

Chris Frankland – The Opportunities and Challenges of Adding Value to Urban Trees

ICF Annual Conference – Newcastle, 28 April 2016

Note Set 1:

Accompanying notes for presentation slides

[1 Ash detail] Adding Value to Arboriculture

I would like to thank the forestry industry for inviting an arborist into your midst.

It is a strange thing – an arborist talking to foresters about processing timber.

Perhaps if I make it clear from the start that I am only experienced in the processing of small or very small timber packages. Several tons down to something you could lift with one hand.

[2 FTS Staff]

I run a small arborist business. There are usually about a dozen of us. We plant, prune and fell trees. We also process our timber. We supply timber but only very small quantities. We work with local communities and schools on tree and timber projects. We make a variety of products ourselves.

The following thoughts are based on practice, observation and conversation. They are not based on researched statistics.

[3 logs on wagon]

My little business probably generates about 400 tonnes of usable timber annually. By usable I mean timber that can be put to a higher end use than firewood or chip.

I estimate that there must well over 1000t of usable urban timber generated by arborists every day. I say 1000t but it could be much more. The majority isn't 'used'. Why? Using my business as an example I will try to explain.

Why don't arborists plank timber? It is not considered part of our responsibility.

Processing timber isn't considered part of arboriculture. It is not included in any training to my knowledge. In my view this is an industry embarrassment but a topic for another day.

There are other reasons that few arborists process timber – these are the numerous challenges and barriers.

Our timber comes in varied sizes, shapes, species. It contains contaminants.

[4 log arch]

We have problems with access and extraction.

Then there is transport, equipment, skills, knowledge, regulation, marketing, sales, time and space and many others.

We can overcome most of the barriers with dedication, passion, patience and hard work (see notes from experience)

Today I don't wish to dwell on these. I want to concentrate on the site issues.

Probably the biggest barrier is finding an appropriate site and coping with planning laws.

[5 yard overview]

Planning restrictions and the lack of affordable space and are by far the greatest barriers to local timber conversion.

Timber processing needs a lot of time and a lot of space. This cannot be overstressed. So what is the problem with planning?

Briefly I will share my frustration at not having enough clout when it comes to the 'very special circumstances' needed to get planning on a low-rent site – that is a field. In many cases this our only option as the profit margins in small-scale timber conversion are so small industrial site or even farm yards require an unaffordable rent (time and space again).

So - are planning laws balanced? I believe our local timber processing is the most environmentally friendly activity taking place in our rural community, but -

[6 new cow barn]

Half a mile down the road from our site a farmer has recently erected a large cow barn. No need for planning as it is agricultural. Does it receive grants? Probably directly, or indirectly, as farming has lobby power. Is it sustainable? The debate about beef and dairy is uncomfortable.

The same farmer has a second farm where most of the buildings and yard space are taken up with horses and caravans. A good income for relatively little effort for any farmer.

[7 runway 2]

Less than a mile from our site Manchester Airport built a second runway over a river and into fields and woodland.

[8 Amazon]

One mile from our site, Amazon are about to move into a brand-new 270,000 sq ft building on a Greenbelt site (sorry – Greenbelt up to the day before the planning application was submitted). Is Amazon sustainable? Does it provide quality skilled work, training and career opportunities or just low paid jobs? Has it received tax payers help? Undoubtedly but I don't know how. Does Amazon pay its share of tax? Is Amazon 'Green'?

[9 peat extraction]

Four miles away peat has been extracted for years without adhering to planning conditions. As a consequence, neighbouring houses are suffering severely from subsidence but the Council is enforcing nothing. An environmental disaster continues every day. Is this sustainable?

[10 HS2]

HS2 is going to cut our village in half.

[11 'local firewood]

A firewood business based in our next door farm yard is no longer processing local timber as it is cheaper to import ready split kiln dried logs from Eastern Europe.

[12 FTS Trees]

We process timber in the corner of field. No one sees us but occasionally you can hear us. We have satisfied (with flying colours) all planning requirements other than one. Our activities are interpreted as industrial and should therefore be stopped as this doesn't comply with 'the open nature of Greenbelt'.

[13 Mill(ionaire) House]

Interestingly our field access is off Mill Lane, adjacent to Mill Wood and on the opposite side of the river to The Mill. Needless to say The Mill is now an expensive residence. We, and I have heard of five other small businesses, have been or are being closed down by wealthy NIMBYs who regard the countryside as a park for the well-off.

I repeat the question – Are planning laws balanced?

Most people like wood. They usually like it a lot, especially if it has a local connection – a story

What could be done with 1000t of timber per day?

[14 space scene Ash detail]

Education

- It is generally recognised that trees are good for us. Generally, today's society is ignorant about all aspects of trees and tree products. Small local timber activities help to connect society with trees and timber. This nature connection cannot be achieved through the internet or in the classroom.
- My own small business has trained dozens of individuals. Many now have skilled jobs and some run their own businesses.

Health

- Mental health is a growing concern to all and resources are scarce. This is not the platform to describe how more local, creative, hands-on activities could save the NHS money, but even my own small business has removed several individuals from doctor and pharmacy visits.

Environment (Carbon)

- Anything made from wood stores its carbon for the duration of the usable life of the product and its afterlife until rotted or burnt. On average, biomass life must usually be for less than two years.
- 'Product miles' for local timber are a small fraction of those for imported timber and even UK commercial timber

Economy

- A ton of local timber used, equates to up to a ton of timber not imported.
- Working with local timber can create a multitude of diverse products, jobs, training
- One small scale activity may not have a great impact on the economy in the same way as a large commercial development but if small scale light industry were made more possible the overall effect could be tens of thousands of jobs nationwide
- A sustainable economy is more efficient let alone necessary. A local economy is sustainable

'Modern Forestry – Unleashing The Rural Potential' was the title of the CONFOR conference instigated by Rory Stuart (Forestry Minister) back in September last year. How can there be any unleashing while we have these planning laws?

Let's compare arboricultural timber and small woodland timber

As arborists we get paid to extract timber! Processing urban timber should therefore be relatively easy and profitable. But if it were then it would be part of mainstream arboriculture but it most definitely is not.

A woodsman however, doesn't get paid to extract his timber. How can he or she begin to make a living when they have to include the cost of extraction.

Let's return to the 'planning'

If I own a wood and a neighbour owns another wood nearby I need 'change of use' planning if he or she were to plank his or her timber in my wood as this in planning law appears to be interpreted as an industrial activity.

Most of would see this local material activity as an entirely appropriate for a rural setting as it has been carried out for centuries in the rural setting and still is across the globe.

There seem to be many grey areas when comparing agriculture and forestry. Some appropriate clarity and support could be a game changer.

Those of who believe in maximising our timber resource try to survive in the shadows.

Generally, people think what we do is brilliant, right and proper.

We are seen as part of the sustainable solution. The government wants this but the rules are saying we are the bad guys.

This is just plain wrong, as admitted by Rory Stuart in September – But his department could do nothing to help other than offer sympathy!

[15 Yew root]

Any day now we will learn that we will have six months to 'get rid of' 400t of timber in order to return a field to horse grazing (leisure – not agriculture).

Small businesses rarely use government funding. We have little if any lobby clout. Local timber processors have no representation in either forestry or arboriculture. We don't get government bailouts. Some of us even pay tax!

Small scale timber conversion can deliver many benefits extremely efficiently if only we were allowed to get on with it.

[16 play log]

It is up to the government. It has the choice. We can trash our own character timber then import dubiously sourced timber products or we can support our own.

[17 wavy wood detail] Thank you

Note Set 2:

Urban Timber - Processing and Products: Notes from experience

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Staff

1. If the boss is not on board success is very unlikely
2. Consider employing non arborists, possibly part-time or as self-employed, often older/retired people with woodworking skills and more patience.
3. Develop relationships with cabinet makers, artists, sculptors craft groups and individuals. Many are happy to work for off-cuts instead of wages.

Quotation from two retired teaching friends – ‘If you couldn’t afford to pay us would mind if we worked for free?’

Warning – If you have good staff who are interested in developing this side to your business you will lose them if you don’t work with them

Equipment and Storage

1. Start slowly on simple experiments. Is this not the same advice you would give to an aspiring arborist?
2. Low rent on long-term storage open-air and some covered if possible.
3. Space to process and store. There are many methods of storing timber and most of them need space.
4. Access to Lorry loader.
5. Sawmills: Three common types – One using chainsaws and the small static or mobile band and circular saws.
6. Timber dollies (Devises for moving large sections of timber by hand).
7. Sundries: Metal detector, canthook, strapping (for plank stacks), power washer.

Warning - Do not invest in expensive gear until you already have positive results - We have been milling urban timber for over twenty years but we don’t own a sawmill – we hire, thus saving purchase costs, maintenance, training, garaging. We also benefit from the experience of the miller.

Training

1. Learn from others - Some like to keep their methods secret. We believe that the opportunities are so vast that we should share experiences and everyone wins. Secrecy we believe to be a form of self-excommunication.
2. Your standard tree contracting crews need to see the importance of dismantling trees in ways that improve the opportunities for uses. Less logging, less lifting, more profits and better job security are good motivators justifying the slightly longer initial dismantling styles.
3. There are many courses, books, magazines and websites targeting many different facets of timber uses.
4. To my knowledge there are no courses specifically aimed at the conversion of urban timber.
5. Working with wood is nothing new; equipment, fixings, glues and access to information have made it easier. Experience is usually one of the most significant missing ingredients.

Marketing

1. We have only recently produced marketing leaflets due to the influx of ‘qualified arborists in our area. Before we had these leaflets, word of mouth and sensibly priced quality jobs across the widened service provision, have been more than sufficient. We are usually short of timber.
2. If you don’t offer these services you could lose your best clients. If you do good environmental ‘things’ with your client’s trees, they feel ‘green’ because they feel part of it.

Principals

We never condemn a tree for its timber. If we did we would become timber merchants, competing with forestry, imported timber and cheap timber products. We would lose our unique market position.

Clients

1. Domestic clients who buy back their own or other local timber in product form are excellent unpaid marketers. Don't tell them an item would be too expensive. Tell them how much and let them decide, just as we do with tree work.
2. Local Authorities like to demonstrate any activities using local materials and local labour.
3. Schools have similar target to local authorities with all things sustainable plus natural play is at last almost mainstream. Large stable logs make excellent playground challenges.
4. Chainsaw sculptors are always happy to find a supplier of large timbers.
5. As mentioned earlier, cabinet makers, artists, sculptors craft groups and individuals.

Dos

1. Be prepared to make mistakes
2. Be prepared to break some rules (Planning Laws)
3. Be prepared to take some risks but keep it sensible

Don'ts

1. Don't expect the miller to tell you what to do with a log. He can advise but it is you who is using it or selling it on.
2. Don't mill tons of timber without knowing what it is for or how and where you will store it.
3. Don't expect instant results.

Funding & Grants

1. Grants tend to remove creative freedom. There are a host of grants up for grabs but our experience is mixed. Obtaining grants is usually best carried out by the corporate client. This leaves us to do the creative delivery.
2. Slow progress with smaller projects retains control. It may not produce fast enough growth for the ambitious

General Products

(Just look around – there is nothing wooden in our lives that is not possible)

1. Indoor – Furniture, flooring, construction, utility items, crafts (bowls, vases, hand carvings)
2. Outdoor – Construction, rustic furniture, sheds, trellises, raised beds, sculptures, play logs and apparatus.

Using The Arborist Advantage (As with any business use your strengths)

1. Clients pay us to take their timber.
2. We have large lumps of wood and our labour is costly, so for in-house products consider large items such as playground timbers and thick timbers such as mantle pieces and other chunky furniture. Avoid the fine sections or heavily

- worked sections that can be cheaply produced in bulk. Create your own market and don't try to compete with established timber businesses. Most commercial timber costs are based on volume. We, in our industry are not short of bulk.
3. We have species diversity. The modern discerning consumer wants choice
 4. We have unbeatable provenance. The modern discerning consumer wants connection and the story
 5. We have interesting figuring (grain variations, burrs, fungal staining, distortions, disfigurements, contaminates). Perfection is big business. Imperfection is class.

Regulations and Health & Safety

1. The Health & Safety officer who may come and inspect our arboricultural (and forestry) activities also has woodworking workshops on his or her specialty activities.
2. Yes, there is a raft of regulation covering all aspects of working with wood. For any arborist this should not be too great an issue as we are already burdened and familiar with more than most. The extras are no more challenging than when we take on a new technology within our basic tree work. But yes, they can be irritating.

The Conversion Process and Further Random Lessons from Experience

1. Preliminary research: Visit as many businesses as possible who are already converting urban timber. His way you can see what inspires you and avoid years of expensive mistakes. You may have to travel.
2. Look at condemned trees as opportunities. With experience you will learn which parts can be used for which products and therefore how the tree should be dismantled.
3. If you have the space, have a good stock pile of timber but be aware that many species won't keep for much more than a couple of years.
4. Deliberately allowing some species to stand in the round for over two years, particularly Beech, can lead to decay (spalting) that increases its value to many end users. The problem is in knowing how long to leave them before they rot too far.
5. Try to avoid any milling until you have a good idea where you will put the processed boards. Multiple handling is very costly.
6. Sometimes you will not know what you will do with a particular piece of wood until you start working on it. The skill to spot potential is usually best gained by sharing experiences. It is the unusual timber that is the most interesting to work with.
7. Think organically. Work and design with what you get and avoid looking for specific quality and species of timber.
8. Try to avoid the clients who want to plunder all your best stocks unless they are prepared to pay well over the odds. It is worth teaching them about species other than Oak!
9. Avoid the know-all client. They are exceedingly irritating, want to tell you what you should be doing and they destroy the positive atmosphere generated by the wonderment within of a group of wood nerds cutting into a fungal infested stem.
10. Maximise the off-cuts (sometimes referred to as slab wood). Hardwood off-cuts are good for charcoal making. Softwood off-cuts make good rustic (very rustic) fencing and domestic den building material. Chunky off-cuts are good for turners

and carvers. We give these off-cuts to interested parties in return for labour when milling. It's cost-effective and keeps the yard tidier.

11. Try to keep a record of the chain of custody for processed wood. This gives it super green credentials and a story. Clients love stories.

Air and Kiln Drying and Timber Treatments

1. This topic is too much to consider in detail but a few hints may be useful.
2. Although the purist would probably disagree we use cedar as drying sticks as is plentiful, quick to dry and brittle thus being easy to snap of to desired lengths.
3. A visit to the internet would provide details of various stick separation distances and stacking methods.
4. There are benefits to selling timber straight from the mill or to process in-house.
5. Storage of kiln dried timber can be costly as it is difficult to keep dry. This is currently one of our biggest challenges.
6. Only invest in a DIY kiln when you are confident you have an immediate use, immediate sale or dry storage. We take our drying timber to a traditional steam drying kiln.
7. Most of the timber we sell for outdoor use is pressure treated at conventional commercial premises. They are now familiar with our odd shapes and sizes of timber stacks. Using the correct form of treatment can provide a 40year in-the-ground guarantee. We request child friendly treatments.
8. There are many options for hand applied preservatives and paints. We are constantly trying out different products.

Contaminants (metal, stones, soil, etc)

(Often the main justification to avoid processing urban timber)

1. There is a high probability that any old urban tree will have some metal buried within. If you know where the tree has grown most of this can be predicted and checked over with a metal detector.
2. Common sources of metal: Washing line hooks, estate agents sign boards, fencing nails and barbed wire, tree houses and many more.
3. Don't ask a large commercial sawmill to process urban timber. When the mill loses production time due to blade replacement and sharpening you could be put off for life by their description of your wood and your ignorance.
4. Lightweight portable sawmills tend to have cheaper blades. Metal damage is less expensive if the blades are less expensive. Broad blades give a straighter cut but are more expensive to sharpen and replace
5. There are various extraction methods, mostly tedious when the metal is buried deeply. We use a carving saw, axe, hammer, fencing pliers and a cheap carpentry chisel. Sometimes it is wise to call it a day and declare it an eco-log and let it rot, pass it to a contaminate friendly chipper or burn it
6. You will hit metal and it does cost. Experience of the whole conversion process gives the best guidance on whether to cut or not.

Government Support (Bizarre contradictions)

1. It would appear that everything the government says would be to encourage local materials being worked by local labour for the local market (*Local Agenda 21 - Rio summit 92, Copenhagen 2010*)
2. Central government, local authorities, businesses, schools and individuals have environmental targets but few resources available that 'they' understand. We

- who own this vast biomass resource should have the means and the knowledge with which to assist with at least their tree resource. Timber sales to schools and local authorities have become our greatest source of income over the last year. This is a growing market.
3. The bizarre contradiction is that the same government that encourages this obviously 'green' activity presides over the same laws that create some of its greatest obstacles.
 4. The most significant obstructive law that we have encountered is within planning. As with most laws, planning has evolved to control. With sufficient economic benefit, seemingly outrageous development has been permitted. Rarely have small environmentally beneficial exceptions been passed without the need for disproportionate effort on the part of the activity. As a result one needs planning for 'change of use' if you take material onto a site that does not come from the estate of which the site is part. You also need planning to process and store this material for commercial gain. Thus, without planning, charcoal manufacture, firewood processing, timber conversion, woodchip storage and various other basic arboricultural practices should not be taking place, even on farms, without planning permission. We have been assured by the authorities that they would give us planning if the planning law would allow it. If we could find a precedent somewhere in the country to overrule this interpretation, our planners would be delighted to grant the necessary.
 5. In a further bizarre twist, the authority has not imposed a stop order on our activities. One reason may be due to the fact that they are the main beneficiary of our 'unlawful' activities.

Examples of individuals, companies and organisation using urban timber

There is a lot of it about but it would appear to be small scale. The evidence is in the availability of many models of small sawmills (mobile and static – 40,000 Woodmizers alone about 1000 in the UK but only a small number being tree contractors – mostly farmers, parks, landowners, estates).

Those of us who do read the trade press will see articles from time to time on the subject.

Urban Lumber Company Oregon: It would appear that this company goes out to collect timber from the urban environment but does not operate as arborists. They seem to be running a successful business.

The contractor who doesn't supply at least one wood turner or carver must be ignorant, selfish or both. If we can't process it ourselves we should find someone else who can. If again, you can't marvel at the wood yourself, stand back and take in the response of the public. Then consider how many tonnes we throw away or at best, use for fuel.

Conclusion/Questions

1. *Using our timber arisings we have the opportunity to manufacture, educate and contribute to the increasing demand for practical sustainable community and hence global activities.*
2. *It can be a profitable activity and it is an excellent marketing tool.*

3. *What are the business benefits when we get involved in schools and community groups?*
4. *We should maximising our opportunities – Avoiding unnecessary costs. Playing to strengths and learning from others*
5. *The bigger picture – Is this a part of arboriculture and our moral duty?*
6. *Is our industry 'sustainable'? This depends on who you are and how you define sustainable. My answer is 'yes' while it is part of the solution and 'no' when it is part of the problem.*
7. *We own one of the greatest local natural resources and as a rule we withhold it from the greatest natural resource – our community.*