

# Study tour to Finland



Suppliers learn about harvesting woodfuel from Finnish forests

Potential users of woodfuel and potential suppliers of woodfuel and/or heat attended the study tour to Finland in November 2009. We saw why effective and reliable heating is so important - while a failure in the UK is uncomfortable a failure in Finland could be life threatening! Everyone was impressed with how well ALL Finnish woods and forests are managed, how robust the woodfuelled heating systems are, the entrepreneurial nature of woodland owners, how well woodfuel is embedded in the Finnish culture and how effectively the Finnish people cope with a little snow.



Buyers at the Ekowatti heating plant

## Key lessons learnt

1. **Sell heat if you can:** delivering a higher value product and providing a greater business opportunity.

## Heat plant at Hirvaskangas

Local farmers and foresters have invested in this plant, which supplies heat to a growing out of town shopping centre.

Includes the flexibility to use woodpellets as well as woodchips



**2. Consider the long term:** The above heat plant includes the infrastructure for easy expansion as the market (shopping complex) grows.

**3. Build to Last:** The market isn't going away and the cost of alternatives is going up.



**Walking Floor at Toivakka**  
Well proven and effective technology.

**4. Provide 'turn key' installations:** The woodheat systems installers aim to deliver the whole system in full working order, rather than just sell you a boiler and let you fit it.

**5. Innovate:** Find simple solutions to problems.



**Reponen Heat Plant:**  
Providing the heat for a rural engineering works.



### Having trouble with tipper lorries accessing your chip store?

Fuel deliveries can be restricted by low roofs.

### Then lift the roof up!

Hydraulic rams lift the roof to the vertical allowing easy access to a variety of delivery vehicles, thus ensuring you are not restricted to particular suppliers.



### 6. Use the whole resource:



### 'Giant' chipper:

makes short work of whole trees harvested during first thinnings

### 7. Use the equipment you have:

Agricultural tractor, PTO driven chipper and silage trailer, again making short work of whole trees harvested from first thinnings.

Delivered to heating plant within 2km of the woodland using the tractor and silage trailer.



### 8. Don't burn water:

Allow the wood to season and keep it dry (waterproof paper over the top of the stack prevents 'rewetting' through snow melt).



Buy fuel on the basis of calorific value: weight x moisture content (simple but effective ways to assess moisture content).

## 9. Engage the local community

The next generation of Finnish foresters learn how their school is heated.



## 10. Finnish technology is well suited to small woods

Manouevrable Valmet tractor with long reach boom allows less of the woodland floor to be driven on.



A rotating seat allows easy operation of the harvester.

Tracks in the harvesting head cope well with broadleaves.



## AND may be eligible for grant support from the Rural Development Plan

### What next?

Study tour to Austria in March: Let us know if you're interested, or pass on details to someone else who may be interested, in developing the woodfuel market or supply chain.

Roll out of lessons learnt from the study tours of Finland and Austria:

During summer 2010 the lessons learnt from both study tours will be 'rolled out' through a series of workshops: by the Forestry Commission and Thames Valley Energy in South East England, by the Forestry Institute in Slovenia and the Forest Extension Service in Croatia.

Details of the dates and locations of the workshops will be posted on our website in due course. However, if you are particularly interested, or know of an existing event where a presentation would be useful, please let us know.

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