

**Biomass Development Service**

**Making Biomass Work in the Yorkshire Dales National Park and  
Nidderdale AONB**

**October 2006 – October 2008**

**Project Report**

**October 2008**

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## **1. Background**

This report sets out the achievements of the Biomass Development Service project funded by the Yorkshire Dales National Park (YDNP) and Nidderdale AONB Sustainable Development Funds and Yorwoods. There is also an identification of further biomass opportunities in the local market, an overview of the state of the local biomass supply chain and barriers to woodfuel adoption. The report sets out the next steps of ongoing support for project beneficiaries in an exit strategy and finally conclusions are drawn.

## **2. Project Objectives**

The original project application set out the following key objectives:

1. Develop a dedicated resource to provide clear and unbiased information, facilitation and networking service for biomass development in the Dales, including access to feasibility work;
2. Promote the use of wood and other biomass for heat and power generation;
3. Establish biomass heating and Combined Heat and Power (CHP) installations for community and district heating schemes;
4. Encourage the use of biomass for heat in public buildings, schools, leisure services, rural estates, farms and other suitable applications;
5. Support the development of the contractor supply chain and infrastructure;
6. Develop and provide technical training packages for communities and those involved in the supply chain;
7. Mitigate the high initial cost of boiler plant and associated infrastructure through focused grant support by assisting communities access current and future funding streams, and provide assistance with feasibility work if required.

### **3. Outputs and outcomes**

#### **Outputs Set**

The original project plan set out the following outputs for the two year project:

- Advise and facilitate 6 community based biomass renewable energy projects across the YDNP and Nidderdale AONB.
- Support 20 biomass suppliers within the project area, provide information, advice, guidance, training and connect these suppliers with potential biomass schemes.
- Safeguard 3 jobs in the supply chain.
- Create 2 jobs in the supply chain.
- Bring into management 100ha of local broadleaf woodland through increased use of wood as a renewable fuel in the local supply chain
- Provide 20 training opportunities in woodfuel systems and the supply chain by assisting beneficiaries to access existing training initiatives such as the Ignite programme

#### **Outputs Achieved - End User Projects**

Feasibility reports completed for 17 woodfuel heating projects:

- Bewerley Park Education Centre
- Coronation Farm
- Dales Countryside Museum
- Danby Hall
- Denton Park
- Fountains Abbey and Studley Royal
- Hill Top Farm
- Kirkby Malzeard Mechanics Institute
- Langcliffe Hall
- Little Red Bus
- Long Preston Primary School
- Low Hall
- Lumley Moor Reservoir Cottages
- Old Station Caravan Park
- Sedbergh School
- Swinithwaite Estate
- Yorkshire Dales National Park Offices at Grassington

With the project supporting the following community schemes:

1. Yorkshire Dales National Park Offices at Grassington: Assisted the National Park to scope out the potential for wood heating systems and supported the development of a woodchip fuelled heating system at Grassington. As part of this project we have also worked with potential local woodfuel suppliers to make them aware of the specification required for the system.

2. Swinithwaite Estate: Assisted the landowner to look into the feasibility of reducing his reliance on oil, through a biomass district heating scheme, providing heat and hot water to 5 properties. An initial feasibility report was produced with a full feasibility report being commissioned. The report highlighted two possible options for the system and we have taken forward the preferred option and assisted the landowner to seek funding through the Rural Enterprise Investment Programme (REIP) for both the biomass heating system and the associated infrastructure.
3. Kirkby Malzeard Mechanics Institute: Assisted a community group to investigate the options for installation of a pellet boiler to provide heating and hot water for the Institute. The initial boiler location has been changed due to the space required to house the system. Other boiler locations and funding options for the system are being investigated.
4. Hill Top Cottages: We looked at the feasibility of installing a log boiler system into the property, which was currently running on oil. This installation was to take place as part of a property development scheme. Subsequently the landowner has been successful in obtaining funding for the biomass heating system and hopes to have it installed towards the end of 2008.
5. Old Sleningford Industrial Unit: Assisted the landowner to look into how much fuel the system would require and at an application to the Low Carbon Buildings Programme for funding. Unfortunately the system was unsuccessful in attracting funding; however, the system was installed in March 2008. An additional system has also been installed in the Hall at Old Sleningford.
6. Little Red Bus: Assisted the organisation to look into using a wood pellet boiler to heat their depot. We helped obtain competitive prices from three boiler suppliers and an exchange visit to an existing wood pellet boiler system. The boiler was commissioned in November 2007.
7. Richmondshire School: Initially we were asked by North Yorkshire County Council to assist them in writing a woodfuel supply contract and have since been involved in looking at boiler and fuel store locations along with fuel delivery mechanisms.

It could be said that the main area of interest in the project has come from people looking to install biomass heating systems, mainly due to a large part of the project area being off the mains gas network. However, the biggest driver has been the cost of using oil, LPG or electric for heating. At the start of the project the price of oil was relatively low at \$60 US a barrel and rose to \$140 US a barrel toward the end of the project having a huge effect on the price of heating.

The number of schemes which went from first enquiry to boiler commissioning has been low, this has mainly been down to the relatively higher cost of biomass heating systems, compared to fossil fuel boiler systems and also the insecurity of woodfuel supply, within the project area.

## **Outputs Achieved - Supply Chain Projects**

The project has worked with 5 businesses either currently engaged in woodfuel supply or that are looking at getting involved.

The project supported the following woodfuel supply schemes:

1. RG Blakey Forestry Ltd: This business wanted to expand and stream line its biomass related operations. This was undertaken through the purchase of new machinery to increase the businesses efficiencies and productivity; with funding being sourced through the REIP. Decision on whether the application is successful is still outstanding, with the decision set to be made at November's panel meeting.
2. Webber Forestry: We have been working with this business to look at procedures which need to be in place to supply woodchip to the biomass heating system at the YDNP offices at Grassington. We also assisted the business to look into possible funding streams to develop the business and invest in specialist handling and delivery machinery.
3. Sunhill Centre/ Fleets Farm: This business already had a woodchip boiler for heating office space and a conference facility. The landowner was looking to work with Webber Forestry to house a long term chip store, for the boiler or for delivery to other recipients. We have worked with the landowner to make sure the structure is correctly designed and to bring 17 hectares of woodland back into management. The main aim of this is to establish a sustainable fuel supply for the farm.

There are a number of firewood merchants in the project area that have not been identified but nonetheless play an important part in the supply of woodfuel products.

The supply chain has been slow to develop, due to a limited market; however with the interest in installing biomass heating systems increasing, the demand for woodfuel products will surely follow.

Significant investment has been made to develop the supply chain during the project; however more investment will be required to construct a reliable supply chain within the project area.

## **Other outputs achieved**

Training in woodfuel production and supply was given to 12 individuals and businesses in the project area through the Ignite 3 day intensive course, which was run on 18<sup>th</sup>-20<sup>th</sup> March 2008 at Old Sleningford near Ripon.

The project has not been successful in bringing 100ha of broadleaf woodland back into management, within the project timeframe. However the project has been successful in advising a number of private woodland owners on how to manage their woodlands for fuel production. During the project timeframe the project was successful in bringing 74 hectares of predominantly conifer woodland back into management by getting the woodland into a Forestry Commission approved management plan.

A further 73 hectares of mixed woodlands are expected to have completed woodland management plans within the next 6-12months. The woodlands are within the holdings of Sunhill Centre/Fleets Farm and Swinithwaite Estate, with both landowners looking to use their woodland management plans to develop sustainable woodfuel production with the majority of the timbers being used for their own fuel requirements.

#### **4. Exit Strategy**

Section 3 outlines seven community based schemes that the project has been working on along with a number of fuel supply chain operatives. Together these schemes have developed a local woodfuel cluster in the Dales area. This cluster has been integrated into the Yorwoods Woodfuel Infrastructure Programme. This is a three year Yorkshire Forward funded programme that aims to accelerate the uptake of biomass renewable energy across the region. Yorwoods has been successful in securing funding that will allow it to continue to service the beneficiaries brought forward under this project and to continue to provide a similar service to communities and businesses across the Yorkshire Dales and Nidderdale. The programme also has a capital grant element attached and Yorwoods can provide funding to help develop the emerging supply chain.

#### **5. Conclusions**

The following conclusions can be drawn from the project:

1. The project was successful in engaging with woodfuel end users and suppliers and has brought forward a number of high profile schemes including the Yorkshire Dales National Park Offices at Grassington, Swinithwaite Estate and Richmondshire School.
2. Further investment in forestry infrastructure and woodfuel supply chains is required including skills and training for the work force in order to ensure an effective and resilient supply chain that can adapt to changing market conditions.
3. The project was successful in bringing 74 ha of predominantly conifer woodland into management, and is working with Swinithwaite Estate and Sunhill Centre/Fleets Farm to bring in a further 70ha of mixed woodland back into management. However further sources of woody biomass may need to be investigated.