of its own in the use of roofing shingles which has been written out of history, but the craft has died out, so it is necessary to turn to Europe to understand the detail to decipher how best to rejuvenate and reimagine the craft in the 21st Century. There is a huge appetite for roofing shingles in the UK, we import them by the container load from North America every year. But why import when we could have a homegrown product?

How I came to learn shingle making is a story in itself. My route to craft was longwinded and unplanned. It began with volunteering at a steam railway in my teens. When I left school with good grades, I asked the careers advisor about practical vocational work and it crashed the system. All of my peers were off to university but I wanted desperately to use my hands, to make and create. In the end I skipped university and channelled all the skills learned at the steam railway into a career with Network Rail, working as a Signalman in rural, mechanical signal boxes, many of these historic structures and the machines inside them being over 150 years old. They were amazing, living, breathing pieces of industrial heritage, sadly now all gone.

The conditions of this work afforded me time to study and develop interests in practical fields; I read book after book between the trains and took myself on building courses to develop skills on my days off, all facilitated by good pay and conditions. Initially my interest in building was inspired by the new wave of 'ecological construction' techniques, like straw bale building. Gradually I came to see that these methods were only plagiarising from the traditional building handbook; all roads led back to the traditional building crafts. When Network Rail began to close the mechanical signal boxes and transfer control to windowless urban control centres far, far away, my world fell apart. I couldn't cope with spending the rest of my working life sat in front of a computer. I needed a fresh start. A little lost in life, I ended up living in Austria.

It was in Austria that I apprenticed in shingle making under the **ausbildung** system at Austria's national open air museum, the **Stübing Freilichtmuseum**. After completing this I was on the way to setting up a workshop and getting busy, but the pandemic shattered my stability and means to earn, and then Brexit dictated a return to the UK. So I set my sights on establishing a new workshop in northern Scotland, seeking similar landscapes and a quality timber supply like that of Austria. It didn't take long to understand how drastically different the forest culture was, and here was where the first questions started to emerge: why is this so?

Whilst I have had some success in establishing a dedicated workshop, the road has been difficult with many unnecessary challenges. Having come from a country like Austria where governmental, cultural, educational, material and economic differences made it appear eminently more possible, I have since become been fascinated with the anthropological, environmental, economic and historical factors that make or break the perseverance of niche rural crafts. Shingle making is just one part of a much bigger landscape, affected by the same conditions which impact many other crafts.

All crafts are fussy. Fussy for the right base material, which needs to be grown, farmed, harvested or quarried in specific ways. The need for such materials is seldom satisfied by what is readily available through the industrial systems of supply that fill the shelves of our supermarkets, wholesalers and builders' merchants.

The Churchill Fellowship | Methodology

I have chosen to focus specifically on shingle making in Europe for the purpose of this report to act as a constant to tie together the many different threads and variables that orbit around all rural crafts.

The challenges of manufacturing roofing shingles are very similar to the challenges that someone may face should they wish to build boats, make furniture, tan leathers, make lime, thatch roofs or grow flax and weave linen.

In the summer and autumn of 2024, with support from the Churchill Fellowship, I travelled across northern and central Europe to explore how rural craft business practices are supported to be established, maintained and passed on to the next generation. In turning to Europe, I hoped to find approaches and solutions to the multitude of challenges which might exist outside of the sector here in Britain.

This report started life as a travelogue, telling the story of the travel and those encountered on it. I felt that in the stories and the observations lay a lot of what I was wanting to capture: the conditions which make for successful rural craft businesses. These conditions are subtle and hide between words and cannot be entirely recorded by uniform measures and statistics alone. However, recounting the travel in a linear story didn't bring together the themes which crossed borders, so this report is split into four sections, exploring the four corners of the life cycle of a craft business, and weaves together observations from the travel with personal experience:

1. **Starting a Craft Practice**
   Making the leap to establish a new craft business and the challenges therein

2. **Sustaining a Craft Business**
   Continuing a practice and staying in business

3. **Legacy**
   How skills and a practice are passed on

4. **Education & Training**
   How children and adults are taught practical skills and the routes to craft work

A 'rural craft business' is my loose definition for a wide array of production-based livelihoods which take place in rural communities, outside of conventional farming and generally on a self-employed basis. At their core they depend on the resources of the natural world – timber, stone, aggregates, or the products of agriculture. They all have their origin in the traditional crafts associated with agriculture and historic buildings. In this report all mention of craft, craft trades, rural crafts, craft businesses – traditional, heritage and rural, should be assumed to be referencing a rural craft business.

The focus on *rural* craft is specific to this research. Whilst many craft practitioners live in towns and cities, and although their practices overlap or are identical, my intent is to shine a light on the way that craft work can from part of a low-impact, genuinely sustainable, rejuvenative culture in rural settings and contribute to reducing rural depopulation, making for an economically resilient and ecologically sound sector of the economy. This sector can contribute to the creation of far more independent local supply chains. In the context of climate change, this is vital to the development of a genuine low-carbon future.

This report is also written with conditions in Scotland specifically in mind, which is seldom the centre of focus in this field and is omitted from much past research. Although there may be generalisations for the UK, it is to Scotland to which this research and the means to find solutions to the challenges are focused.

I hope to publish a more comprehensive study of the regional styles and details pertaining to making shingles in due course, having collected a hundred or so examples from the travel. A list of workshops visited follows in the next chapter. A more detailed history of shingle making in Scotland can be found in Appendix I. Papers are not referenced directly in the text although sources can be found in the bibliography in Appendix II.

Rural Crafts, Resilient Economies

A 2012 study reported that heritage craft contributed £4.4 billion gross value added to the economy. 2024 figures from the Department of Culture, Media & Sport showed that there are 10,000 employed in the sector; an earlier 'Mapping Heritage Craft' report in 2012 reported 210,000 are involved in crafts in England and the Crafts Council (England) concluded "there are 149,500 people employed in the craft economy" in 2012. The statistical measures for craft, and how it is defined and recorded is patchy, but inside these figures, it would be fair to say craft work forms a substantial part of the economy – perhaps around 1.5%.

When it comes to the manufacture of shingles, import/export figures from the 'HMRC Overseas Trade Records' (see Appendix IV) show that the UK was a net importer of shingles and shakes for the data available between 2000 and 2025, averaging a value (and trade deficit) of £2.5 million and weight of 1,575 tonnes per year. The majority of imports come from Canada. Exports from the UK are negligible. This small and niche sector is a drop in the UK economy, but highlights the trade imbalance which is present throughout many craft trades and sectors where value can be added to natural resources and demand exists to support a variety of craft livelihoods, but they generally utilise imported natural products to meet that demand. In the case of roofing shingles, the environmental impact of importing/shipping such quantities of forest product from overseas cannot be underestimated.

I have come to care deeply about seeing rural communities as places which are vibrant, lived in and full of diverse life and, specifically, places of production which can counter our unhealthy consumer culture. The trend of urbanisation, which pulls young folk from the country to the towns and cities, or keeps them wed to the city, despite generational iterations, has never really abated since the industrial revolution. Many idolise having a slower paced rural life, more connected to the natural world, but don't know how to get there.

When you consider that with small changes in policy, some better, more focused support structures and signposting, a bit of opportunity and a more level playing field, there is great hope in rejuvenating and creating an economically diverse, resilient economy which is modern yet rooted wholly in tradition. Rural crafts connect us to our past and forebears. This connection to the past gives great meaning and context in where we have come from and how to live within our means. There is also a degree of urgency to this, as there is a growing list of traditional crafts being marked as endangered and at risk of loss. Climate change is here. It's time for action.

Owen Bushell
December 2025

List of Research Locations

This research involved visiting mostly shingle makers and manufacturers and open air/ethnographic museums across Europe, starting in Scandinavia, then heading south through the Baltic States to Poland and then Romania. From here I headed west to the Balkans before travelling in the Alpine states, then returning to the UK via south-west Germany. The list of the visits is as follows (in approximate order of travel):

	Sweden	
1	Kalle-Magnus Melin	*Researcher, 12th Century Carpentry in South Sweden, University of Gothenburg*
1	Linda Lindblad	*Hantverkslaboratoriet, University of Gothenburg*
2	Börje Samuelsson	*Shingle Maker & Carpenter, Tranäs*
3	Bengt Jo Bygden	*Shingle Maker & Hewing Specialist, Bråta*
3	Södra Råda Church	*Replica of a Historic Church, Rebuilt by a Community of Master Craftsfolk*
3	Jurgen Ånge	*Shingle Maker & Carpenter, Björsäter*
4	Mattias Hallgren	*Millwright & Carpenter, Director, Traditionsbärana, Forsvik Bruk*
5	Anders Fransson	*Shingle Maker & Carpenter, Solvarbo*
6	Halsinge Takspån	*Shingle Manufacturer & Roofing Contractor, Kilafors*
	Finland	
7	Nykarleby Spantåk	*Shingle Manufacturer & Roofing Contractor, Nykarleby*
8	Livady Arkkitehtitoimisto	*Conservation Architect, Helsinki*
8	Jani Puhakka	*Head Conservator, Seurasaari Open Air Museum, Helsinki*
	Lithuania	
9	Gintas Čekauskas	*Čekauskas Ethnographic Museum, Lekeciai*
	Poland	
10	Żadlak Gonty Drewniane	*Shingle Manufacturer, Podsarnie*
10	Warciak Drewgont	*Shingle Manufacturer, Podsarnie*
10	Jan Budd Gonty	*Shingle Manufacturer, Podsarnie*
11	Orawski Ethnographic Park	*Open Air Museum, Zubrzyca Górna*
	Romania	
12	Adi Pescaru & Greta Zsak	*Bihor Province Ambulance for Monuments, Hinchiriş*
13	Lucian Robu	*Director, Astra Museum of Traditional Folk Civilisation, Sibiu*
13	Andrea Bernath-Doncuțiu	*Head of Research & Conservation, Astra Museum, Sibiu*
14	Carina Tataranu	*Oltenia Province Ambulance for Monuments, Câpâtânesti*
14	Nicola Toader	*Shingle Maker & Log Hewer, Câpâtânesti*
14	Eugen Vaida	*Director, Ambulance for Monuments*
	Slovenia	
15	Nina Koželj	*Director, Skodlarstvo Koželj (Shingle Maker), Stahovica*
16	Nejk Dijak	*Shingle Maker, Skodlarstvo Bohinj, Bohinj*
	Austria	
17	Martina Piko-Rustia	*Urban Jarnik Ethnological Institute, Klagenfurt*
17	Dr. Ingeborg Schmid	*Director, Kärntner Freilichtmuseum, Maria Saal*
18	Christopher & Stephan (Surnames unknown)	*Shingle Makers and Carpenters, Großkircham*
19	Klaus Seelos	*Head of Conservation & Maintenance, Stübing Freilichtmuseum, Graz*
20	Josef Kalser	*Retired Shingle Maker, Leisach*

20	Manfried Wendlinger	*Shingle Maker, Thal (East Tyrol)*
21	Thomas Lohninger	*Shingle Maker & Forester, Attersee*
22	Werkraum Bregenzerwald	*Exhibition Space, Andelsbuch*
22	Edwin Weiser	*Shingle Machine Manufacturer (Semi-Retired), Schnepfau*
22	Florian Bär	*Shingle Manufacturer, Wieden*
	Switzerland	
23	Patrik Stäger	*Shingle Maker, Untervaz*
24	Eva Gredig	*Shingle Maker, Thalkirch*
	Germany	
25	Theo Ott	*Shingle Importer & Former Manufacturer, Hammerau*
26	Schindelzentrum	*Shingle Importer & Former Manufacturer, Salma, Oberstaufen*
27	Marius Frommherz, Schwarzwaldschindel	*Shingle Maker and Carpenter, Kleines Wiesental*

This list excludes the many additional historic shingled buildings visited during the research. This included a number of shingled churches in Sweden, windmills and agricultural buildings in the Baltic states and a large quantity across the Alpine states. I intended to visit shingle makers in Bosnia and Croatia; however, ill health during the travel forced the cancellation of this part of the research. Some manufacturers did not welcome visitors or did not respond to enquiries, so it was not possible to visit any of the identified workshops in the Italian South Tyrol and French Vosges regions. The travel for this research was made between August and November 2024. Notable names and institutions are **marked in bold** throughout this report.

List of Thanks

If I was to include all the tales of the open doors, fellowship in craft, hospitality, mishaps, experiences of supermarkets in other countries etc, the crux of the issues I have been entrusted by the Churchill Fellowship to explore would be lost. There have been many wonderful people on this journey who have made for "life prolonging" (thank you Bengt!) experiences where the relativity of time stretches out and a single day can feel like a week. Not to mention all those who have taught and inspired me over the years. Special mention is due to Reforesting Scotland for their support towards printing this paper. Thank you to you all.

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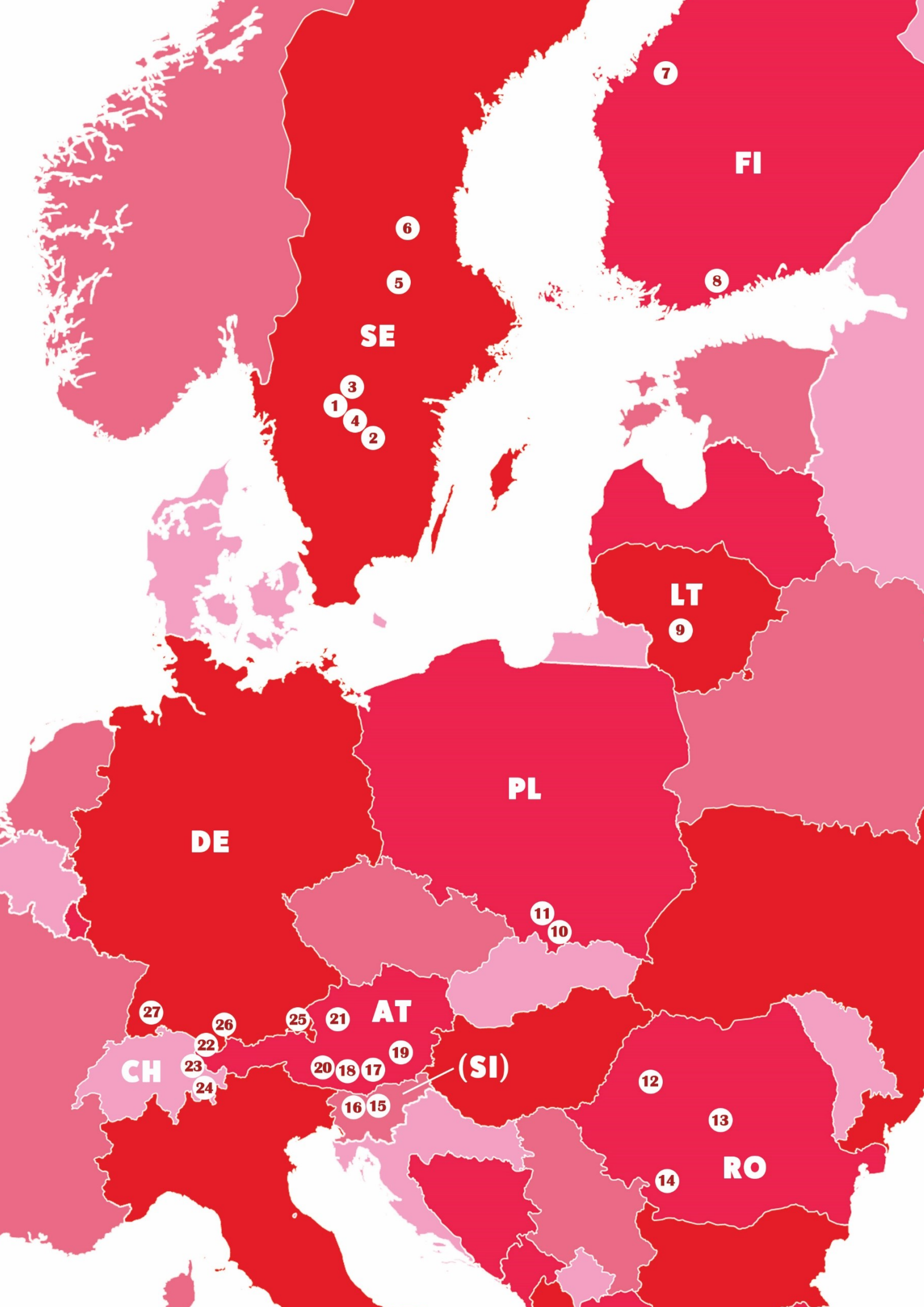
And of course, a special mention for Emma, for all the encouragement, support and for being the best proof reader, critic and editor I could ever hope to meet.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Chapter I: Starting a Craft Practice

In this chapter I will explore how craftsfolk can access unprocessed natural materials, with detail relating to forest management and the underlying economic conditions which have huge influence on someone starting a rural crafts business: how they might secure a premises for their work and the bespoke machinery for their practice.

There comes a time when it is necessary to take a leap into making a living from a craft. Depending on the individual circumstances, it may be that a hobby has grown into a vocation, or an apprentice has qualified and is starting a first job. Perhaps an experienced employee wants to make a jump to self-employment, establishing a business of their own.

At this point, taking courses stops quenching the thirst for knowledge, or being in the pay of someone else doesn't scratch a curious itch. The only thing to do is get into practice and either go it alone or partner with others. From the confines of a stable PAYE job, or a more perilous situation on zero-hours contracts, taking the leap to self-employment after a period of time collecting skills, or even transitioning to an employed role as part of a company, is a hugely daunting task. This pivotal moment can be alienating – friends and family may not give the best advice, if they have not trod a similar path themselves. There is no standout mentoring network to guide people through the hoops. Business advice is tailored towards taking on debt; bank loans do not necessarily suit the subtle complexities of a rural craft business which can be hungry for investment and very slow to produce returns. The fear of losing the security of a stable job, or the financial pressure to keep the money coming in, can simply be too much for some.

Land Ownership in Scotland | A Brief History

To aid the interpretation of the next sections, it is necessary to explain an extremely abridged history of the changes in land ownership in Scotland.

Starting in ancient times with the Picts and Celts, with various Irish and Norse influences, after the forfeiture of the Lord of the Isles in the 15th Century, the clan system emerged. Many of these clans took up arms against England in the Jacobean revolutions of the 18th Century, which ended in massacre and defeat on the fields of Culloden Moor in 1745.

Within a hundred years the social landscape of Scotland had changed immeasurably. Clan chiefs lost their power or became indebted and their lands were sold. During the early 1800s the period of the 'Highland Clearances' began, which saw many upland tenants who lived in 'townships' evicted (sometimes forcibly), in favour of the hardy Cheviot sheep. Sheep were more profitable than human tenants. Many sailed for North America on one-way tickets or took poor coastal ground. Glens which had sustained people for thousands of years became vacant.

Throughout the 19th Century many of the traditional clan chiefs were disposed by new landowners who developed the 'sporting estate', popularised by Queen Victoria at Balmoral, with land management favouring conditions for deer, grouse and sheep.

From then until now, there has been nearly 200 years of upland grazing, which has had huge consequence for forest regeneration. Between the wars, and especially after the Second World War, the Forestry Commission planted vast tracts of 'plantation' forestry, which are the basis of much of the forest stock of Scotland.

Since Victorian times the model of the 'sporting estate' has reigned supreme as the primary model of land ownership in Highland Scotland, which is one of the most concentrated in the world. It is said that around 430 people own half of Scotland.

In recent times a new wave of owners begins to change the landscape entirely. Dubbed 'green lairds', the majority are overseas billionaires and advocates to the new movement of 'rewilding', which seeks to let the landscape rejuvenate through natural succession. This involves management to control or completely remove the primary grazers, the sheep and deer, to allow for natural forest regeneration. Some iterations support the reintroduction of predators to encourage 'trophic cascades', such as wolves. There is much more detail to the implications for ecology and the arguments for and against, which is outside of the scope of this report.

The key point is that we continue to live in a time where there is no concerted drive to have people living and working from and on rural land, especially in historically populated upland areas.

Forest Management

With the focus of this research being upon shingle makers and manufacturers, I was able to see across Europe different approaches to forest management, and how they have an effect on the craft.

Fundamentally, there are two approaches to managing forests commercially. The first and most common method in the UK, of *clear cutting* a forest which had been planned and planted by hand a generation or more before, originated from Sweden in the 1800s. Known as *plantation* forestry, it makes up much of the forested landscape in Scotland. After the First World War, the need for improving home-grown timber stocks was clear and so the Forestry Commission was established. Much of these forests centre around fast-growing varieties such as the Sitka spruce and other coniferous species, such as Douglas fir and European larch.

The second mode of forest management is known as *continuous cover*. This is the more traditional method of managing forests, with trees selected and cut within an existing woodland, either with small areas being clear cut on rotation and felled to create new openings for new growth, or through the piecemeal extraction of mature trees, leaving smaller openings for new growth.

In simple terms, the latter mode of management, especially piecemeal extraction, means that new growth must fight for the light, so tree growth is focused on reaching the forest canopy rather than branching out as a *park tree* would do when it has no surrounding competition. This type of *forest tree* can have very straight, branch free (and therefore knot free) trunks and is sheltered from the wind (which reduces twisting in the grain) by the surrounding trees as it grows – these being the essential components of a good tree for shingle making and many other crafts: straight grown and knot free.

The other advantage of continuous cover forests is the means to select timber whilst it is standing. I walked amongst many forests with experienced craftsfolk on this journey and all of them had their own wisdoms to tell which timber was right for the job. Whilst there would be a sprinkling of superstitious folklore, many of these wisdoms hold true – such as understanding the twist of the bark and fibres to understand if the tree has been exposed to wind as it has matured. I have yet to meet anyone in the UK who holds this kind of understanding, which brings into sharp focus just how much knowledge of forest management practice has been lost due to our industrialised ways.

That said, straight grown timber can still be procured from clear cut forestry. For this, regeneration must be very tight and dense. Natural regeneration, where new saplings germinate from the seed of their parent tree, can achieve this. Manual planting seldom does, as the saplings which are planted have a few years head start upon the saplings which may come through natural regeneration.

Natural regeneration is only possible when saplings have a chance to establish, and the common theme of establishing any forest in Scotland quickly brings the topic of deer management to the fore. There is no doubt that deer populations in Scotland are artificially high and pose a serious challenge to natural forest regeneration, which is the mother of the kind of good quality timber that future craft trades will need.

Raw Materials

Some crafts by nature have very low overheads – take the very compact craft of spoon carving, for instance. Pitched against something such as timber framing, to establish a workshop for the latter requires significantly more space to be efficient – likely a yard, expensive specialist tools and a means to transport heavy logs and frame components to site for installation. To make a timber frame, you need timber, a dry stane dyke, stone, a linen cloth, flax. How do you source it?

Access to raw materials can be one of the most prohibitive factors in starting out. In almost all cases, materials are accessed via an intricate web of social connections – someone who knows someone, who has the raw material and is prepared to part with it for an affordable price.

The most obvious element in a particular rural craft business equation is often the hardest to procure. Traditional crafts are all inherently simple, as is always reflected in the historic architecture of a particular region. Craft work is vernacular in its nature: vernacular materials are the fuel of traditional crafts, materials of the place they are from. If you've grown up in the same place and are inheriting or taking on a business you've apprenticed in, the supply chain will already be established. For the multitudes of new entrant craftsfolk coming into the sector, this can be a much, much harder task which can take years to develop.

For shingle making, I need wood. Specifically, I need certain varieties of tree, such as larch, spruce, aspen or oak. Even if I am successful in finding the right species, they may not have the right quality for my work. I need straight grown, knot free timber, which has grown slowly and so has tight annual rings. Much of the commercial 'plantation' timber which populates the forests of Scotland may be straight, but it is heavily knotted and fast grown, so is of no use for manufacturing shingles. Fast grown timber does not have the resilience of slow growth timber. It is the winter wood which gives the resilience to timber. Other timber trades are equally fussy in their needs. The best thing for me to do is walk in a standing forest, so I can read the trees that are growing there, see the conditions and select the right timber for the work I need. The skill and knowledge to read standing timber is something I have learned from my time in Austria, it is neither commonplace in the UK nor industry standard.

As a small-scale maker, I am up against a financial culture which is mainly in favour of clear cutting forests so that landowners make a large profit when the forest reaches maturity, as opposed to one which would select a few trees annually, over successive years, which would bring the landowner a steadier but smaller financial trickle. Logs from mass harvesting stacked high on the forest track are very hard to read. Buying timber this way has high financial risk when you need to see and study each log in isolation to ascertain if it is good for shingle making.

The problems begin here. Who owns the land? Often historic land holdings do not appear on the public register and in Scotland require a patient and costly search of the Sasine Register. How do I speak to the right landowner, or their agent? How do I go about beginning this conversation? Will I be able to explain or be understood in asking to fell a tree? Will they take me seriously, or think I'm a dreamer? Is my enquiry even worth answering, because small-scale felling really isn't profitable to the landowner? If they are amicable, how do I fell, extract and transport it?

If I can get it to a workshop, will there be sufficient access for an HGV to deliver these logs? Is there room enough to unload them? Have I got the cash flow to pay for haulage? How will I handle them when they've been delivered, cut and split them? When I have made my shingles from them, how will I load and distribute them?

In isolation, each craft worker is vulnerable to the whims of every landowner and manager they meet in trying to procure the raw materials to feed their practice. All such craftwork is built on interpersonal relationships – which is why, when a craft business dies, the network it may have built up over a long, long time, dies with it too. Restarting production is never so simple.

Many of our large institutions are not geared up to deal with the small-scale craft producer. In my experience of contacting Forestry & Land Scotland, they simply do not have the resources, language or process to accommodate 'the little guy'. Filling out a generic website enquiry form will often get you nowhere, but knowing and having a good regional contact, who is easy to speak to, can understand your specific needs and has resources to help you, will. Those frontline managers can make or break a suitable material supply. In my case with producing shingles, it was the amazing support of a Woodland Trust regional manager, **Ross Watson** (CF, 2023), who gave up time and resources to facilitate the procurement of larch from a forest which enabled me to start producing shingles after returning from Austria in 2021.

Inflexible industrial supply chains can be extremely restrictive for craftsfolk sourcing materials. As a landowner, why spend your resources on a customer who may offer a very small return, even if paying a premium for material, when you can deal with a more industrial consumer, who will purchase more material and be less of an administrative burden?

It would be beneficial to have collective representation among craftsfolk, for the means of procuring materials. This is firstly where certification of a maker (see Chapter IV) has an extra value, in providing that cultural vouch that a maker is genuine and skilled. For timber-based crafts, an existing sawmill can facilitate and feed many smaller scale producers with quality timber, set aside from the large volume that they may process. Certainly in my travels many shingle makers were allied in one form or another to a sawmill, if they did not have their own to make use of lower quality logs.

Consistent public education on heritage crafts helps a lot here too, for when traditional craftwork sits larger in the public mind, it makes explaining what you're doing much, much easier. I would not have the answer for what collective representation may look like and how it could work in practice to benefit a community of makers, beyond pooling resources to attain better purchasing power, be it through a craft or trade association, union or guild, which can challenge the current competition, but it is worth a thought and noting here.

Natural Regeneration & Growing Fine Timber | Sweden

When saplings naturally regenerate and grow tightly together, similar conditions are achieved to a forest tree and so all saplings collectively bolt for the light trying to out-compete their neighbouring trees. I saw this to good effect in Sweden on a site which had been *clear cut* and had been left to naturally regenerate ninety years prior. Contrary to a common view in the UK, these trees did not need, and had not been *thinned* – that is, the process of a forester cutting out a proportion of the trees before full maturity. This, in combination with strong deer control, had the effect of promoting dense growth in the particular stand of very fine, tall and straight pine trees I visited. Another vital quality for good shingles.

In order to make the best use of all parts of the tree, the shingle maker **Bengt Jo Bygden** had experimented by removing areas of bark in the seasons ahead of felling. When the bark of a coniferous tree, in this case, Scots pine, is removed, the tree responds in the only way it knows how – by flooding the sapwood with resin, to fight off infection, beetle attack and heal to live another day. Sapwood is the living, outer part of the tree, underneath the bark. Heartwood is the structural part of the tree, found inside the sapwood layer. By doing this on each quarter of the trunk over a period of four years, the tree responded by flooding all sapwood in the trunk with resin. Normally sapwood is removed during the shingle making process as it has poor rot resistance, but as this was resin-impregnated, it had similar qualities to the heartwood. This meant more of the densely grown, tight growth-ring timber in the sapwood could be used.

Such patient forest management practices are hard to implement in the UK and Scottish forests, as they are far outside the cultural norms which have become established and centre around clear cutting *plantation* forests, which

generally produce knotty and fast grown timber. Fast grown timber with widely spaced annual rings does not provide good natural resilience against decay. Within *plantation* forests, there can be exceptional quality timber, but this can easily be lost inside the process of industrial harvesting. It is hard work to encourage harvesting firms who are on tight timescales to set aside potentially good logs.

Another huge challenge which faces British forestry is the march of the Ramorum disease (*Phytophthora ramorum*), which plagues the Larch. If found in a standing forest, those affected trees must be felled. This has disastrous consequences. Larch has excellent resinous timber, is very rot resistant, and one of the primary species for making long-lasting shingles. Ramorum disease, along with 'Ash dieback' disease (*Hymenoscyphus fraxineus*), means we face losing two highly valuable tree species which are integral to a wide variety of traditional rural crafts.

All in all, it is very challenging in a widespread culture of *clear cut* to find a way to encourage landowners and even our state institutions such as Forestry & Land Scotland (previously the Forestry Commission in Scotland) to consider the small-scale craftsfolk in the management of forests. The success of procuring timber from established forests by small-scale craft producers only succeeds with the support of local managers of either state or private land holdings above and beyond anything else.

In the same light, although outside the scope of this research, similar challenges exist for those seeking to quarry stone, grow fibrous crops (such as flax and hemp) for weaving, tan hides and all manner of other such activities. The struggle for thatchers to find suitable straw is well documented – such hopes live and die when a door is opened, or kept closed.

Understanding Economic Pressure

One thing is certain in Britain: the cost of living is much too high. Rents are inflated, property is too expensive. The unregulated speculation that has allowed this to unfold is to blame. In the last decades billions of pounds of on- and offshore money have flowed into land-based investments across the UK. The knock-on effect for everyone is that the cost of land, buildings, workshops and homes is unaffordable. Wages have been stagnant for nearly twenty years and have not caught up to equalise this wealth inequality. The cost of living cannot be ignored in understanding the pressure which prevents many from pursuing rural craft livelihoods.

What is quite astonishing is that the economic conditions which make or break the means to pursue or maintain a craft business are seldom explored. Reports, discussions and conversations centre around skills training and provision, perhaps the means to obtain grant funding. They never look to the conditions that lie at the heart of every single craft business and how to make it work financially. The House of Lords met to debate how the government is supporting the craft industry on 12th June 2025 (Hansard 846). Despite many valid and crucial points being made, at no point did anyone raise the issue that the property and wealth inequality landscape in Britain is strangling the opportunity for this sector to punch well above its weight.

Economic conditions must be at the forefront of the conversation when it comes to heritage crafts. Affordability is a key deciding factor in someone making the leap into establishing a rural craft business

Conditions for Rural Living

In Scotland the historic township or 'farmtoun' was the primary mode of living in upland areas, with small communities living together and sharing resources with integrated homes and workshops. The way we live now in rural areas is unrecognisable to this older model, many rural settlements are not more than an extension of the suburbs. Most of the 'farmtouns' in Scotland are now abandoned, for many reasons, and often what remains is in

ruinous condition. Questions arise: What has driven this change? What are the barriers to craftsfolk to reintegrating into rural life?

One of the primary barriers to integration is second home ownership. This causes significant problems in the whole of the UK, with acute problems in National Parks and scenic areas. This increases the demand on housing stock, and so demand outstrips supply, and both house prices and rents can increase. This is great if you own property and want to sell – it is terrible if you are trying to keep afloat in the place you've lived all your life. It is worst when you may be trying to move to a rural location. I know from bitter experience in my native Norfolk the exclusionary consequence of this kind of inflation.

Because many second homes are rented for holiday lets, this has created a parallel economy, which is rooted in the service economy. This of course generates local economic stimulus – in renovating, cleaning and maintenance along with providing support for ancillary businesses, such as cafes, shops and pubs. However, this sector is wholly dependent on tourism and so is very vulnerable to external economic changes.

In Slovenia, **Nejk Dijak** of **Skodlarstvo Bohinj** had many complaints of the consequences of the hyper-tourism to the Triglav National Park and Lake Bohinj in the Slovenian Julian Alps and the consequences for his employees in having access to affordable housing. As a property owner or investor, why rent to a local all year round when you can rent to tourists for six months of the year, and still make several times more money? In desiring to develop and expand his workshop, the price of land has skyrocketed and means to develop it has become more restrictive. Tourism can be a lifeline for some craft trades, when the product is consumable by the tourist. But roofing shingles, as a building craft, have no market in the gift shops of Bohinj, yet he makes a product which directly challenges the importation of North American shingles. Despite thousands passing through each year, the story of making and producing in this particular workshop touches none of those who visit, beyond passive enjoyment of the historic shingled churches.

In order to be resilient, rural economies must be diversified and it is necessary to strike a balance between the manufacturing and service economy sectors. Too much favour to the latter contributes to the 'Disneyfication' of rural places and they become a pastiche of what they were. Craftsfolk need homes, so when the housing stock is reduced, the subsequent inflation can price many out of the market. Holiday lets suck much life and soul from rural communities, especially out of season.

Finding Workshops & The Importance of Secure Tenure

Every rural craft business needs a base, but it is very difficult to find workshops in rural settings. There are three main options: 1. utilising an agricultural building, 2. renting a commercial unit such as on an industrial estate or, 3. working from home.

Regarding the first option, we have lost the spaces for production which previously existed in rural communities. Across the UK, relaxed planning regulations saw the growing popularity for barn conversions throughout the 1980s and 1990s. This robbed the rural landscape of much of its historical agricultural and production infrastructure. Many of these spaces were the venues of rural craft industries before they became residential: *The Old Smithy* etc. This change marked the end of many traditional craft businesses, which have never been replaced. The unconverted spaces which are left are extremely sought after, and this competition eclipses most rural craft businesses from utilising them. For the remaining buildings which may be potentially available, finding out who owns them and being able to meet the right person to speak to is a huge challenge.

Commercial spaces are rarely available in rural settings and so accessing such spaces can dictate commuting to nearby towns or cities. Industrial estates can be soulless. Working away from rural settings makes for an immediate

disconnect between the natural resources and landscapes which feed rural craft businesses. Commercial leases often have a relatively short notice period for termination; such topics are discussed in the next section. Rent, rates and energy costs in such units can be a huge financial burden before production begins.

Working from home wholly depends upon individual circumstances. Crafts often need space. Undertaking commercial work at home can impact other factors such as insurance and rates. Rented properties can have contractual stipulations to prohibit garages or outbuildings being used for commercial activities. Bringing in the rent at home poses the same challenges as renting commercial space.

Ideally craftsfolk need to own buildings outright in order to mitigate the high costs of rents and mortgages. However, the majority do not have a secondary source of income, cash savings or inheritance to facilitate this.

Security of tenure is the foundation stone of any long-term, successful craft business. Security comes from outright ownership, but when this is not possible, there are other conditions which can benefit craftsfolk.

Before investing time and money in workshop adaptations and the development of supply and distribution networks locally, craftsfolk need to know they will be able to stay in their premises for the long term. Without this guarantee, such investments entail high risk. Most standard commercial leases have a restrictive notice period to terminate, meaning the agreement could be brought to an end at any time. No matter how long a tenant has occupied a space, the spectre of being given notice is never far away. This means that all business planning and expenditure on such properties must be viewed through this lens, which discourages investment, growth and progress.

It wasn't always this way. Agricultural rents have historically been much cheaper and it would be more common in past times to find long-term leases readily available. This enabled the tenant to invest in the building to suit their needs without threat of future eviction during the lease period. Historical records of leases taken on meal mills in Scotland show this quite clearly. Many of these were for peppercorn rates, in exchange for the tenant taking on responsibilities for repair and maintenance.

The truth is that in the UK there are not enough venues for workshops in the rural sphere. When they exist, they are often either inaccessible, unaffordable or unworkable.

However, in Scotland, there is a massive stock of unused, historic residential and agricultural buildings, mainly in the care of the estates. These are left unoccupied for several reasons:

1. There is insufficient incentive to repair them.
2. Family farms have declined.
3. The buildings have a value beyond financial value.
4. In condemned condition, they do not attract council tax. Renovating increases overheads.
5. It is perceived to be cheaper to construct new buildings rather than renovate older ones.
6. Historic reasons.

Firstly, the incentives. This mainly stems from the fact most of these historic buildings do not have any protection against demolition. There is no mechanism to mandate they are kept in good order when they are unlisted. There is no grant support to subsidise their repair.

The decline of the family farm and associated rise of big agriculture and economies of scale means that many traditional farm units, a farmhouse, steadings and associated land are now leased to other tenant farmers. The fragmented nature of modern farming means that the farmhouse of such holdings is seldom occupied by the farmer and frequently stands empty. The interest of the leasee is upon the land, which may in turn be worked by contractors. Such farmhouses and steadings within the larger farm lease can be left unused with no obligation for the leasee, or landowner, to keep them in good order.

For some estates, owning buildings but keeping them empty can be of greater value than the financial gain which may be obtained from leasing or selling them. This being the case there is more to gain by maintaining the status quo than to seek to repopulate such premises. Similarly, by keeping them unoccupied and in poor or unimproved condition, they do not attract council tax.

The renovation of historic buildings can be costly, mostly because their repair requires substantially more labour than modern constructions. However, when viewed in the total lifespan of the building, timely repair pays off in the long run. The materials for repair, such as stone, can be sourced for free. Because many traditional agricultural buildings are of diminished proportions, they cannot accommodate modern tractors and machinery so easily. When there is limited capital available for investment, the perception is commonly that modern construction will be more suitable; however, over the lifespan of these buildings, they may not last as long as the vernacular architecture. Reuse of existing buildings has significantly lower carbon footprint and it is a misconception that reuse leads to energy inefficient buildings when retrofitted correctly using appropriate materials and methodologies.

Some of the historic townships are empty for complex reasons of history. Aside from not being connected to the mains electrical supply, world events in the 20th Century have also been the cause of abandonment. In the case of the many empty properties on the Cabrach in Moray, depopulation was caused by the First World War. Young men went to war and never came back. The Cabrach is described as "the largest war memorial in Europe".

So many of the successful practices visited in this research had a recurring theme running through them: they either owned or had a high level of security on the workshops they occupied.

Different countries have different regulations and certainly Scandinavia, Germany and Austria exhibited much stricter regulations on renting which protect the renter. Eviction was much harder: in some cases it was not possible to be evicted until a new premises had been secured.

Rental prices were substantially more affordable. The means to own, either through long-term family ownership or because of a more affordable property market, was prevalent throughout. Even in 'western' European nations, the cost of living and property prices were comparatively much more affordable.

As was seen in Sweden with the shingle maker **Anders Fransson**, an incredibly productive business can be achieved with fair access to land. A short way along the road from his parents' farm, he has bought himself a plot of land and in the last few years built three sizeable workshops. Two are storerooms filled with seasoning timbers and shingles, the other is a workshop. With a few useful machines like a telehandler and a sawmill, he has an incredible output, repairing buildings and supplying materials. In this setting, the value of ample space to facilitate craft work is self-evident. The land on which the workshop sits was incredibly affordable in comparison to UK land prices, a similar plot in the UK would have easily cost four times the price.

Tools & Machines

Each craft business inevitably requires specialist tools, and often bespoke machinery, in order to be productive. It varies business to business. A weaver needs a loom like I may need a log splitter to produce shingles. Whilst each craft in its most pure and authentic form can be stripped back to operate on hand tools alone, as I can with my froe and hammer for shingles and a weaver can do with a spinning wheel and hand loom, the right dose of machinery can bring with it productivity increases which allow for greater profitability. All the same conditions, from the inception of the threshing machine through to the developments of the Industrial Revolution, so affect anyone involved in the production of things in the craft trades. Where mechanisation drifts away from involving human beings, to full automation and computerisation, is the point at which we makers generally stop in our productivity development, for craft work exists in a fluid point between handwork and partial mechanisation.

For anyone starting out, who has obtained sufficient knowledge, perhaps even having secured a workshop, there is then a sheer cliff face to climb in obtaining the tools for the work. This obstacle is both financial and practical. It is the same sheer cliff those breaking out into self-employment in the conventional trades faces can face. For instance, it takes large upfront capital for a carpenter or joiner to amass the collection of tools required to work efficiently and productively. When our wages are stagnant, our means to save are impaired, so the injection of grants and financial support can make or break the emerging crafter. Some crafts may require specific, handmade or forged tools, which can be hard to obtain, and in turn may be reliant upon the specialist skill of another craft maker like a blacksmith.

Plant and machinery are an incredibly expensive up front cost, as is the cost of a commercial vehicle to transport materials or deliver products in. Vans, trucks, trailers – it all adds up. There is seldom any support for these prohibitive initial costs and if there is, it does not go far. One current scheme in Scotland is the Harvesting and Processing section of the Forestry Grant Scheme, which can pay for 40% of direct costs associated with procuring machinery which adds value to timber, and small sole trader type businesses can be eligible. Although such grants are beneficial, the remaining 60% capital required can still be too prohibitive and of course it is limited to the forest trades.

Such grants can do much for economic stimulus – they are spent almost immediately, mainly with local businesses, and when VAT is paid on the goods 20% of the purchase price returns to the Exchequer anyway. In the craft sphere, such grants create direct stimulus into the pockets of those who make and create and they enable craftsfolk to add value to homegrown raw materials.

There is no doubt that small grants which can aid the outright purchase of tools, machinery, plant and equipment would do wonders for new entrants trying to get their foot in the door and likely be money well spent when it comes to economic stimulus.

A Vision for Scotland

What is evident, is that there are changes afoot to shift a significant number of traditional 'sporting estates', with bare heather-topped moorland hills, over towards landscapes of 'rewilding', generally featuring afforestation and a focus on nature conservation. For craftsfolk who utilise raw timber, afforestation is incredibly welcome and represents huge opportunities in the future to make a holistic living with the land.

The changes which have happened so far have often come with some degree of community consultation, to catch the views of the residents of the glens where populations still cling on. These consultations seldom directly consult the specialist voices of craftsfolk, who could be the future users of the forthcoming natural resources. Forests take a long time to grow and it will be a generation or more until a naturally regenerated forest may be able to sustain a livelihood from timber-based craftwork. As it stands, the craftsfolk do not have a seat at the table.

Given past historical occupation, this form of nature conservation continues to segregate people from the land and prevents the emergence of working *with* natural resources to create a harmonious livelihood. Previously this land *sustained* a lot of people and in my view *should* be sustaining part of our population. Landscapes are at risk of becoming the pristine playthings of a very few. Forests bring life and afforestation of these places should bring *meaningful* life back with it.

In conjunction with this, there is a huge and untapped resource of empty historic buildings, both homes and steadings, which with some sensitive repairs would create hundreds of soulful venues for rural crafts businesses.

These buildings need immediate protection to prevent their loss. Many are at a critical junction with the loss of historic fabric imminent.

For the estates who care for them, inviting traditional craftsfolk into these buildings affords a safe means to sensitively repopulate these buildings in a way which can be mutually beneficial: many heritage crafts are of great use to the maintenance and upkeep of the estates, which can often struggle for skilled trades in remote areas.

Conclusion

Craftsfolk stuck trying to break out of the myriad of these conditions need help. It must be acknowledged there is a distinct absence of affordable and suitable workshop space.

Help can be in the form of suitably supported, subsidised and affordable workshops, direct financial support to purchase expensive tools and machines and through mechanisms which might include measures such as tax relief, provision of business startup and development grants and means to support those *with* workshops to accommodate, nurture and mentor those trying to start out through the encouragement of cooperative, positive work ethics.

Beyond this, those holding such ruinous assets need to be making bold moves to allow opportunity to those who are best placed to fully utilise them – or else it will be necessary to explore some more radical policy, such as a right for heritage trades to occupy and/or community buyout.

In Scotland a full review of the historic agricultural buildings in rural areas is needed, to safeguard from destruction exactly the kind of house-with-workshop setups which could provide the backbone of this emerging resilient economy.

That said, real and meaningful progress will only be made with deeper political and economic reform. Failure to address the crushing economic environment strangles the dreams of many to break out into craft practices. This means being bold: controlling rents, expanding social housing provision whilst being sure to incorporate workshops into the planning of new homes. Further restriction on second homes would ease many pressures on rural communities, certainly the legislation in Scotland which allows for second homes to be taxed at 200% is welcome, but the revenue from this taxation must remain in and be used to benefit the locality.

There is much to develop in Scotland related to forestry practice to favour craftsfolk and every effort to encourage a greater proportion of 'continuous cover' management practice should be supported, for it will afford fine quality timber in the longer run. In turn, the language and skills associated with this must be developed. For institutions like Forestry & Land Scotland and other large landowners, it means having a consistent open door to 'the little guy', and they must both nurture and support the development of small-scale craft enterprises. On the ground this means enabling makers to earmark standing timber, and setting it aside during felling. When timber is not earmarked, being reactive to the occasions when it is being discovered that fine timber is being harvested from clear cut plantations and seeing that this material can be channelled to makers who will use it is also key. It is also necessary to develop a directory of interested parties who can utilise such timber.

Afforestation initiatives are to be welcomed, but a change in land use must bring people back to the places which were once inhabited. Rewilding does not challenge the model of concentrated land ownership. A proposal was made by the Scottish Land Commission for future large landholdings to go through a 'Public Interest Test' when ownership changes. This would be a welcome first step, but as explained, rural craftsfolk, both current and future, need a seat at the table in land use consultations.

Starting a Craft Practice – Learning Points

1. Support policy which reduces economic pressures for rural crafts:
    a) Rent price controls.
    b) Taxation and restriction of second home ownership.
    c) Restriction in conversion of agricultural buildings.
    d) Reduction of wealth inequality.
    e) Tax relief for craftsfolk.
    f) Better protections to afford long-term security of tenure.

2. Meaningful grant funding to support:
    a) New entrants with the cost of tools, materials, plant and machinery.
    b) Subsidy for the renovation and improvement of agricultural and commercial buildings.
    c) Comprehensive subsidised and accessible training in practical business management, taxation, accounting, health and safety and machine tickets tailored for craft business.
    d) Costs associated with rural craft businesses, such as to cover rents, insurances, energy costs in the first years of trading.

3. New tranche of historic building listing for historical agricultural dwellings and buildings, particularly in Scotland, to protect against demolition and loss.

4. 'Right to Occupy' for craftsfolk to register an interest in and take on derelict and abandoned historic buildings which have been left unoccupied for an extended period of time.

5. Collective representation for procurement of raw materials.

6. Support for research into forest regeneration, particularly focused on high quality growth and a percentage of forest earmarked for longer term, continuous cover management to supply future generations of craft trades with quality home-grown timber.

7. Encourage the management of other land-based resources in ways which make procurement of materials open and accessible to small-scale makers and producers. Allow affordable and accessible pathways within licensing which minimise bureaucracy or allow for derogations to support small-scale users.

8. Nurture new entrants, create centres of community and means for craftsfolk to connect with one another.

9. Support and encourage experienced practitioners to become mentors to new entrants.

Chapter II: Sustaining a Craft Business

Just like the factors governing the establishment of a craft practice, the conditions that govern sustaining a business are many and varied.

For every success story of a long-established craft practice surviving into the 21st Century, there will be dozens of businesses which have fallen by the wayside, such has been the decline in manufacturing since the end of the Second World War. Many existing craft trades can struggle to keep going. A difficult economic climate, changes in legislation, premises, lease terms, working culture and health and safety regulations can mean some businesses are no longer viable. Sometimes it can be that the business has not adapted to keep up with the times. The product might be fantastic, but the maker may be reluctant to engage with a changing marketing landscape, so products may be under appreciated. Social media has completely changed how makers interact with their customers.

During the period of this research, two striking examples emerged, demonstrating these challenges. In the first, concerning **Lanark Wool**, which faces closure, it was reported that the intricacies of a craft business were not fully appreciated by new management, where there was more focus on an exhibition for Lego than the rich history of weaving with water power. The second concerned **Shap Quicklime**, a supplier of lime to the historic building trades which recently closed down. Owned by Tata Steel, many stonemasons in Scotland had used quicklime produced at these Cumbrian kilns as it was their most local source. When the plant wasn't making enough money, they closed it down. In the wake of this decision, a huge raft of dependent businesses lost a vital supply of a material integral to their work. Thankfully other supplies could be sought, but the replacements have never matched the qualities of the Shap quicklime, causing widespread headaches for those relying on such large corporate suppliers with a relative market monopoly north of the border. Now the competition in the market is even less. All the more reason for local production. Currently no building lime is produced in Scotland.

Those conditions which once allowed a business to establish and flourish may one day cease to exist and mean the next generation cannot continue as before. Just as all these complex factors conspire against someone wishing to become established, so they can cause a coup d'état upon an otherwise stable business. In the worst case, this may force a business to cease trading, give up out of frustration or adapt so radically to survive that the authenticity or original ethos is lost.

In the same vein, continuation of supporting services – a shop, post office, bus or rail service, pub etc – all have a balance on the quality of life in a rural spot. Unfortunately for much of the UK, the provision of village services has fallen dramatically. Such services stitch communities together, which is vital in geographically isolated rural places. For the crafter, they can be a lifeline to protect against isolation and loneliness.

Automation of a Workshop | Austria

In the Bregenzerwald of Austria, bordering Switzerland and Germany in the furthest western reaches of Austria, an enclave of shingle makers and producers has kept alive a long-standing tradition, adapting to the times and, in some cases, utilising automation to stay in business.

One such shingle making company, **Florian Bär**, has turned automation to its advantage. The machines are the brainchild of **Edwin Weiser**, who invented and manufactured all of the specialist equipment in the workshop. Edwin lives nearby and has made his living as a *maschinenbaumeister*, a mechanical engineer, producing machines specifically for the production of shingles. I first came across his machines in the care of other shingle makers in Austria, and heard that they were utilised in Poland, too. In the case of the Florian Bär workshop, the end result is quite a sight, and looks like something invented by Wallace & Gromit. The noise of machinery makes talking impossible; three ear-defendered operators sit in silence at their stations, feeding the beast. Flatscreen televisions relay


PROTECH

CCTV images from different parts of the machine. Conveyor belts run around the ceiling, slowly depositing freshly cleft shingles into sacks for kiln drying. The machinery does nearly every part of the manual process mechanically, with the exception of splitting, which is guided by the human hand, but even here it is partly automated with a guillotine-like splitter. Yet still, an experienced eye needs to read the grain to make the best use of the material.

Despite this automation and impressive array of machinery, there are challenges on the horizon. Edwin Weiser is now in partial retirement, with no legacy – his **Weiser Maschinenbau** company is no longer producing new machines. When faced with the guillotine splitter, I ask about how such a machine complies with modern health and safety requirements. A raised eyebrow and wry smile follow – in the legislative environment in Austria, it is becoming harder and harder to use these machines. When I came across the same model, in the care of another maker near Salzburg, the same admission came through: the machine wasn't compliant, but was too good to stop using. And there was no alternative. No one has ever made a better, more bespoke machine for the enterprising shingle maker.

Health & Safety Challenges | Sweden

In the far north of Sweden, a similar set of circumstances play out for **Halsinge Takspån**, a business which has been running since the 1960s. It has gone through several iterations, but has always been under the same roof, in a former school which has been gutted and adapted for factory use. Here logs are brought into the workshop by conveyor belt, cut and pressed through a four-way splitter to take the section of trunk into quarters. Again, the need for the human eye is inescapable, as the next process requires splitting on a table-mounted hydraulic splitter, with the grain being read by the maker for the best results.

I ask the same question of health and safety here as in the Bregenzerwald. The same raised eyebrows and wry smiles present themselves. Nils Englund, the new part-owner of the business admits if these machines were made today they would not be complaint with Swedish Health & Safety law, but they trust the competency of their employees to operate these machines safely so as to avoid mistakes and accidents. Experience is the key to managing the risk.

One area where risk is very well managed is inside the caged contraption in one corner of the workshop. This is proudly demonstrated – a fully automated shingle machine, the most modern in Europe by my observations. Developed by the previous owner, who had an enthusiasm for electronics, the machine is one of a kind and goes a step further, manufacturing shingles from stock sawn timber blocks. In this way almost all risks can be mitigated and reduced to the more manageable, modern and compliant timber mill and cross cut saw, as is the same in any joinery shop. Although the end result is impressive, it seems that with every step of automation something of the magic and authenticity of a craft is also lost through such a machine. The din of the factory environment is at total odds with some of the more peaceable, slower paced workshops and makers I have met.

Nils has big plans for the business and shares his plans for a new factory. Located on the edge of the nearby town, it will be custom built, with more machinery and automation than ever before. This is clearly a win for compliance with health and safety. But this move, especially to an urban centre, is one which takes manufacturing out of the rural setting. Some of his employees have been with the firm for a long time and live either in the village or the next. In the future, they will have to commute, if they stay with the firm.

From a fully automated, electronically controlled workshop employing others, at other end of the scale lies the other way to manage health and safety obligations: be self-employed. In these travels I have seen the same set of circumstances in multiple European nations. To mitigate against risk and obligations: work alone and lock your workshop door. No more apparent was this than on a visit to the workshop of **Jurgen Rånge**, who stays near Mariestad (home of the **Hantverkslaboratoriet**) in Sweden. Jurgen is a carpenter and happens to have a machine for

producing a type of shingle called *Takspån* in his sizeable barn. This is a type of machine I hoped to catch in my travels – I had heard whispers and found the odd video of one but never caught one first hand.

Jurgen's machine was built around 1915. It was common for there to be a machine like this in nearly every village in Sweden at one time. Whilst Swedish churches have been shingled since medieval times, these *Takspån* machines came about in conjunction with the rise of factory-made nails, in around the 1860s. In Scandinavian architectural history they represented a new wave of vernacular roofing in the late 19th Century. Although they were made well before this by hand, the introduction of the machine made them commonplace. Along with the more traditional forms of birch bark and turf roofing and, in southern Sweden, thatching, only the churches were shingled with thick *Stavspån* made of Scots Pine and coated in the traditional pine tar. These machines pre-dated readily available corrugated tin and asbestos sheets and enabled roofs to be quickly, and cheaply, covered in a material that lasted longer than turf and thatch.

The shingles made on these machines are, in effect, blade cut, somewhere between a split shingle and a sawn one. They are thin, perhaps 3mm to 5mm in thickness. The machines work in reverse to the way a steam locomotive cylinder drives a wheel by a crank: the drive comes in the opposite direction – from the wheel – and the cylinder is instead a moving metal plate with a blade. Power comes from a belt-driven electric motor, the main wheel is around five feet in diameter. The knife slides on greased rails, and has a captive knife blade inside of it which dashes backwards and forwards as the wheel turns. When a block of wood is placed in its way, the blade slices off a sliver from the bottom of the block, spitting a cut shingle out the bottom. Mechanical descriptions can be tricky: I hope I've brought you with me. See one for ten seconds and it's very intuitive. Blade cuts thin strip from wood block. What is also intuitive is that there's clearly a high risk of injury. It cares not what it cuts. I think if this machine could talk, it would quietly whisper *"I'm going to eat your fingers".*

Remarkably, Jurgen has all of his fingers. This is down to the intense concentration that this machine requires, along with a little to luck. Take your mind off the ball, and you'll come a cropper (that's a phrase that originates from losing your fingers in a repetitive printing press, by the way – there are many parallels). When it is fired up, a feeling of reverence descends in the barn – no one is to distract the operator. In this way, risk can be mitigated. What is worth noting is that despite the wild glimmer in his eye, Jurgen knows what the risk is, the parameters of it, and how close he can sail into it. Moving away from the potential for injury and into the realms of what makes for a rounded, healthy mind, this appreciation and knowledge of dealing with risk makes for a sharp mind. Yet now it is impossibly hard to teach or pass on. No apprentice or employee can be easily brought into this environment. It is hard to find ways to mitigate the risks beyond having experience, but at some point, you need to make your first cut. No insurer would sign off the liability. It's a conundrum. How do you keep the craft skill alive whilst maintaining compliance with health and safety regulation? Locking the workshop door is no way to share skills and inspire others but perhaps it is the only way to keep alive some modes of production.

On a later visit to the shingle maker **Nykarleby Spantåk** in Finland, they had a similar machine tucked away in the corner of the workshop. Here I asked if they were able to use it for shingle making – the response was firmly not, it was too dangerous to employ people to use it. Their liabilities as employers compelled them to not use it and make other arrangements. The risk was too great and there was no workaround. In this unassailable challenge, a piece of cultural and industrial heritage dies.

In these scenarios, it is only the one-man band, the sole trader, tucked away out of sight who can really, at their own risk, use such a machine. If they dare, that is.

Creating Cooperation | Sweden

For established or emerging craftsfolk, despite all the attractions of the countryside, rural places can be isolating.

Making new connections can be very difficult, moving to a new place can be like landing on the moon. When your work is your lifestyle and occupies most of the hours of your day, it can be hard to have time to make friends and meet other likeminded craftsfolk with the same work ethic or love of their work.

In central Sweden, near one of the largest lakes in Sweden, Vättern, lies Forsvik Bruk. Bruk means mill, in Swedish. Forsvik Bruk is the birthplace of industry in Sweden, with the earliest record of manufacturing dating to 1457. The industry has left, leaving an open air museum in its wake.

The open air museum here is an excellent example of how partnership with craftsfolk can be for mutual benefit. **Mattias Hallgren** is a man of many talents, for whom life is craft and craft is life. He has the use of a hangar on the museum site, which is his workshop. It is an impressive space with an overhead crane gantry – a hangover from the industrial past – which still earns its keep, moving many of the heavy timbers and components about for the various windmills, boats and timber frames that he works upon.

Because the museum is owned by the community, he is able to obtain an affordable rent, which is much, much lower than a comparative market rate, which for this size of space would become unaffordable. Everyone wins with this arrangement, because a vacant building in the museum is now occupied in a way which enhances the attraction and the museum earns a diversified income stream. Mattias has the option to open his doors, clip up a velvet rope and become a live museum exhibit as he works. It does not mean he has to stop and answer questions, he can get along with his work. But to the visitor there is a living, breathing workshop where there was nothing before and the educative experience is enhanced. Additionally, a tenant such as Mattias can navigate the health and safety challenges better than the museum can. Recently other parts of the museum closed, where demonstrations in forging and operating historic machinery happened. As the responsibilities of health and safety fall to the tenant, he need only close the metaphorical velvet rope. The risk becomes his liability, not the museum's, but the end result is that the practical activities continue. Additionally, out of hours, he is a presence on site, an extra pair of eyes, affording security.

Mattias heads up the **Traditionsbärana**, the *Tradition Bearers* which is best described as an informal network of master craftsfolk, with a benevolent leader. The simple notion is that those who practice craft work hold on to the traditions, practice them, and pass them on to the next. They describe themselves as "a group of individual entrepreneurs with broad traditional craft skills, such as carpenters, blacksmiths millwrights and shipbuilders" along with "architects and designers linked to our network." More simply put they are "professional specialists [working] in cooperation for the preservation of traditional crafts."

What is interesting about the structure of the **Traditionsbärana** is that it is not incorporated. By running it as a conductor of sorts, glued together with a firm, guiding vision and good morals, Mattias has the final say on those who can become members, and the focus is on creating a switched on, intelligent community. All the members are passionate about the niches they occupy. Because it has grown with a spirit of cooperation, decisions are made together. This format has the risk to be cliquey, but my impression is that it avoided this pitfall well, thanks to great self-awareness. The benefit to being unincorporated is that there is no need to for meetings, taking minutes and the inevitable bureaucracy that can gobble up great initiatives like this from the inside.

Mattias's emphasis is about transforming the members of the network from craftsfolk into *specialists*: "To be a craftsman is one thing, to be a specialist is better." The benefit to the members is clear: individuals do not have the resources to take on large restoration work. Together they can collectively take on larger projects. What Mattias, and the network, has achieved in recent times is to build an organisation with a solid reputation. In essence it is a signposting organisation, a trade body of sorts. It allows for the unique niches of its members but by pooling their skills together in cooperation, it makes it easy for external organisations to find and approach them for larger scale

projects, where as individuals, they would not be able to operate at scale. For Sweden, their industrial heritage is greatly benefited.

In turn, the **Traditionsbärana** network is sociable. Even if occupied most hours of the day by a love for work, those who participate become a part of something much bigger than themselves and this does much to prevent the alienation and isolation that can come from working in remote and rural places. Perhaps the strength of it is that each of the members know they are part of something bigger than themselves, and so it creates a spirit of solidarity and comradery in the work. Later in my travels I met with **Arkkitehtitoimisto Livady** in Helsinki, one of the "architects and designers linked to [the] network" who frequently work with the **Traditionsbärana** and undertake highly practical research of their own, most recently in burning limestones for building limes and undertaking trials and experiments with pine tar recipes, all their works having a very similar sociable basis. We can learn much from their approaches.

Home and Workshop as One

In the travel for this research I visited a great many workshops which were inseparable from home life. Home was work, work was home. There was the appearance of little distinction between the two. This didn't mean a life of leisure – quite the opposite. There was work to be done, but it was not something that was despised, or a drudgery. It is more like a lifestyle choice. Each situation was different, but the similar themes emerged. What was constant was the absence of commuting. No sitting in traffic. No daily consumption of energy to get from one place to another to work for someone else. Most exhibited an empowered agency, vital for a healthy relationship with work. These were modes of living with a low carbon footprint. Some of the most successful examples of a home and workshop as one were as follows:

Eva Gredig | Switzerland

Enmeshment of home and workshop life in the countryside is *real* rural life and something integral to seeing rural places as places of production. Nowhere was this more apparent than with **Eva Gredig**, a shingle maker in eastern Switzerland. At the head of the Safiental is Thalkirch, 1700m above sea level. At this height, still the valley bottom was dwarfed by the towering high alps at the head of the valley. In this setting, Eva makes shingles. She trained as a carpenter but the love for the craft came from watching her grandfather making shingles as a child. Here she keeps the tradition alive, utilising extremely fine spruce which comes from the surrounding forests.

Her workshop is a small way along from her home, in a humble stone and timber barn, looking out to the high alps. It is very simple – there are no power tools, or modern hydraulic splitters, just a huge log-block-come-jig for splitting out shingles. This is a workshop operating at the other end of the mechanical spectrum and it is as peaceful as it is authentic. The workshop is an immediately pleasant place to be; pine resin, rather than machine oil, fills your nose as you walk in. Shingles are mainly made in the winter and spring, and when the weather clears, she spends the summer installing them. This is the definition of slow living. In this stunning setting, she has made a living like this for twenty years and raised a family. Rural optimists, take note.

Eva also works with another local shingle maker, **Patrick Stäger** who lives in Untervaz, an hour north. In this way isolation, at least within the craft, is avoided and they cooperate on projects and production, from time to time.

Jurgen Rånge, Borje Samuelsson & Bengt Jo Bygden | Sweden

Returning to Sweden and the workshop of **Jurgen Rånge** with his antique and dangerous shingle machine, a look at the wider setting shows clearly what can be achieved with space. The shingle machine was housed in a large and

spacious two-storey agricultural barn, full to the brim with stored materials and various side projects of the sort that are necessary to keep an income coming in when you are a specialist in a niche craft trade in a rural setting. His shingle machine was just a side-project.

Outside there was room for multiple stacks of air-drying timber, many of it from the forest shown to me by **Bengt Jo Byden**, where the experimentations to flooding sapwood with resin had been undertaken. In a separate building was a joinery workshop where there was ample space to work on large and bulky projects such as building and repairing window frames. This diversity in work streams is an important part of understanding why being pigeon-holed into one craft or trade seldom works in rural spots. Here Jurgen juggles sawn timber, shingles and conventional joinery work, and there is something for every season and weather.

This description would apply much the same to the workshop of Swedish shingle master **Borje Samuelsson**. Another large and spacious two-story barn, also absolutely full with projects, stored materials and a complete treasure trove of tools and curios. Here ample space allowed for diverse income streams – sometimes the production of shingles, sometimes other traditional woodcraft, along with space and time for artistic creation.

Bengt Jo Byden's home and workshop setting was particularly inspiring for the way that horticulture and the rearing of chickens and sheep was interwoven with craft work. Here I was reminded of the craft lifestyle adopted by **Klaus Seelos**, my shingle master and tutor in Austria, where all forms of craft and traditional agriculture saturated all corners of life. Apart from making for an aesthetic, tranquil setting, the inclusion of food production is important when really nailing down what it means to be self-sufficient and live holistically. As with **Eva Gredig**, the peace and tranquillity from these settings was the definition of a peaceful existence.

In all the situations, these makers owned outright the land and buildings they occupied.

Schwarzwald Schindel | Germany

In the Black Forest of south-west Germany, **Marius Frommherz** makes and installs his shingles. Much like the peaceable settings described in Switzerland and Sweden, shingle making is part of a broader holistic existence. Marius has built an impressive scribed log home, which incorporates a large and spacious workshop, all from scratch for his growing family and he juggles working for others with work on his own projects. When I meet him on a sunny autumnal day, he is patiently installing his own shingles to the roof of his home, which is a monument to his work. As an apprentice of the *ausbildung* system, Marius is, like all German carpenters, highly skilled, well trained and time served. With a clear passion for traditional woodcrafts thrown in the mix, it is self-evident that his work is something he *must* do, not *should* do. I ask questions of the factors and conditions which governed his decision to build a house as he nails down shingles. The land was affordable and the means to put plans for a traditional design, faithfully executed to the authorities was supported. The home he has built is simple, made from natural materials and will last hundreds of years.

Nykarleby Spantåk | Finland

The shingle maker **Nykarleby Spantåk** was founded by Tom Nylund and his brother Karl-Erik. Built up over several decades, they both produce and install shingles and renew pine tar coatings, with many of their projects on church steeples requiring rope access. They utilise the largest workshop seen during the research, which is a vast palatial complex of industrial buildings repurposed from a large joinery workshop several decades before into their shingle making enterprise. The premises have long since paid for themselves. The plot they sit on is sizeable with ample room for log stacks and parking for their articulated log transporting lorry and trailer. Their shingle making operation occupies not even a quarter of the workshop site – the rest is either empty, used for a little storage of

neighbours' cars and the like, or is turned over to timber and shingle storage. A huge plot of the yard is unused. Space is not an issue.

Over the road is a traditional timber house, painted in the iconic red oxide paint seen across Scandinavia. In this house Tom and his wife have lived most of their life. From this base, with the workshop in sight, Tom has been able to produce literally millions of shingles and reroof countless churches, all contributing to the continuance of a trade several hundred years in the making. For anyone coming from the UK, the ease, peace and absence of benign stress which comes from our perilous, high-rent/high-mortgage-standard system is really quite sobering. The same conditions exist as in Sweden and Switzerland: the workshop is owner-occupied, there is no pressure for mortgage or rental payments, business rates are quite reasonable.

Podsarnie | Poland

In south-west Poland, between Krakov and the Slovakian border, lies the small village of **Podsarnie**. Podsarnie is remarkable in the shingle making story, for here there are nearly a dozen small and family-run workshops in the village, quietly producing shingles in their distinctive regional style. This kind of concentration is found nowhere else in Europe. Here they make a regionally distinctive pattern, in Polish known as *Gonty* or *Gonty Drewniane*, which are a kind of shingle that slots together, much like a tongue and groove plank. Each piece is tapered in profile, the sharp point on one edge slots into a groove cut into the other, thicker edge. Only in Romania did I see a similar, interlocking style.

The pattern of ownership in Podsarnie was uniform with large, intergenerational family homes with each generation occupying a different floor and a hint of the strong patriarchal religious order underpinning these rural communities. For those producing shingles, the workshop was in either an adjacent or adjoining workshop or garage, with shingles stored and stacked in tidy yards. Whilst the details of shingle production here are best dealt with in an appendix, the anthropological setting here is what is worth noting: not only are the land and buildings owned outright but in Podsarnie, the critical mass and nucleus of shingle making means that it is a self-supporting centre of production. As best as I could understand, there is a reasonable degree of informal communal help between the makers, everyone gets along despite having competing businesses.

Sustaining Passion at Scale

Passionate pursuit of a craft and subsequent development of a livelihood will at some point – if the desire is to grow the business – need to employ others. Whilst great for economic development and providing jobs in rural places, this brings with it new challenges. Financially it can be a struggle to pay good wages and minimum wage work seldom attracts the kind of motivation, interest and thirst for learning which may have started something off. Work like shingle making can be very tedious and repetitive to some – and meditative to others. Getting the right aptitude in an employee, and creating a good working culture can be very challenging. People change and move on, and it may be that a decade or more down the line, it becomes ever more challenging to find the right people to work with.

These challenges were a consistent theme in the research and workshops visited. Often a workshop was established a generation before by someone with great passion for the work but as the business has grown it has taken on more employees. Where there is no natural successor with the same drive, most of the employees consider it 'just a job' – albeit sometimes a fulfilling or relatively simple one. When labour is pulled from a rural pool, especially in sparsely populated areas, it can be an inevitable impossibility, only staved off by good luck, to recruit employees who do not have the same passion. This was certainly true in many of the workshops visited, such as those in **Podsarnie** in Poland where shingle making work was in abundance. For many employees, making shingles was just a job, not a calling.

Conclusion

What is clear is that of the four areas being explored, the sustenance of a practice is the most challenging to understand. It has been hardest to write about and get at the essence of what is at play. There are no silver bullets – each workshop and business survives because of its own set of complex interwoven factors. But the biggest single constant which emerged was this: those who survived owned the land under their feet.

For those businesses that employed others, the age of employees varied greatly, but it would be fair to say that many of the employees were older. It would be hard to say if this was because they were good positions for older members of the workforce to take, or if the workforce had aged with the business. There was a smattering of young folk. In **Podsarnie** in Poland, one workshop employed exclusively young men barely out of school, while another employed three men well into their seventies.

The majority of the long-established workshops visited existed on sites which were owned outright by the maker – both from small-scale home workshop situations through to the larger factory workshops. Where they didn't, rent was cheap and affordable, as in the case of **Mattias Hallgren**, where renting from the Forsvik Bruk open air museum meant a social, not a market rate rent, but here this was a relatively new venture measured in years not yet decades. Across the board, the makers I met did not have the pressure from rents. The use of mortgages did not appear to be such a norm as in the UK, and the appearance of stability was much, much greater. It is external economic factors which govern the sustenance of most craft businesses.

Sustaining a Craft Business – Learning Points

1. Support initiatives which:
    a) Encourage craft business to negate market rate rents and mortgage payments.
    b) Support grant funding for workshop purchases.
    c) Offer subsidised or sociable rent for craft business practices.
    d) Assist marketing and promotion of craft businesses.
    e) Connect and promote existing makers to one another.
    f) Financially support or fully subsidise taking on apprentices or new employees.

2. Encourage cooperative initiatives, such as the **Traditionsbärana**, and recognise them as valid bodies to tender for large contracts.

3. Improve guidance, training and provision for the navigation of health and safety for craft practices, particularly where there has been/is historic operation or machinery.

4. Ensure there is sufficient affordable and social housing provision, more so in areas of high tourist pressure, such as National Parks where conventional rental can be eclipsed by holiday lets.

5. Support all initiatives to reduce the burden, or eliminate entirely, the pressures from rents and mortgages (see Chapter I).

Chapter IV: Legacy

This chapter focuses on the most experienced masters of their craft, those with incredible skills and knowledge, and how these can be passed on to the next generation of emerging craftsfolk.

What happens when it's time to retire, and stop practising? How do you put a plan in place to see that the *intangible cultural heritage* embodied in many traditional skills is shared, disseminated and recorded to live on in the next generation? How does someone pass on their skills? The end can come for many reasons, from bankruptcy in the worst scenario, but more likely retirement. What do you do if there is no one to pass the baton on to?

Apprenticeships will be explored from the perspective of the one learning in the last chapter. But every apprentice needs a teacher, and the teacher is the one with the experience, skills and knowledge. Those who practise their chosen crafts may be masters in their own right, deft and skilled in their work, but that does not make them good teachers by default.

Who is Teaching the Teachers?

Teaching is a profession of its own, school teachers have to train for a long time in pedagogics and on qualification have many tools at their disposal to explain and describe the information they need to teach to their pupils to attain success. Those who teach crafts have seldom heard of the word pedagogy, let alone been exposed to the science of teaching. Some are born naturals, others not. For those who are not, how can they be better coached to become good teachers? Currently there is little structure to support teaching the teachers of craft work or encourage those who are naturally gifted.

There exists in the field of craft work many exceptional teachers with no formal training. Certainly, in my own journey to craft, I cannot skip over the many inspirational people who have nurtured and encouraged me, most of whom have never been trained in pedagogics. With regard to shingle making **Klaus Seelos** of the **Stübing Freilichtmuseum** was an exceptionally pivotal figure in my own journey. Inspired by the writings of John Seymour in his childhood, Klaus has gone on to embody the folk-craft lifestyle and is saturated in work and lives in a beautiful traditional home painstakingly roofed with his own shingles. Figures like Klaus leave hundreds of inspired and trained converts in their wake.

Teaching craft work makes for better crafters, generally, as being able to describe clearly and succinctly what, why and how you do a particular task into an easily understandable format makes the practitioner better and cements their understanding anew. By this measure, cooperative cultures that encourage teaching and the free sharing of knowledge should raise the quality for all involved.

But teaching doesn't come to everyone, or lend itself to particular crafts. A great many craft producers work alone, and are introverted and quiet. It is very probable that many who end up in craft work qualify as 'neurodivergent' and this may bring additional challenges to teaching an apprentice.

Thrusting an apprentice into such spaces does not always attain best results. I know from my own practice how impossible and frustrating it would be to slot an apprentice in to my ever changing workload. I am always juggling multiple projects, sometimes I need to work late, sometimes I flit continually between work and home life. Even though I have accumulated some niche knowledge, but it is hard to pass it on even when I'd like to.

More than Skills & Knowledge

Passing on niche skills knowledge is only a part of the equation. Passing on a business, be that a prestigious name, specialist or irreplaceable tools and machines, workshops and even homes is all part of the challenge. This, however, needs planning ahead of time and it isn't easy. Such planning must acknowledge our time on the mortal coil will

come to an end, that what has been must cease and our own, frail and elderly bodies will not be able to work in the way they did in our prime. Letting go can be hard. This is all the more challenging when a life's work is a passion, and a workshop might feel like an extension of the soul. Losing a space and place of a livelihood can be an alienating experience.

At the time of writing this report I have been supported by the Heritage Crafts Association to learn how to operate a unique historic water powered sawmill which specialises in producing wooden buckets. The man I am learning from has dementia, and is the only person in the world who has worked the machines and made buckets in the past forty years. The knowledge of the process lives in him alone, but it is a very patient thing to learn – I have to be prepared to drop whatever I am doing to spend time with him when he is having a good day, to work around his health. Compounded in this problem is that the historic machinery I need to learn with does not meet modern health and safety requirements and exposes issues related to liability and risk mitigation. I can learn all of the skills in the world but there is no curriculum, no support structure available or mentor to guide me through this complicated web of difficulties. This experience would make for a whole other paper, but it highlights a very clear 'real world' example of how learning a craft from an experienced master is not always so clear cut as installing an apprentice and sitting back to let the osmosis happen.

In this situation it is the *intangible* heritage which becomes at risk. The building will survive, so will the bespoke tools and antiquated machinery inside the mill. It's the bits you can't touch, the life's work to hone a skill, the rules of thumb, an intimate knowledge of all the quirks of a unique machine or specific regional details which can be most at risk of loss.

Change is Inevitable

In Finland, the province north of the port city of Vaasa is home to the country's largest shingle making workshop, **Nykarleby Spåntak**. This workshop has already been mentioned, and is run by the Nylund brothers. Founded in 1992, both Tom and Karl-Erik are ready for retirement but have no natural successor to the business. When I visited, Tom Nylund explained the business was soon to be up for sale but confessed to concerns for the business taking a different direction, worrying the attention to detail he had cultivated since inception may be lost. Such is the weight of letting go. We had bonded over a shared love for traditional craft, and I think he feared that love for the work might leave the business. At some point, control has to be handed over, and letting the business stop entirely, with the subsequent loss of work for the other employees was also not an option. What to do?

By contrast, when I spoke to Nils Englund in Sweden, the new co-owner of **Halsinge Takspån** (another similarly large shingle manufacturer) he had big plans for expansion involving a whole new purpose-built workshop in the nearby big town, which would see the end of production in the rural setting. This was just the sort of change that Tom Nylund expressed fear to me about, and I can see why, because when you care deeply for your work, it's hard to let it go once you've stepped back. Especially if you know the next iteration might be drastically different and wrench the business away from the core values you held on to in your own time. But change will come, and in the case of Halsinge Takspån, this means a complete uprooting. A business leaves a village for the town. What will fill the void?

Josef Kalser & Manfried Wendlinger | Austria

Managing a transition to the next generation in a timely fashion is something which was successfully achieved by the Austrian master shingle maker **Josef Kalser** with his business, **Kalser Lärchenschindel**. Josef had made and manufactured shingles in Leisach in East Tyrol since the 1990s but by the time of the pandemic had hung up his froe and mallet. He put his machines up for sale. But rather than 'cash in and drop out', he supported **Manfried Wendlinger**, a local joiner, to take up the mantle and assisted in teaching Manfried the details pertaining to shingle

making. Josef's knowledge in the field is vast. Starting in the forest, he knows exactly what to look for in a standing tree. He knows who owns the land, who to speak to, who to call up to help extract timber and what a fair price would be. When the timber is felled, he can tell by the smell of the Larch if it has 'the red rot' in the innermost heartwood, which makes for a poor shingle. **Nejk Dijak** in Slovenia had the same finely tuned senses.

Meeting Josef for an afternoon, I learned an incredible amount and was wholly touched by his generosity and willingness to share. So extreme was this that he insisted on sending me away with an antique Tyrolean shaving horse, a froe and several books. Josef Kalser didn't just support Manfried Wendlinger. He had been in possession of some of **Edwin Weiser**'s superb bespoke shingle making machines from the Bregenzerwald, and on retirement sold these to and taught the shingle maker **Thomas Lohninger** to use these at his workshop near Salzburg.

The knowledge Josef possesses is the kind of special, multi-generational knowledge that is akin to a gene. It lives in the body of the host, ready to be passed on. This sort of knowledge takes decades to accrue. A rule of thumb can be described in a few sentences; such little wisdoms may have taken a lifetime to learn. When it isn't passed on, it is lost forever, and that is where and how the craft has died in Scotland and is in a very poor state of health elsewhere in the UK. Extinction means the loss of those irreplaceable craft genes, the little nuggets of wisdom and the loss of the *intangible cultural heritage*. After a craft extinction, we only become historical reenactors, scrambling about in the footnotes trying to piece it all back together again.

When Knowledge isn't Shared

Several times in my travels for this research, I encountered an interesting kind of suspicion when asking questions about the practice and a fearfulness to share. I can understand why – many of the workshops and makers I visited were not used to, and didn't have, 'craft tourists' come knocking on the door. They made shingles, sold them, and that was it. In **Podsarnie**, the village of a dozen shingle makers in southern Poland, there were several times when makers were unwilling to show, let me photograph or watch either their work or bespoke machines. One visit was particularly short, with a door opening, and promptly closing. Here language probably played a part, but I certainly felt as though they considered I was committing some sort of industrial espionage and would steal their ideas and processes to put them out of business.

Similarly in the **Bregenzerwald**, that same feeling of a closed shop returned, with many makers unwilling to engage or share. In both Podsarnie and the Bregenzerwald, I think ironically the high concentration of multiple workshops creates a critical mass and so creates a bubble. If you were in the community, in the bubble, you would share freely, but for anyone on the outside, it was a closed shop. Only suspicion will greet the outsider. A workshop in the Bregenzerwald, responding to a request to visit said to me "…machines and equipment are mostly self-built. We'd rather not reveal this too widely."

What I found remarkable was that in the areas where there was a concentration of workshops and makers, not only was this absolutely phenomenal to have such a concentration, but it was doubly remarkable how little promotion or appearance of celebration was done on the part of the makers, or the wider community, to champion this amazing tradition. It was just something that was. The Bregenzerwald *façade schindel* were a point of vernacular architectural pride, and adorned the majority of the historic buildings and very many modern ones too. Yet the means to celebrate, connect and join together the patchwork of producers was non-existent. Visiting the very slick **Werkraum Bregenzerwald**, which represented and exhibited craft work from the region, there was little signposting available for the half dozen or so shingle makers on the doorstep. Even the institution to celebrate the culturally unique didn't know who made their culturally unique façades! Only luck and providence intervened to lead me to a meeting with **Edwin Weiser**, who was distinctly offline! Concurrently in Podsarnie, I called into the local government office at the

beginning of my arrival, as I had not been able to rouse a reply from any of the workshops on email. Here no one in the office knew of the significance of the village for its concentration of a unique and special craft; no one seemed to really know what a *Gonty Drewniane* was despite it being made on their doorstep for hundreds of years.

I was reminded of these experiences in Poland and Austria on a recent trip to the Isle of Harris in the Western Isles. Shops to purchase tweed are all around, but for me the most fascinating part of the story is the making of the product. The product is made on small looms, housed in garages, small workshops and back rooms and in some larger mills. The smallest producers are not geared up for such 'craft tourism', being in private houses. But still, the story of the making is one of the most powerful, interesting and engaging, especially in the home environment, yet it is not fully or clearly told; it hides away. Those that know, know, but on the outside, it is hard to get a way in. That way in, if not for interest in production, is one of the essential components to inspiring the next generation of craft producers.

Skodlarstvo Koželj | Slovenia

In the Slovenian Alps, below the high alpine plateau of the Velinka Planina and its many hundreds of historic shingled roof cabins – traditionally used for managing the summer grazing but now mostly turned over to a plethora of holiday cabins – is the workshop of **Bojan Koželj**. Nestled into the steep hillside, it is one of a string of houses in Stahovica recently very nearly washed away in torrential flooding on the Kamnik Bistrica river. Here is another home and workshop setting which is enmeshed, allowing for a life and a living to be made that is rooted in natural materials. Mr Koželj is near the end of his working career, and is recognised as one of the most prominent shingle makers in Slovenia. I did not meet him, but met his daughter Nina, who is doing what she can to keep the business afloat, take care of administration and hopefully, find a way to keep the important traditions alive and pass them on. Currently prospects seem bleak. It is most likely the company will be wound down and a thread of the shingle making story in Slovenia will end.

The company of **Skodlarstvo Koželj** is now over fifty years old. It employs two others, one of whom I met high up on the Velinka Planina plateau. Here, outstanding metre-long spruce shingles were being installed on one of the historic cabins, having been manufactured at the bottom of the mountain. Passing on the business is not the only challenge. A changing climate is having a huge effect upon the fine spruce which grows tall on the slopes of the valley. This is not spruce like we know it in Scotland – the Sitka spruce: fast grown, knotty and generally useless for shingles. This is fine, old growth, mostly Norwegian spruce and native to these alps. But the spruces are dying, from needle rust and bark beetle infestations. The fine timber for the traditional metre-long shingles is becoming harder and harder to source. It seems that the climate change driven extremities in the weather that flooded the Kamnik Bistrica river so violently are likely to blame.

Nina Koželj expresses there could be some state support to keep the business alive, and that there was also a younger maker who was interested in taking on the business. So far there has only been talk, and by the sounds of it, little action. Nina juggles administering her father's company alongside her own work as a sculptor and teacher. I also ask of cooperation between other makers, but here there is not so much, this being corroborated by **Nejk Dijak**. The cooperative spirit was lacking. It seems likely that in this corner of Slovenia, a successful business is sadly about to die.

Conclusion

It is easy and obvious to say "plan for succession", but in my direct experience this is always far down the agenda until it is nearly too late, as I am finding out first hand.

It is a very safe bet that supporting those with skills and bespoke knowledge to become better teachers will provide handsome returns and do great work to see that niche skills are passed on and the details of them are taught well. Supporting this goal consistently, over many years, will rebuild much of the culture which used to exist, of a master passing on knowledge to the apprentice. Consistency over a long period of time is key; too often schemes come and go and can't be relied on in the long run. Identifying those who are naturally good at teaching is a good thing to do, too.

Recording of existing skills requires mention here, because it can never be done enough. Recording of craft requires specialist resources to capture audio, video and a unique deftness to coax out the vital details. If a craft is lost, it has much better hope of being revived when the details of doing and the means to procure the materials are preserved.

To have spent a life's work developing a craft business, only to fail to plan for succession seems to be one of the saddest things, especially where failure or retirement of the business means a loss of a craft or end of it in a particular area. Comparing the examples of **Skodlarstvo Koželj** in Slovenia to that of **Kalser Lärchenschindel** in Austria shows how a little forethought and planning can go a long way and make a huge difference to the next round of makers following in your footsteps.

Legacy – Learning Points

1. For existing craft trades, plan for succession.

2. Collaborate, and support initiatives that create and support a cooperative spirit amongst craft trades that may provide cohesion in a particular niche area of practice or locality such as in the Swedish **Traditionsbärana** network.

3. Champion master craftsfolk and celebrate achievements and skill.

4. Create funding streams and programmes to assist existing craft trades, especially those identified as endangered or at risk, to develop succession plans. Make available resources, to access video and audio equipment, to facilitate recording.

5. Investigate the creation of a craft trades labour exchange, marrying those seeking to learn or take on existing established businesses with those looking to retire.

6. For funders, aid easy access to funding to support those seeking to record and learn endangered and at-risk skills, with streamlined processes for time-critical activities.

7. Where skills are passed on, be mindful that they are disseminated beyond more than one individual, so that unique knowledge, *intangible cultural heritage* and vital 'rules of thumb' are held inside more than one person. Similarly, support the capture and dissemination of media to broaden the knowledge base, make films, audio recording, drawings, notes etc to see that such information is properly recorded.

8. Support and fund recording and archiving of all crafts, with particular focus on recording from the perspective of the maker.

Chapter IV: Education & Training

The last chapter of this report starts at the beginning of the cycle. How do you learn a traditional, rural craft – or find out they even exist? The answer to this question starts with children. Not just how they are exposed to and educated about craft and cultural traditions but also how they are exposed to practical work at its most simple level: an opportunity to be around practical and creative mindsets, hammers, saws, knitting needles, the making or repair of things, and the story that everything has to come from somewhere. Sadly, we live in a time when many coming into adulthood have never any experience of the most basic hand tools.

Some children are lucky, they might have a parent who practises trade work, come from a farming family, have a relative who has a practically minded hobby or are encouraged to follow a natural interest. For many children, exposure to practical work depends not upon home dynamics but upon the extent of their school's curriculum, and design & technology tuition often only starts in secondary school.

A prevailing focus by successive governments upon academic 'STEM' subjects (Science, Technology, Engineering and Maths) to favour GDP-orientated growth means that practical skills, much like the arts, are seldom at the top of the funding agenda.

For students who develop well academically but also have practical aptitude, practical routes are seldom offered as a viable option, despite newer initiatives to reimagine apprenticeships. Practical work is of course seen as the place you go to when you've failed academically. It is undeniable that skills training and the routes to craft are patchy, informal and too dependent on the luck of the draw. Rural communities are not well served. This means there are a great many with *potential* skill who may never discover, adopt and pursue such interests and, therefore, never come to develop economically diverse businesses in rural settings.

The patchy education of practical skills leads to a difficult relationship with risk. Children are seldom exposed to it. Without exposure, the *fear* of risk grows. Consequently, there are even fewer opportunities to teach skills on how to work *with* risk, identify it and constructively mitigate it. 'Health and safety' becomes a colloquial catch-all phrase that is mostly used in the negative to imply restriction: "You can't do that anymore, because of health and safety" etc. Of course, we live in a better world for being protected by legislation and there are far fewer industrial accidents and deaths. There is also much less industry. However, the craft trades generally have a delicate relationship with risk, such as using antiquated machinery or involving chemical processes. *Carte blanche* restriction creates problems, but so too does an unregulated landscape. How do we develop a better relationship with risk?

Many regional civic and building preservation trusts do excellent outreach work to engage children with the built environment and expose children to predominantly building craft skills, but such provision differs greatly county to county as there is no statutory requirement. This kind of outreach work is often one of the only occasions school children may be exposed to the notion that there are pathways to follow in traditional crafts on leaving school. Signposting to careers in traditional craft is minimal. Yet, as will be explained, there are many opportunities for learning already present in the UK.

Access to Skills Training & Certification

In the UK, for anyone learning trade work, the most common form of qualification available is the NVQ and SVQ – National Vocational Qualifications and Scottish Vocational Qualifications. They are structured between seven levels, with Level 1 qualifications being entry level, Level 3 being equivalent to A-levels/Highers and Level 6 equivalent to a bachelor's degree.

In most urban centres, there are generally courses a-plenty for conventional trades. Yet for those in isolated and far-

flung rural places, accessing such courses is another game of chance. Despite good recent innovations, such as the Level 3 NVQ in Heritage Skills developed by The King's Foundation (which covers skills such as stonemasonry, bricklaying, earth construction, dry stane, plastering, roofing, metalwork, thatching and decorating), specific training in conventional trades, let alone heritage niches, can be hard to come by. A direct equivalent of the NVQ in Heritage Skills is not available in Scotland.

By way of example, in my home county of Aberdeenshire, the nearest technical college offering Level 3 SVQs in Joinery is in the Central Belt – a 100-mile journey. Aberdeen's technical college is nearer, but is geared up to serving the oil industry, with a focus upon engineering. Travel and accommodation become mandatory for such distant courses, with prohibitive costs to bear. N/SVQ qualifications generally cover construction trades well, but do not translate well to the smaller scale, cottage industry mode of production which would suit a weaver, tanner or market gardener.

Changing economics have led to changing curriculums, too. Signwriting was a course commonplace in the UK. New technology, particularly vinyl cut printing, has meant the steady decline of brushwork. City & Guilds ran accredited signwriting courses until the Millennium, these being replaced by the subtly different 'sign making' courses which now focus on predominantly CNC and vinyl technology. All formal tuition now excludes traditional craft elements of signwriting. A retired signwriter in the Highlands recounted to me his experience of learning at college in Inverness in the 1970s, with tuition in 'the classics' of learning how to lay out Roman script, which is the most refined of all typefaces. Learning Roman script teaches the student about structure and form: all well drawn letters are small buildings of their own which stand without looking like they'll fall over. Students were expected to be able to draw and lay out lettering by hand, creating an intimate bond and understanding between the letter and the maker. Such embedded skill no longer exists in the new iteration and so becomes extinct the knowledge of laying out, proportion and all the foundational details which make for beautiful work. The curriculum that remains is a dumbed-down shell which fails to teach the first principles.

Qualifications such as N/SVQs, whilst quantifying skill level against a set curriculum, also do not do much to educate about the intricate inter-connected skills which touch all rural crafts. Instead, they isolate trades into compartments, preventing the kind of healthy cross-pollination that comes from a rounded education.

The Leap from Education to Practice

There is a big leap between being inspired and transitioning that inspiration into the development of skill. Skills need to be developed to the point of being able to make a living from them. This refinement is a patient process. There is never any substitute for practice, of course.

For some young folk, they will be held inside a formal apprenticeship from leaving school, and complete this training with recognised qualifications. This is most true of more conventional trades, such as joinery or bricklaying via the qualified routes already explained. Even then, the *quality* of training is a postcode lottery, depending on the provision of technical colleges, the attitude of the employer, the motivation of the student and the culture of the college – statutory provision does not always create an optimal learning environment and rarely inspires that vital thirst for knowledge or passion for the work.

For others, skills are developed as hobbies. Sometimes they are taken no further but sometimes the hobbies become a calling in life and then become the foundation for a career change. Many – myself included – have already had a career in a different field. Amongst UK craft workers, a significant proportion have come to craft after a change in career. The UK has several craft training programmes, such as those run by The King's Foundation (Building Craft/Arts Programmes), the Society for the Protection of Ancient Buildings (SPAB – Fellowship) and Historic

Environment Scotland (HES Fellowship). Many of the participants on these courses in recent years are career changers and use these courses as routes to craft work.

Hantverkslaboritat | Sweden

The unassuming Swedish town of Mariestad in central Sweden is home to the **Hantverkslaboratoriet** – The Handwork Laboratory. This faculty of the University of Gothenburg is home to one of Europe's leading training centres for traditional craft skills and is a hub and nucleus for the Swedish traditional craft scene.

In the last decade since its founding in 2010, the Hantversklaboritat has become a power house for skills training in traditional craft with many students passing through its doors. It provides a vital pathway for folks in their mid-twenties (the average age of students is 28) and beyond, who have been channelled into the education system when they didn't really know what they wanted to do. Many have arrived into adulthood with a degree or career path which they're not so keen to pursue and are instead searching for a more practical and physical way to live. It also gifts its students meaningful qualifications which certify their skill if they have been interested in crafts beforehand.

The laboratory offers courses in three areas: 1) building crafts, 2) (what can be best summarised in translation as) traditional land management (incorporating elements of traditional agriculture, grazing, forestry and the crafts associated with it) and 3) horticulture. The centre is also something of a dating service – a great many couples find themselves falling for each other over a shared love for the vernacular and traditional! This element is easy to overlook, but can become an essential component of transitioning from a series of isolated practitioners and the burgeoning of a bigger, self-supporting community.

The laboratory brings together a whole series of loose threads: training, certification and research, under one roof. After fifteen years of operation, the deep roots that come from continuity start to take hold, so that it is a fixed feature on the Swedish craft scene, and a consistent point of reference. This kind of institution is lacking in Scotland, the only comparative in England being the Building Crafts College in London.

By creating a nucleus, they also create a community. Perhaps the community that has been nurtured in the last decade is the most important of all the outcomes. Many students who come to Mariestad stay in the area, and so go on to start businesses of their own, and many work in collaboration with their fellow craft peers. A culture of co-operation and free sharing of knowledge for mutual benefit is born. This ever-growing network creates a skilled workforce who are trained to maintain and repair Sweden's many historic buildings and readily apply the great wisdoms in traditional craft to the challenges of our times. Such a network creates a symbiotic outcome: the sum is greater than the parts.

Folkhögskola | Sweden

The **Hantverkslaboratoriet** does not have a monopoly upon traditional craft tuition in Sweden. One other institution in Sweden which plays a significant role is that of the **Folkhögskola**. Founded in the 1830s by a Danish priest, the schools spread across Sweden with the intention to "provide an education that did not pull the sons and daughters of the common people away from manual labour, but return them to it with a strengthened desire for their life's work and increased ability to perform it". That's a mission statement I can get on board with!

Each of Sweden's 155 Folkhögskola schools vary greatly in the curriculum available. Not all deliver traditional craft skills courses – in this regard, it is a postcode lottery. All schools still stand by the founding principle and offer free education and cultural activities to adults. It also affords a chance for adults to study anew topics which they either struggled with or failed in high school. For many of the refugees that Sweden has taken in in recent years, this institution is also an essential component of assimilation and the place where many can begin to learn Swedish.

On my travels I met two former students of the Folkhögskola. For the first, **Bengt Jo Bygden**, a master carpenter, shingle maker and axe specialist already mentioned, the Folkhögskola was where he first learned carpentry and he can trace the origins of the cultivation of his interest in traditional carpentry to this institution. In the UK night schools or colleges are a second best to the structure of the Folkhögskola as a place where adults can seek training, educational enrichment or qualifications in later life but provincial technical colleges seldom offer traditional craft tuition. In many ways, it is no surprise to learn of this sort of liberal, open-minded institution in Scandinavia and see how, for Bengt, it can translate into following a path of craft work.

Similarly, another Swedish shingle maker, **Anders Fransson**, was a student of the Folkhögskola. Luckily for him, the local school just happened to run a course on "Buildings and Industrial Renovation", better described as a theoretical training in the repair of old buildings. Anders is also the son of a farmer, so by inheritance has access to land and machinery. He mainly works alone, yet is a fine example of how isolation does not impair productivity. He operates an exemplary cottage industry which provides a great service in his rural community.

The Steam Railway

In my own journey to craft work, the lightbulb moment came when I was around 15 and began volunteering at a steam railway. Initially I worked in the engineering workshops and then progressed to learn how to fire, and then drive, steam locomotives with all the rules and regulations it entails. As time passed, the volunteering became inherently sociable – friends were made, and I became part of a cohort of young people for whom volunteering at the steam railway was our collective pastime, no different to a social club. Instead of playing ping-pong ball, we learned how to maintain and operate a railway.

Whilst I had some initial curiosity to try it out, it was the social element which really kept me engaged in the long run. What bloomed from this was an incredibly rich educative experience which – whilst not measured in qualifications – in real terms was vast, deeper and more beneficial than any course or formal programme. This education not only exposed our cohort to mechanical and civil engineering but also applied physics, chemistry and mathematics in a 'real world' application. We learnt highly transferrable skills like graphic design and project and business management, with cooperation and comradery at the heart of it.

An organisation like this can provide a venue for education *outside the conventional means* and has the chance to inspire those who pass through it. Those coming to volunteer do not always start their journey as young folk, many begin in middle age or in retirement. It provides an opportunity for intergenerational socialising and connection which is increasingly rare, and very beneficial to everyone in the age mix. Unfortunately, the brilliant route that took me here no longer exists – new safeguarding rules prohibit teenagers being involved so informally. Some of my best learning experiences came from being thrust into the deep end, working one-to-one with highly experienced experts and after the work, being hidden in the corner of pubs, listening to amazing stories. A more formal club structure now exists, but some of the freedom to explore and experience is lost.

The Open Air Museum

My route to shingle making came via an apprenticeship at an open air museum (**Stübing Freilichtmuseum**), which was funded by an EU 'Interreg' project. The wider project actually only included heritage skills training as a mere footnote. Yet for the museum it facilitated the training of around twenty shingle makers. We in turn produced a substantial quantity of material to repair the museum's buildings, deepened the network of skilled trades around the museum and gained a formal qualification once the apprenticeship was served. This kind of EU funding is of course no longer accessible in Britain post-Brexit.

Much like the steam railway, the venue of the open air museum is able to capture the attention of – and then inspire – those who participate. The crucial point here is that there already exists in the UK a wide variety of established institutions that collectively directly employ thousands and engage with tens, if not hundreds of thousands of volunteers every year.

Being mostly volunteer-centred tourist attractions with fixed bases and premises, they have the means to absorb new entrants of all abilities into their structures. Yet their potential in educative structures has not been fully recognised. Here there can be a pathway to provide part of a nationwide solution and structure to absorb and educate interested young people in the multitudes of craft work and provide qualification and certification for niche craft skills at all ages of life. Steam railways, open air museums and other similar institutions are all limbs of the same body, but their representative bodies seldom overlap and there is no national strategy or major tie-in with the curriculum. The resulting absence of organisation in this field leads to patchy provision with minimal signposting, especially for school children. Clearly, more can be done.

Ausbildung System | Germany & Austria

The examples of the Swedish **Hantverkslaboratoriet** and **Folkhögskola** show some good examples of how a new pathway into craftwork can be created and nurtured. Systems like these do not really exist in nations like Germany and Austria which follow the much stricter **ausbildung** (apprenticeship) system, which is a direct descendant of the medieval guild system. This system is very formal, standardised and regulated. To practise trade work in Germany and Austria without qualification is largely prohibited, and if not, very difficult.

In Germany and Austria, the 21st Century apprentice has a clear pathway from school. Training generally begins in a technical college, with employer placements or vice versa, with time spent at college covering theoretical elements. Each trade varies but programmes last around three to five years. If not initially, around halfway through, the apprentice begins to work under the tuition of a suitably qualified *meišter* with great emphasis on the skills being passed down from master to apprentice, which is a tradition of great cultural pride. Everyone knows their place.

In the Germanic carpenters' guilds, a qualified apprentice is known as a journeyman. Before becoming a *meišter,* it is possible for journeymen to undertake a special travel called the *wanderjahre* – the wondering years, or a *gesellenwanderung* – 'a journeyman wandering', or *walz* for short. The *walz* is at miniumum a period of three years and a day, where you cannot go within around 50km of your home, and must spend all of this time away travelling, practising, sharing and learning more for your craft. Those undertaking a *walz* wear a traditional dress, dependent on the guild. The most recognisable journeyman dress features black bootlegged trousers, an eight-buttoned waistcoat (representing eight hours in a working day), and a large-brimmed bowler or top hat. They carry only a leather satchel and a walking stick with their most basic possessions, which can comprise no more than some basic hand tools and a spare set of clothes. Still the tradition holds fast, although it becomes more infrequent and is now open to all genders. In Britain, journeyman traditions like this have died out and although some medieval guilds survive, their power over the regulation of the training system has passed. As our *laissez-faire* ways reign supreme in Britain, this has significant consequence for the quality of, and routes into, practical trade and craft work.

It is easy to lament the loss of the guild system in Britain when witnessing the success that the structure which the Germanic system brings. The biggest success comes from continuity: everyone knows where they stand. Trainees know where they're going and skills are accredited and qualified in a meaningful way: comparable, understandable. Those who have passed through the system enjoy fair wages, and careers in trade work have a significantly higher social standing and respectability. Those *meišters* also understand their role and obligations to teach the next generation. The protection which comes from the regulation of qualification means that the quality of construction is significantly higher, improving the standard of living for all. It is embedded in the culture.

Whilst this can sound idyllic, there is of course a flipside to this: for all the security and stability it brings, the drawback is in the rigidity of the system. Essentially, the same young folk who do not really know what they want to do are channelled into the **ausbildung** system at a young age from which there are few means of escape. This typecasting has the effect of making trade work 'just a job'. Passion and interest often do not guide the way, which compromises that essential quest for the pursuit of knowledge for its own sake. There is a parallel between the British and Germanic systems which can never be avoided – many young people do not really know what they want to do when they need to make foundational educational choices.

Clearly the best path lies somewhere between the current patchy provision in the UK, and the rigid structure like the Germanic one outlined. For the UK, it translates to this: more structure, clearer accreditation, better training, consistency and continuity.

Astra Museum & Craft Certification | Romania

One development in Romania which is run by the **Astra Museum** – the national open air museum of Romania – in Sibiu, Transylvania, is worthy of note. This new initiative recognises that many practitioners of 'folk craft' – predominantly rural crafts, mainly used in traditional building, but also encompassing crafts allied to agriculture – are uncertified, and this absence of certification prevents otherwise skilled masters from being suitably qualified to work on listed buildings, which in Romania requires accreditation.

The absence of certification is for many reasons. Many craftsfolk in their later years lived through Ceaușescu era communism and come from rural communities where the traditions are unbroken; their agrarian ways have generally remained unchanged until relatively recently, this being driven by an absence of Western-style economic development. In this sense, craft work in Romania is really quite special, because the link has not been broken. Their skills have required no certification, because they have made a living continuing from what their parents taught them, embedded in the rural communities they have grown up in. The supply chains and mentalities that feed craft trades remain unbroken too, which means there is some exceptional local production. They are just doing what they do. For example, many shingle makers in Romania would fall into this category. They are unrecorded, uncertified and legally 'unqualified', yet they all possess great skill.

Many younger craftsfolk who become interested simply don't have access to a suitable structure of qualifications, much like in the UK. Whilst there may be technical colleges to cater for conventional trades, traditional crafts fall through the cracks and exist silently. If skills are not passed on, trades die, and this is where skills such as shingle making are at risk of not being passed on. Always in this mix, the city is luring and exciting for young folk, with money to be made. Why be a shingle maker when you can have stuff, work a 'modern' job and be in the city?

To challenge this, the Astra Museum has devised a scheme for certification and is the first of its kind in Europe. Through a dynamic assessment process, craft practitioners are assessed in their knowledge and skill in a given craft, and if they can demonstrate a suitable level of competence, are certified with a nationally recognised qualification. The assessment process is worth noting: it is not a written exam, but an informal conversation and practical demonstration between passionate craftsfolk who care for their trade. Certification enables them to work on listed historic buildings, which affords more security for the self-employed. Certification is certainly not a silver bullet, but it allows standards to be applied, captures and records who is practising which craft and how they do them. It affords an opportunity for oral history to be recorded and the means to nurture a network and community between otherwise isolated makers.

The recognition that comes from certification is important too, because it instils new pride into traditional craft work which, in the complex social and economic factors that govern Romania, is very much at risk of being viewed

as something of the past to be forgotten and ashamed of. This work by the Astra Museum is of exceptional importance in turning the tide against skills loss and encouraging appreciation of intangible cultural heritage.

Ambulance for Monuments | Romania

Staying in Romania, **The Ambulance for Monuments** (*Ambulanta Pentru Monumente*) is an organisation founded in 2016 which focuses on saving ancient historic buildings which are in an advanced state of decay. Here is an example where great work to teach traditional skills is done without a permanent base. Whilst the project began with distinct material objectives to save culturally important buildings from ruin, the real success of the project lies in its social nature. Each year their autonomous regional sub-groups camp out at a building at risk and then operate from that site until completion, before moving onto the next.

The Ambulance has a primary goal of building social connections. The task of repairing a historic building comes second. On face value this seems counterproductive, but it is self-evident from the oversubscription of particularly university-age students who volunteer to gain practical hands-on experience that there is method in this approach. Many of them would be the archetypal urban twenty-somethings who have never really been exposed to or had the opportunity to undertake practical work and what they sign up to is often their first taste of physical labour in adulthood. They throw themselves at it with an impressive enthusiasm and a thirst to learn.

The Ambulance's Director, **Eugen Vaida**, tells me the project has been operating in this social mode for several years, and with each year passing begins to see more and more of the buds of this approach come into flower. Students who first volunteered five years ago are left inspired. They then become actively interested in the field of building conservation, see their historic built environment with new eyes, and grow a natural self-educating interest to pursue and broaden their knowledge of traditional architectural crafts. Through this they significantly broaden their cultural and historical understanding of their country, its history and their architecture. In later years some return with significant experience and skill in practical work to volunteer as project co-ordinators and tutors, sometimes establishing new branches of their own, to help new entrants at the beginning of their journey and so in this regard, the project becomes self-sustaining. One of the finest things to see in a worksite of the Ambulance is the exposure of young people, previously occupied in the land of theory, being brought into contact with practical work. The effect is immediate and long lasting.

During a project, skilled craftsfolk are also employed to work alongside the volunteers – in the case of the projects I visited, these were shingle makers and log hewers. The income obtained from this work brings them prosperity, new demand for their business, an increase in the respect for their work and wider cultural understanding and promotion for their practice. Simultaneously it connects them to the dual communities of the energetic volunteers who I saw to be enthralled and inspired by their skill and also in the deeper roots with the community whom they are serving in the repair of their building.

A very large element of the project aims to rekindle a town or village's connection to the historic buildings being repaired, and reframe their appreciation. This forging of new connection starts at the most basic level, with food and shelter. The community is asked to feed and house the volunteers who come, and in doing so, the levels of social connection and assimilation are exponentially larger and this adds that vital intergenerational ingredient. This is important, because once the volunteers have gone and the project is complete, the community is hopefully left with a better understanding and appreciation for their repaired historic building, in turn meaning it is hopefully cared for to avoid future decay.

In this way, the **Ambulance for Monuments** would be one of the clearest examples where the venue for intervention does not have to be rooted into one place. Their structure of creating social connection is self-reinforcing and with

each year grows stronger. Presently, it is undoubtedly the moving force for exposing young people to rural crafts and their folk roots and craft traditions in Romania.

The Ambulance was the finest example of volunteer mobilisation seen during this research and is a credit to all involved. The Ambulance's engagement with young folk was one of the best, most practicable, sensible examples identified in this research. Alongside the **Astra Museum**'s certification process, these two organisations represent a very hopeful positive shift change in the landscape of skills training in Romania and we should take note.

Conclusion

This chapter invariably asks more questions than it answers. Deeper exploration of the education and training topic in the UK and in Europe would justify reports of their own.

What cannot be ignored is that in rural areas it is a near necessity to have a broad knowledge of multiple trades. In my own practice, I work seasonally and as there is insufficient demand for my work in one trade, I must flit between different other trades to keep the money coming in. In the spring and summer, I will be repairing buildings with lime mortars, filling the downtime with shingle making. In the autumn and winter when the sap is down in the forests, I will be looking to fell timber ahead for use the following year. Some days I make bread dough, others lime mortar: but knowledge of one improves the other, and both have similar qualities – the right ingredients, mixed in the right way. This is a lifestyle and, as explained, conventional qualifications contribute to pigeon-holing trades into singular areas, which is not so applicable to the kind of cottage industry I would like to champion.

When the continuity of a rigid structure is broken it can take a generation or more to re-establish such things until they are embedded back into the culture. In the case of the UK, when so much time has elapsed and the provision and breadth of courses has substantially diminished over successive decades, there comes a point when it has to be recognised that it would be impossible and unwise to impose a structure such as the Germanic **ausbildung** system on the UK scene – the most recent efforts of T-Levels show that this isn't so easy. After all, the ausbildung system is the product of a different European culture. Our culture produces our system (or lack of one). Similarly, when so much time passes, a substantial generational cohort comes to bypass the entire educational system so that many of those practising traditional crafts in the UK are seldom qualified, because there is often no structure to accredit them, even if they are masters of their field and adept and skilled in their chosen crafts.

As is experienced in the **Hantverkslaboratoriet** in Sweden or for the participants of a heritage skills training programme in the UK, most participants are not college or apprentice-trained, but later in life converts, and this majority now staffs the ranks of those practising traditional crafts, and they do it very adeptly, with much passion, too. How do you go about catching up those who have slipped the net, accredit them, and bring some regulation to an overly liberal system for the benefit of all?

In education systems, there are three reforms required. The first is to better structure the routes into craft, this being the education of children in schools, and for adults in later life. This means consistent signposting, a clearer map of routes and understanding where existing measures fit into a bigger scheme. The second is to better support those already practising craft trades, offering an intelligent and practical form of meaningful certification with academic equivalence, to provide qualification and standards to those who form the backbone of this hidden sector. Lastly, it is necessary to support the most experienced members of the craft community to teach and inspire the next generation, offering funding and structure to enable them to pass on and teach skills in a way which does not impair them economically.

Education & Training – Learning Points

1. Connect children to the making of things in all stages of the curriculum, with particular focus on the avoidance of gender stereotypes.

2. Use traditional crafts to enthuse and inspire, connected to the narrative that it can be a viable vocation and possible for anyone to pursue as a legitimate career choice.

3. Support pathways for exposure to practical activities, in all stages of life.

4. Reappraise the cultural relationship with risk, firstly in improving the teaching of identifying and mitigating it, but also in working with it, particularly in situations where the only mitigation can be experience, such as operating historic machinery.

5. Nurture a clearer network which joins together the available venues for education to formalise and publicise the places which practise traditional crafts and incorporate volunteering at such places into the educative pathways available to young people.

6. Encourage later-in-life career changes and support transitions financially.

7. Establish a new means of certification for craftsfolk with equivalent, meaningful and sufficient comparable academic status.

8. Allow sensible and accessible routes for certification/accreditation for craftsfolk who have trained and learned outside of conventional education structures.

9. Build networks and communities to connect craftsfolk built on foundations of the free sharing of knowledge, cooperation and mutual support.

10. Focus on social goals before material goals for long-term group-based practical activities.

11. Encourage and financially support master craftsfolk to mentor and constructively support new entrants.

12. Recognise that a changing regulatory environment closes many of the doors previously available to young folk to become involved with volunteer organisations offering practical work and that additional structures, such as internal youth groups, need direct financial support to mitigate the loss.

Final Conclusion and Recommendations

When I began this research, I really hoped I would find clear examples of excellent routes to craft and brilliant funding structures to directly support makers and producers in the field of traditional and rural craft.

I have seen some distinguished examples that encourage routes to craft that must be studied in more detail so that the best practice can be adopted for the improvement of the sector in the UK. The Romanian **Ambulance for Monuments** inspires and upskills hundreds of volunteers and is fast cultivating a new appreciation for built heritage, especially among young people. The Swedish **Hantverkslaboratoriet** affords a clear pathway to traditional craft work with structure, training and qualifications, particularly for later-in-life career changers. The Romanian **Astra Museum**'s efforts to certify existing craftsfolk is a great example of how best to capture and record vital *intangible cultural heritage* and give those who have slipped through the cracks, or exist under the radar, appropriate recognition for their skills and contribution.

Finding clear examples of grants and funding that go directly to support craftsfolk, in whichever part of the cycle they are in, was not so definitive. On this point I did not find any distinguishable means for direct financial support. I was left mystified post-Brexit by the EU 'Interreg' project which had funded my shingle making apprenticeship, and wanted to find out more. How did an inter-state project come to fund craft training? As I described, it turned out this funding was a footnote upon a much larger project for which the main objectives had nothing to do with craft training. Perhaps the thing which can be learned from it is that funders of big projects which are not necessarily craft focused can make a huge and lasting contribution with the inclusion of heritage objectives. All this craft work survives *without* a clean, direct financial support mechanism, so I am left wondering what could happen if there was direct support for craftsfolk. A pilot is required.

When I set out on my travels, I really wanted to find examples where 'the little guy', the sole trader and the small-scale cottage industry, could get direct grants, with minimal bureaucracy, to help them in their work. I found none. There was a lot of money, most often from the state or church; in the case of the shingled churches of Sweden, it always funded repairs and never appeared to look to the underlying infrastructure of the craft makers and producers which enable such works. Perhaps it was too ambitious to try to record structures for funding alongside all the other factors I was researching. This conclusion is not exhaustive; I only reach it from what I saw, which was an incomplete picture. Studying the various financial mechanisms available across Europe would of course make a dedicated research paper of its own, like so many of the topics I have touched on. Still, no flagship policy to fund makers directly presented itself.

This has led me to reassess the situation here in the UK. For all its faults, we may actually have some of the best examples of grants which directly support makers, at least in comparison to the countries studied. This is not an endorsement that we have an optimal system – far from it. Despite some excellent organisations doing great work to change the funding landscape for craftsfolk, there is no hiding from the truth that the funding available is of low value and still then it is hard to come by when you are running a small business.

Traditional craft work needs to be better included in the national curriculum. Both at school, and within the existing volunteering structures that engage thousands, there are ample opportunities to do more to capture and inspire. As already explained, there is so much existing skills training in the heritage sector, but the different limbs of industrial heritage, historic transport and museums need to better talk to one another and there is so much more work that can be done to incorporate these institutions into the curriculum.

Now that the UK has finally ratified the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, it is time to conduct a full government-led (or funded) appraisal of craft work: rural or not. What was clear in writing this paper was that the statistics available for craft work are woefully out of date, some of the most

substantial research now being over ten years old. How this data is recorded going forward is vital. For a start, what constitutes 'craft'? There are multiple interpretations and there can be little to distinguish, say, building crafts like stonemasonry from fine, decorative arts such as silversmithing. The UK craft sector is overdue for a nationwide census, which will require a lot of sensitive thought to fully record and appreciate the nuances that exist, especially in rural crafts, where we can wear many different craft hats on different days of the week.

Alongside such a census, the time has come to collate some serious economic data. We need to know (and hopefully prove) if and when craftsfolk, who have businesses rooted in natural materials, are given injections through grant funding that they can deliver returns and benefits to the economy that far exceed the initial outlay. When craft producers 'add value' to base raw materials, it seems entirely plausible that grants and direct financial support to purchase tools, machines and workshops, as well as to undertake training, increase productivity and to train and employ others will consistently be money well spent, especially if these come from the public purse, and are used to stimulate the economic growth of this highly sustainable and resilient sector. Given the global picture and increasing intensity of fluctuation that is coming with climate change, investment in resilient rural crafts might well be one of the most timely, sensible things successive governments can look to do to create a backbone of productive manufacturers which simultaneously cherishes, protects and promotes our skilled folk and trade heritage.

There is much work to do in improving the landscape for workshop provision. Any efforts in any direction, be it shared workshop space, tool libraries, subsidised and affordable spaces, renovation grants or bold policy, such as a traditional crafter's right to occupy, will make an immediate and positive difference. In Scotland, the means to safeguard a substantial proportion of historic agricultural buildings is at a tipping point. Since I returned from my travels and began writing this report there are two examples local to me which have been demolished. A nationwide heritage appraisal and new wave of listing is required, along with better provision to enforce and bring justice to breaches. Much work needs to be done to get the next generation of emerging craftsfolk into these spaces. It cannot be understated that provision of workshops *must* go hand in hand with increased security of tenure.

Such security of tenure does not stop at the workshop. The same protections are needed as much at home as they are at work. Of course in the rural setting, homes and workshops as one is exactly the kind of opportunity that needs to be supported and created.

Topics of security bring us to the elephant in the room. Economic pressure. We can dream all we like of idyllic rural crafts and a revitalising of the rural economy, but without addressing the root causes of the crushing pressures which come from high rents, stagnant wages and unaffordable property prices, little will change and the boat for creating a resilient rural economy will sail with few on board. If you care for craft, you must care for economic equality.

It feels possible that we are at the beginning of a resurgence and a time of new appreciation for heritage crafts. Much work has been and is being done to champion heritage crafts and the emergence of the Heritage Crafts Association means that the sector starts to gain a voice and reach new audiences and lobby for constructive changes in policy, which can do much to help build a network of resilient rural craft businesses nationwide.

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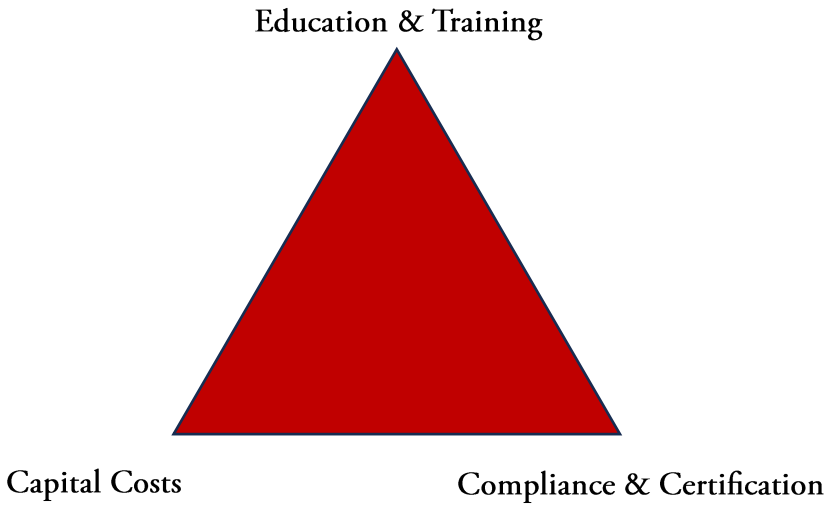
Huge thanks must be extended to the Churchill Fellowship for their support to undertake this research. Beyond this paper, I have been very privileged to learn so much in my craft of shingle making from my travels and make connections with many brilliant folk. In the exploration and analysis of the themes at play I have already been able to enact some of the learning points in my own practice: a direct outcome being the establishment of a Community Interest Company which is tasked with repairing and operating a historic water powered sawmill in Aberdeenshire.

Fig.1 Challenges for Craft Businesses

This diagram illustrates the challenges facing all craft businesses throughout the life cycle:



Education & Training:
These are the challenges associated with securing appropriate training. This element of the triangle is often the easiest of the three to achieve (and in itself, this can be difficult). Most discussion related to the decline of traditional craft skills focuses on this element but omits the other factors.

Capital Costs:
These are the challenges associated with securing funding towards the large and prohibitive costs: purchasing or renting buildings, acquiring tools, machines and vehicles and procuring raw materials for the work. Some businesses face additional challenges when procuring specialist machines. Eligibility criteria for grant funding often prohibits grants being awarded to individual craft businesses/sole traders. When available it almost always mandates that new machinery must be purchased, which restricts the restoration and repair of older tools and machines which may be more appropriate or essential for craft work.

Compliance & Certification:
These are the challenges associated with navigating the administrative elements of running a craft business. They include topics such as:

- Navigating and understanding tax, self-employment self-assessment and company structures and options
- Health and safety compliance
- Developing risk assessments, safe systems of work and competency management systems
- Securing correct competencies and trainings and funding such courses and tickets
- Knowing where and how to access such competencies and trainings
- Having informally learnt skills certified in a meaningful manner
- Securing appropriate liability insurance
- Ensuring employees and volunteers are adequately trained

Appendix I: A History of Roofing Shingles in Scotland

First published 2024. Indebted thanks to the late Bruce Walker, author of the paper The Use of 'Skailie' in Medieval and Post Medieval Scotland, from which many of the references in this article are sourced.

When talking about producing roofing shingles in Scotland, a question inevitably arises along the lines of "but were there ever shingled roofs in Scotland? Isn't the climate too wet for them?" This common misconception has its roots in cultural memory, in a misinterpretation of entomology, an inaccurate historical analysis and an honest misunderstanding in the resilience of good quality, cleft timber against the weather.

The slate roof is undoubtedly widely recognised as the predominant historical roofing material in Scotland. Before the advent of slate, historians would have consensus that the thatched roof, of reed, straw, heather, broom or juniper, and the turf roof, reigned supreme for thousands of years and was the most common roof for everyday homes and steadings.

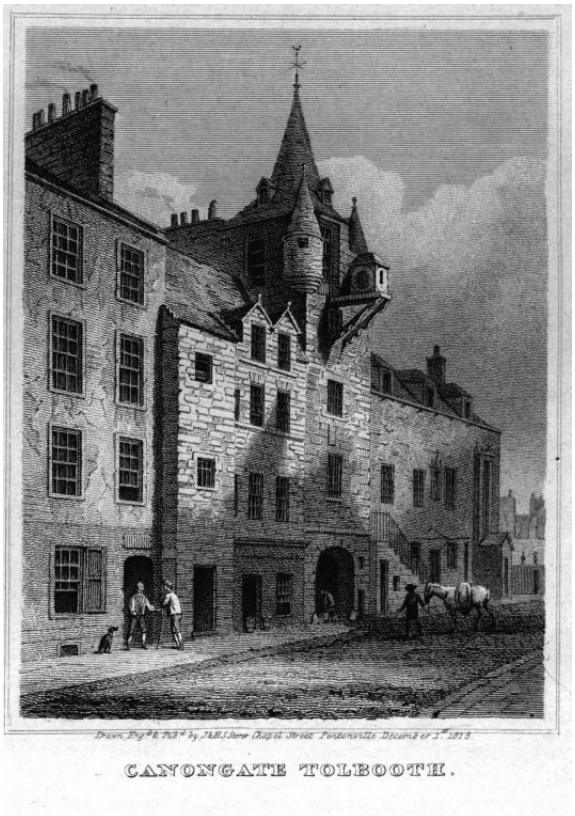
However, it must be recognised that the use of roofing slate went hand in hand with the rise of the industrial revolution. Before this time, slate was of course produced, but was difficult to transport. It was also much heavier than earlier materials, requiring stronger roof structures. The first record of slate production in Easdale dates to 1554[1] and the first slate was quarried from Ballachulish in 1693.[2] The ease of installing slate also boomed with the advent of industrially produced nails.

Queen Victoria's Picnic Cottage, recently repaired by the National Trust for Scotland at Mar Lodge, Cairngorms NP. R.G. Bushell supplied the larch shingles for a porch extension in a recent renovation.

[1] Easedale Museum: www.easdalemuseum.org/slate-industry/ 11/2024
[2] RCAHMS County Inventory: Argyll Volume 2; Lorn. Canmore Ref: 1083214

From afar, a shingled roof is also possible to be misidentified as slate, so in cultural memory, the specific use of roofing shingles is somewhat forgotten. John Alexander Smith, the vice president of the Society of Antiquaries of Scotland, writing in 1873, captures a historic example of roofing shingles at the Edinburgh Canongate Tollbooth, and how easy it can be to misinterpret them:

Some years ago when walking with a friend down the Cannongate, on a bright sunny day, I made a discovery which rather astonished me; the sun was shining brightly, as we passed, on the picturesque roofs of the turrets and tower of the Old Tolbooth, and from its rich brown colour and general appearance, I saw that it was not covered with slates, but with wooden shingles; and my friend, who was familiar with shingled roofed church towers in Berkshire agreed with me on this opinion. The fact was a new one to me, though it may have been known to others, and must have been well known at least to the workmen who from time to time would require to repair the roof. I looked into the various published works which gave details of the antiquities of Edinburgh and the adjoining burgh of Cannongate; but though some gave short, and others larger accounts of the Tolbooth, none that I could discover made the slightest reference to the fate of its shingled roof. In the course of this winter, I happened to notice planks and scaffolding projecting around the eaves of the old building, and on making closer inspection, I found that it had been undergoing a thorough repair; but I was startled to find the shingled roof had altogether disappeared, and that it was now newly covered with small blue slates.



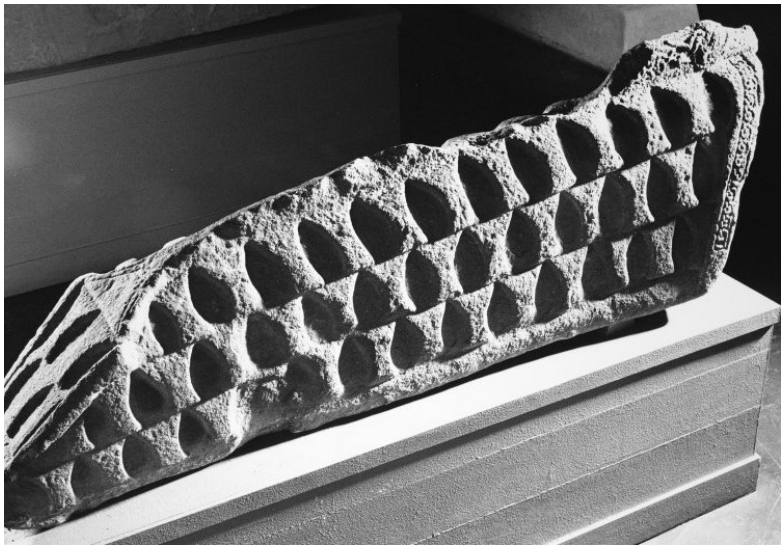
An 1810 engraving of Edinburgh Canongate Tollbooth, at this time still with a shingled tower. (Canmore)

Roofing shingles are very likely to have been in existence in Scotland as far back as the 10th Century. The Meigle Stones is a collection of 33 Pictish carved stones. The 25th in the collection, a Hogback Tombstone is noted for its "Anglo-Scandinavian recumbent tradition".[3] It features carved 'tiles', which bear a striking resemblance to some of the Scandinavian pattern of shaped pine shingles (Stavspån or Kyrkspån).

The oldest surviving example of a roofing shingle in Scotland dates to around 1250. Unearthed from waterlogged ground during excavations in Perth High Street in 1975, this small example is made from oak.[4]

Shingles were evident further north in the Highlands. Fairburn Tower, west of Dingwall, was recorded as having its oak shingled roof blowing off in a storm in 1803.[5] As an oak shingled roof can last over sixty years without issue, it would be likely that at the point of failure the roof was at least eighty years old. There are records of repairs being made in the 1720s,[6] which if it were taken that at this time the tower was fitted with new oak shingles, would correlate reasonably well to reaching such a decayed state by 1800 that a storm would destroy it, thus leading to the conclusion that it was probable that shingles were being manufactured in Highland Scotland in the 18th Century.

[3] HALL, A.M. The Meigle Stones: A Biographical Overview, Northern Studies vol.46
[4] Perth Museum & Art Gallery Collection, 1975 Object A11257 "Perth Roof Shingle"
[5] MATHER, A.S. 1987. The County of Ross and Cromarty
[6] STANDORD, C. 2023. Fairburn Tower History Album, Landmark Trust



Meigle Hogback Tombstone No.25, and an example of wall shingles in Kopparberg, Sweden.

With this information, a reassessment of the use of shingles can be made, which also challenges the institutional history of Scottish roofing materials that there was "no physical evidence of the early use of shingles in Scotland."[7] It is highly probable that before the advent of slate, and well into the 19th Century, roofing shingles continued to be used for high-status buildings. The late Bruce Walker describes this best:

Scotland had had a long timber tradition and Scottish aesthetic preferences were linked to that tradition. These preferences included extremely steep pitched roofs, ideal for shingles but not readily adapted for the application of extremely heavy slate, some of the earlier varieties were extremely coarse. Substantial timber resources appear to have resulted in a continuation of the shingle-roofing tradition on high-class properties, although there is some evidence to suggest that grey slate may have been used in Angus, the Borders and Caithness at a slightly earlier date than its introduction into central Scotland.[8]

The Highland Clearances of the 19th Century contributed to a huge loss of craft and folk traditions as generations were moved from land inhabited for hundreds of years. The land ownership changes that came with the clearances made it harder to access forestry, with firstly Estates and latterly the Forestry Commission having a monopoly on forestry geared towards producing fast grown, poor quality timber which would be unsuitable for shingle production.

The advent of the Victorian Highland shooting estate heralded the normalisation of overstocked deer populations, seriously inhibiting forest regeneration and further widening the loss not just to shingle making, but all timber craft traditions. Many of the emigrants of the Highlands during the second wave of clearances in the 19th Century settled in Canada and it would be probable that some of the cultural knowledge of shingle making went with them and fed into the fast growing Canadian shingle making industry. By 1909 Canada was producing 725 million shingles a year and increasing to 2.5 billion by 1919.[9]

A planked roof, a common type of roof in parts of Austria known as a *Brettendach*, can also be found in Scotland. A planked roof is, as the name suggests, made of sawn timber boards, laid vertically. Single planks are either laid in continuous lengths for the whole span of the roof, or smaller lengths are laid, much like large shingles. Built in 1853, the historic Finzean Bucket Mill in Aberdeenshire features a preserved example of a planked roof, hidden inside the

[7] EMERTON, G. 2000. The Pattern of Scottish Roofing, Historic Environment Scotland
[8] WALKER, B. 2001. The Use of 'Skailie' in Medieval and Post-Medieval Scotland
[9] GRIFFIN, R. The Shingle Sawing Machine in British Columbia 1901 to 1925, British Columbia Provincial Museum

roof space, where a later extension was thought to have been added in 1869. A record exists of the miller's cottage, which was sold in the 1850s, as having been shingled and a photograph from 1883 appears to show shingles on the new cottage of 1855.[10]

Preserved section of historic planked roof, inside the 1853 Finzean Bucket Mill, Aberdeenshire. Roofing shingles are not the only pattern of wooden roofing found in Scotland.

Oak shingle reclaimed from Perth High Street during building works in 1975. This shingle is dated to 1250, dispelling the myth that there was no evidence of early shingle making in Scotland. (Perth Museum)

[10] CALLANDER, R. A History of Birse, 2000.

After the growth of more industrial sawmills, but before the wholesale introduction of cheap corrugated iron roofing sheets, planked roofs may have been more common, at least on ancillary and agricultural buildings in Scotland, nearby to sawmills.

The Scottish slate industry reached a peak in the 1890s[11] and by this time the widespread use of slate, with its ultimately superior longevity, combined with the huge changes in landscape, a moving population and economic order ultimately nailed the coffin for the making and use of roofing shingles in Scotland by the end of the 19th Century.

After the Second World War, a revival came in the form of sawn Cedar shingles, imported from North America, which were used on scale to clad the roofs and sometimes walls of many of the pre-fab homes built after the war. The Forestry Commission in Scotland was notable for its provision of forester's bungalows, with Cedar shingle roofs and walls. The pre-fabs came from a variety of sources, with many frames coming from Sweden.[12]

Imported Cedar shingles made their way into roofs of new builds across Scotland post-war, not just for the Forestry Commission with social housing from Benbecula[13] to Strathconon[14] featuring shingled roofs, partly driven by the shortage of building materials in the UK. Cedar shingles remain available throughout the UK but suffer from increasing costs. Between 2013 and 2022 the price has increased 6.5 times.[15]

This of course makes a home-grown Scottish product all the more viable and with patience, good institutional support and a growing appetite for sustainable, locally produced building materials, the beginning of a new chapter in the history of shingle production in Scotland is possible.

Fairburn Tower east of Dingwall in the Highlands. The shingled roof was said to have been lost in a storm in 1803. (Wikipedia, CC)

[11] Historic Environment Scotland Engine Shed Blog: hps://blog.engineshed.scot/2020/04/17/scoish-slate-industry 11/2024

[12] NANDI, S. Evolution of Prefab Timber Swedish Houses in UK from Prototype in Sweden

[13] Columba Place, Balivanich, Benbecula. HS7 5LS

[14] Achlorachan, Strathconon, Muir of Ord.. IV6 7QQ

[15] WLW Timber: hps://www.wlwest.co.uk/news/cedar-shingles-v-larch-shakes 11/2014

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Appendix III: List of Photographic Plates

Front Cover: **Eva Gredig** at work in her workshop in Thalkirch, Switzerland.

Page 5: The preserved and shingled buildings in the **Stübing Freilichtmuseum,** Austria present a rural idyll.

Page 7: The shingled roofscape of shingle maker **Klaus Seelos'**s home near Stübing, Austria.

Page 13: The map of sites visited during the travel for this research.

Page 16: A shining example of a continuous cover forest in Taurachtal, Austria. Larches turn yellow in the autumn.

Page 19: One of **Bengt Jo Bygden**'s experiments with bark removal to promote resin in Sweden.

Page 23: One of the many abandoned farms of the Cabrach in Moray, Scotland.

Page 25: **Nejk Dijak**, director of **Skodlarstvo Bohinj** operates a hydraulic log splitter in Slovenia.

Page 30: **Edwin Weiser** stands with one of his inventions in the workshop of **Florian Bår**, in the Bregenzerwald, Austria.

Page 34: Millwright & Shipwright **Mattias Hallgren** operates the impressive overhead gantry crane in his workshop at Forsvik Bruk open air museum, Sweden.

Page 36: **Eva Gredig** stands in the doorway of her workshop in Thalkirch, Switzerland.

Page 38: Interlocking *Gonty Drewniane* shingles are stacked high in the yard of **Warciak Drewgont** in Podsarnie, Poland.

Page 42: **Manfried Wendlinger**, student of **Josef Kalser**, makes shingles in his workshop near Lienz, Austria.

Page 45: The shingled cabins of the Velinka Planina, Slovenia, feature unique metre long spruce shingles.

Page 52: **Bengt Jo Bygden** demonstrates how to manufacture and fit a pine wall shingle at the reconstructed **Södra Råda Church**, which has been rebuilt by master craftsfolk after a devastating fire, Sweden.

Page 54: **Marius Frommherz**, master carpenter, shingle maker and director of **Scwarzwaldschindel** fits fir shingles to his self-built home in the Black Forest, Germany.

Page 56: Master shingle maker and log hewer **Nicola Toader** demonstrates hewing an oak beam during repairs to a historic church for an **Ambulance for Monuments** event in Câpâtânesti, Romania.

Page 59: Architecture students of Cluj-Napoca University wave from the roof they have repaired, having spent a week volunteering with the **Ambulance for Monuments** in Hinchiriş, Romania.

Page 62: Façade shingles in eastern alpine Switzerland, much like those produced in the Bregenzerwald of Austria.

Back Cover: A pattern of fir shingles in a swept valley, covering a roof of a building at the **Sibiu ASTRA** open air museum in Transylvania, Romania.

Appendix IV: Import/Export Figures

Import and Export of Shingles and Shakes, HMRC Overseas Trade Records 2000 - 2025										
	EU Export		EU Import		Non-EU Import		Trade Balance		(of Which from Canada)	
Year	£ Value	Kg Weight	£ Value	Kg Weight	£ Value	Kg Weight	£ Value	Kg Weight	£ Value	Kg Weight
2000	£ 109	40	£ 6,749	1,715	£ 790,179	697,009	-£ 796,819	-698,684	£ 787,377	694,791
2001	£ 4,113	2,520	£ 2,680	301	£ 843,896	727,982	-£ 842,463	-725,763	£ 843,042	727,892
2002	£ 50	24	£ 2,881	2,058	£ 970,566	967,979	-£ 973,397	-970,013	£ 969,290	965,679
2003	No Data	No Data	£ 75	125	£ 1,164,319	1,044,436	-£ 1,164,394	-1,044,561	£ 1,013,937	992,484
2004	£ 949	1	£ 2,642	414	£ 1,175,309	1,352,276	-£ 1,177,002	-1,352,689	£ 1,175,309	1,352,276
2005	No Data	No Data	£ 524	260	£ 1,002,482	1,271,354	-£ 1,003,006	-1,271,614	£ 991,116	1,261,903
2006	No Data	No Data	£ 380	50	£ 2,041,333	1,861,561	-£ 2,041,713	-1,861,611	£ 2,041,333	1,861,561
2007	£ 9,831	4,231	£ 81	48	£ 3,017,756	2,518,565	-£ 3,008,006	-2,514,382	£ 3,017,756	2,518,565
2008	£ 16,060	18,109	£ 286	210	£ 2,102,140	1,536,901	-£ 2,086,366	-1,519,002	£ 2,101,523	1,530,901
2009	£ 421	4,640	£ 1,109	950	£ 1,605,816	1,566,866	-£ 1,606,504	-1,563,176	£ 1,538,327	1,497,115
2010	£ 7,518	17,890	No Data	No Data	£ 1,984,065	1,624,185	-£ 1,976,547	-1,606,295	£ 1,895,792	1,558,036
2011	£ 12,021	13,212	£ 174	125	£ 2,546,850	2,071,918	-£ 2,535,003	-2,058,831	£ 2,286,316	1,941,555
2012	£ 1,080	10,022	£ 4,947	1,200	£ 2,632,590	2,055,137	-£ 2,636,457	-2,046,315	£ 2,282,525	1,689,201
2013	£ 463	450	£ 195	20	£ 2,694,826	2,152,045	-£ 2,694,558	-2,151,615	£ 2,236,009	1,755,966
2014	£ 1,489	1,200	No Data	No Data	£ 3,721,157	2,922,641	-£ 3,719,668	-2,921,441	£ 3,630,012	2,899,183
2015	£ 5,516	2,308	£ 452	10	£ 3,904,563	2,868,621	-£ 3,899,499	-2,866,323	£ 3,882,216	2,864,121
2016	No Data	No Data	No Data	No Data	£ 3,619,515	2,133,968	-£ 3,619,515	-2,133,968	£ 3,480,345	2,048,164
2017	£ 6,285	4,600	£ 208	659	£ 3,079,052	1,701,830	-£ 3,072,975	-1,697,889	£ 2,931,997	1,636,727
2018	£ 6,222	856	£ 90	20	£ 3,062,391	1,697,930	-£ 3,056,259	-1,697,094	£ 2,862,733	1,611,454
2019	£ 1,614	226	£ 1,362	437	£ 2,610,136	1,300,239	-£ 2,609,884	-1,300,450	£ 2,473,078	1,240,458
2020	£ 23,806	11,973	£ 1,086	1,503	£ 3,139,409	1,593,275	-£ 3,116,689	-1,582,805	£ 3,033,912	1,554,086
2021	£ 285,578	70,510	£ 1,278	1,425	£ 5,544,946	1,877,149	-£ 5,260,646	-1,808,064	£ 5,181,977	1,784,582
2022	£ 616,818	147,315	£ 1,145,282	311,163	£ 3,945,772	813,353	-£ 4,474,236	-977,201	£ 3,377,495	647,520
2023	£ 93,970	37,448	£ 392,674	277,426	£ 4,274,404	981,847	-£ 4,573,108	-1,221,825	£ 3,879,885	847,373
2024	£ 136,279	82,054	£ 409,215	355,785	£ 1,797,252	620,848	-£ 2,070,188	-894,579	£ 1,673,616	569,655
*2025	£ 3,037	2,402	£ 36,213	15,469	£ 1,075,260	445,900	-£ 1,108,436	-458,967	£ 1,073,471	439,900
							£2,504,744	1,574,814		
							£ Average	Kg Average		

*Up to June 2025 at time of compilation

Notes