

Advisory Note 8

Undertaking a survey of local firewood demand and market potential

This Advisory Note is a brief introduction to market research based on Llais y Goedwig's experience of undertaking a domestic firewood demand survey.

Why do we think market research will be of interest to community woodland groups?

- Your group may want to embark on an income generating scheme based around selling firewood
- You may wish to understand more about local firewood demand and trends before deciding on whether to manage part or all of your woodland for firewood production.
- You may wish to offer firewood management services to local woodland owners.

The value of market research

Why do market research? Success in any business venture depends on a host of factors - not all of which are within your control - but the more you understand your potential market the greater your chances of success.

Market research gives you a deeper knowledge of who wants a product or service, what they want, and at what price. Once you have answers to these questions you can better plan what you are going to produce and how you will sell it. Market research also helps you work out how to contact your customers and acceptable prices for your product. This knowledge is at the heart of your business plan and is the evidence that your business idea is credible.

Credibility is especially important if your organisation is planning to apply for grants or loans in order to purchase machinery and tools (e.g. a log splitter).



Photo: Blaen Bran Community Woodland

If you are seeking a grant or loan for an enterprise idea you will need to prepare a business plan. At its simplest a business plan is your tool to convince prospective lenders that:

- You understand the market you want to sell to
- You have a plan for reaching potential customers
- Your sales will cover your costs and meet loan repayments.

Well executed market research can give you an advantage over competitors, as you KNOW your customers specific needs – it can help you to break into current markets or create new ones (this is why companies the world over spend so much money on it). This Advisory Note takes you through the basic principles and shows you how to conduct a simple market survey within your local community using firewood as an example.

What is market research?

Market research is a structured exercise to gather information about a given market or set of customers. It usually takes the form of questionnaires and interviews of potential customers. These questionnaires are designed to determine whether or not there is a local demand for your product. The researchers can also ask questions about the price customers are willing to pay and the quantity and quality they expect.

For a community woodland group the research survey can also be a great opportunity to introduce your group and your business idea to the wider community – and to answer questions about what your group is all about.

Market surveys do take time - crucial to your success will be engaging a dedicated group of volunteers who are prepared to 'get the job done!'

Planning your market survey

This Advisory Note draws from a real-life survey of domestic¹ firewood markets in Wales (www.llaisygoedwig.org.uk). If you wish to explore the wood fuel market in your local area you could use the survey form at the end of this Note.

When planning any market survey you need to start by thinking about what information you need.



Photo: RS

¹ Firewood used in the home – rather than for commercial or industrial use.

A simple checklist might include:

- Which groups of people in your local community are most likely to become your customers?
- How many of them are there?
- In what quantities do they commonly buy firewood?
- What characteristics define your potential customers' perception of 'good quality' or 'best quality' firewood?
- Who do they buy from at the moment? Are they happy with these suppliers?
- Are there people interested in your product who are not able to buy it locally?
- How much might a customer buy and how frequently?
- How much might your customers be willing to pay for your product?

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Keep your questions focussed, simple and quick to complete. The questionnaire survey² at the end of this Note has eight questions and should take less than five minutes to complete.

Before you finalise your questionnaire and begin your survey it is important to carry out a trial or pilot. You need to do this to iron out technical difficulties such as estimating or measuring quantities and to identify any difficult or confusing questions. A trial of at least 10 (preferably more) is a good idea - this does not need to be very formal – a few people agreeing to fill in your questionnaire and provide critical feedback will do the job.

Market research can be done by telephone or by postal questionnaires however response rates to both these approaches is not great (maybe 10% or lower if your group is not well known). Door to door surveying is a better approach – especially within your local community where your neighbours know you!

² This is a short version (8 questions) of the survey we used which had 12 questions and took 10 minutes to complete

Door to door surveying - experience from the LlyG domestic firewood market survey

Door to door surveying or face to face surveying in town centres or local community focal points produced response rates of 40% plus. This level of response is really important if you are looking at market potential within your own local community and I think that a committed team could increase this rate.

The main stumbling block to this sort of surveying is FEAR; few people are keen on knocking on strangers' doors. But within your own community, introducing yourself, your group and a good local product you believe in, to people who are your neighbours, is a good thing. You can also give out fliers, information on your open days or volunteer days and generally increase the profile of your community woodland group. Many people are shy of attending meetings or joining a group where they don't know anyone and this can serve as the bridge some potential members need.

If organised properly, a couple of afternoons spent going door to door followed by a quick unwind/de-brief in the local café or pub can be an enjoyable experience for a group. If you decide to go door-to-door then afternoons are better than mornings (children are home from school and people are more relaxed). It is also more pleasant to survey in warm weather - although in the case of firewood you may experience more direct sales as a result of your research if you survey in the Winter months.

Kirsten Hails

Who to survey?

You should survey where you expect to be selling your product. So for local sales of modest amounts of firewood you might restrict your survey to your local communities. You will not be able to ask everyone to complete a questionnaire - you need to *sample* your survey population. Sampling is the selection of a proportion of a population to complete your questionnaire. There are many ways to choose who to include in your sample but if you want reliable results you should endeavour to make your choices *objective* rather than *subjective* (see Box 1).



Photo: msamsa

Box 1: How to choose good samples

Objective sampling is when you choose who you will interview according to a set of pre-determined rules. There are many rules you can use e.g. 'every house on a randomly chosen street' or 'every third postcode on the voter registration list' - the important thing is to stick to your rules.

Subjective sampling is when you choose people to complete your questionnaire for convenience or to avoid places where you think you won't get a good response. Examples are asking your friends, parents of children in your child's class, your neighbours, wealthier households because it's too intimidating to go onto the estate etc.

Subjective samples may be 'easier' to undertake, but, they have the potential to be biased – i.e. they may not be an accurate reflection of the whole population. An objective survey enables you to produce better estimates of your potential customer base.

If you want to be able to estimate the total size of your potential market then you need to sample within a known population which usually means working within an administrative area for which there are official statistics. So you might want to work within a Ward or a Community Councils. You can find useful statistics for these areas from several sources – for firewood statistics we used the Energy Efficiency Wales website <http://www.energyefficiencywales.org.uk>

You now need to decide how many households or people to interview. Time and resources for your survey is limited so you will want to do the minimum number necessary to give good results. Around 100 objectively selected interviews should be sufficient to estimate the proportion of potential buyers in the total population but may not be enough for other questions³.

If you want your results to represent your sample area then remember you need to make sure you sample from across the whole area. Areas with larger populations often require more samples than smaller areas simply because they include more variety. However, you can always evaluate the results of your survey after 100 samples and then decide if you need to add more.

Analysing your results

You do this at the end of your survey, but it helps to know what you will do with your data before you start planning your survey. Check that your questions will provide you with the information you need as you don't want to go to the effort of collecting data you won't use.

Box 2 on the following page is a (real) example of the analysis of responses to the LlyG firewood market survey for one rural ward - to illustrate what you can discover from a few focused questions.

Sitting down with a calculator will produce the numbers you need but will not tell you whether your business idea is viable. The interpretation of your results is something only you and your group can do and it may require some careful thought and comparison with other sources of information.

You may wish to write a formal report of your findings or simply incorporate your findings into the market section of your business plan – use the checklist from section 1 to help structure your findings – can you now answer your key market questions?

³ For example: from the firewood survey in Box 2 we are fairly confident with the results for firewood users (27 households from 111) but have only a sketchy appreciation of the motivations of the four households who say they would like to use firewood.

What comes next?

Your market research results may indicate that there is potential for you to sell your product to your chosen market. You now need to compare your potential sales income against the costs to you of setting up your enterprise before you can tell if your idea will result in a secure income stream for your group.

The workbooks developed for tree nursery start-ups are a useful pointer at the process of understanding what is involved in the financial assessment of a new enterprise http://www.nativetrees.org.uk/native-trees/native_tree_downloads.php.

If you need further assistance with market research or business planning then you can find further information and support from the Welsh Government from <http://business.wales.gov.uk/> and more specific support for social enterprises from <http://www.walescooperative.org/business-support-wales>.

We hope this has been of some use to you and your group. Good luck with your venture!

This Advisory Note has been prepared for Llais y Goedwig by Jenny Wong of Coetir Mynydd, Bangor.

Llais y Goedwig is a voluntary association of community woodland groups that formed in November 2009 to provide a voice for community woodlands. We want to share experiences, support each other and enhance local woodlands to benefit the people of Wales. This resource is part of a growing series that we hope will be useful to our members, and others interested in community woodlands in Wales.

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Box 2: Results from the LlyG domestic firewood demand survey

Face-to-face interviews on the door-step were used to complete 111 questionnaires. The streets where interviews took place were selected at random and included a mix of dwelling types including council houses. The results of the survey in tabular form are given here without interpretation.

Data from Energy Efficiency Wales <http://www.energyefficiencywales.org.uk> gives the total number of households in the ward = 916

Multiplying the percentages from the survey results by the total number of households enables the estimation of the total number of households consuming firewood.

Attitude to firewood	Number in sample	Percentage of sample	Total number of households in ward
Use firewood	27	24%	220
Would like to use firewood	4	4%	37
No interest in firewood	80	72%	659
Total sample	111	100%	916

Of the households who use firewood, 30% use wood to heat the whole house, a third have this as their main form of heating and 7% have firewood as their only source of heating. Around 80% of households burn firewood in a log stove.

The four households who said they would like to make more use of firewood gave their reasons as 'to save a bit of money' or because 'it's sustainable'.

Estimated firewood consumption varies according to the length of time the fire is lit; national averages suggest that a wood-burning stove:

- lit all day consumes 12 cubic metres of wood per year
- lit only in the evenings consumes 6 cubic metres of wood per year
- lit only occasionally consumes 3 cubic meters of wood per year

Frequency of use in winter	Households in sample (n=111)		Average annual firewood demand per household (m ³)	Total firewood demand in ward (=916 x percent x annual demand) (m ³)
	Number	Percentage		
Burn wood all day	5	4.5%	12	494
Light in the evenings	16	14.4%	6	791
Occasional fires	6	5.4%	3	148
Total	27	24.3%		1,433

The total volume of wood can be visualised as 574 trees 10 m tall and 60 cm in diameter per year.

Where firewood comes from	Households using firewood	
	Number	Percentage
Bought	16	59%
Grown (from trees on own property)	6	22%
From family	3	11%
Scavenged (collected from wayside, fallen trees etc.)	10	37%
In kind / From work etc.	6	22%
From neighbours	2	7%
From friends	1	4%
Total	27	NA

Form in which firewood is obtained	Households using firewood	
	Number	Percentage
As tree	7	26%
Green logs	3	11%
Split, unseasoned	4	4%
Split & seasoned	15	56%
Totals	27	NA

So the market for firewood is 59% (percentage of households that buy firewood) of 1,433 m³ (total demand) = 845 m³ per year and people buy their firewood split and seasoned.

Example: Firewood survey questionnaire

Please take 10 minutes of your time to complete this short anonymous survey. [Name] is a local community woodland group which is thinking of supplying firewood to the local community. Through this survey we are hoping to identify the current and potential future market for local firewood production in our area. [Modify to suit your needs – and introduce your group and woodland.]

POSTCODE _____

PROPERTY TYPE:

Semi-detached House		Flat	
Terraced house		Farmhouse	
Detached house		Other	

1. Do you use woodfuel (or woody biomass) for heating?	YES	NO
If yes, go to 2, if no complete question 1 only.		
Would you like to use wood as a fuel?	YES	NO
Why are you considering using wood? Are there any problems you foresee with this?		

2. How often do you burn wood in the winter?	
Every day (all day)	
Every day (evenings only)	
Occasionally (e.g. weekends)	

3. Where do you source your wood? Please specify			
Buy it		from	
Grow my own			
Get it free		from	
Scavenge it		from	
Other source		Where?	

4. In what form do you get your wood fuel	
Tree	
Logs for cutting and splitting at home	
Buy it cut and split: Seasoned:	
Unseasoned:	
Branches / fallen wood	
Waste wood	

5. Do you have any preferences between the following?			
	First choice	Second choice	Would not use it
Hardwood			
Softwood			
Composite briquettes			
A good mix of both hard and soft			
No preference – all wood burns			
Do you have a species preference?			

6. Estimated annual expenditure on firewood (£)	
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7. Would you be interested in a new source of local firewood?	
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8. Do you have any further comment or concerns with firewood availability, quality, price etc?