

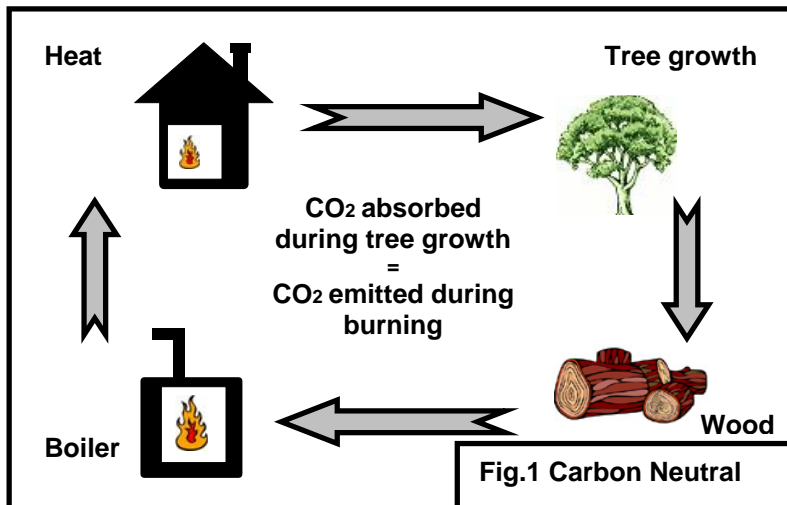
Biomass is being promoted by the government and supported by the Council because:

- a) It is very good environmentally because it significantly reduces the amount of carbon dioxide (CO₂) produced compared with gas boilers. Carbon dioxide is one of the main causes of climate change.
- b) Biomass is a renewable resource that can be obtained locally which helps local employment. Biomass actually offers the greatest potential for job creation of all the renewable technologies.

Whilst relatively new to this country, biomass has been used trouble free in other European countries and North America for many years. Local authorities and other large organisations with big boiler plants are increasingly adopting it.

In Sheffield it is also being considered for a number of new school sites, and in future years for other housing schemes where we believe it can be technically possible.

Burning wood in a community-heating boiler is very different to its use in domestic fires. It is accurately controlled, and the burning temperatures and mix of oxygen ensures virtually no smoke or other particles. Any emissions are normally restricted to when the boiler is lit and when it is cooling down. The Carbon Dioxide released when the wood is burnt is equivalent to that absorbed by plants during their growth.



Frequently asked questions

Q: *Why was Carwood Close chosen?*

A: Carwood Close was chosen for this scheme as the boilers and boiler house were in very poor condition and needed replacing very soon. Since a new boiler house was needed it made Carwood ideal for biomass.



Wood chip

Q: *Will the quality of heating and hot water be any different than now?*

A: Biomass is very reliable, so there won't be any changes to the service you receive. Even when the boiler is shut down for servicing there is easily enough heat from the gas backup boilers to meet any demand for heat and water.

Q: *How much will it cost us?*

A: There will be no effect on your individual heating charges as these are averaged out to be the same across the city. In the long run biomass may help reduce the fuel costs of community heating in Sheffield.

Q: *How much noise will there be?*

A: The boiler house is sound proofed to ensure that any noise is kept in. When the fuel is delivered it will cause some noise for a short amount of time, most likely less than 15 minutes. The new boiler room will be significantly quieter than the previous boiler room, which was not insulated and had very noisy boilers.

Q: *Will this lead to more pollution?*

A: No. Wood burning is accurately controlled, and the burning temperatures and mix of oxygen ensures virtually no smoke or other particles. Although gas appears to release no emissions it actually does but they are not visible. Having a wood-burning boiler will lead to a lot fewer emissions.

Fuel

To ensure adequate biomass fuel supplies, South Yorkshire Forest Partnership has been working with a number of forestry and other organisations to help develop a sustainable market in the region. Within 10 miles of Burngreave there are over seven thousand hectares of woodland, and in addition to this there is the potential to use a proportion of approximately 4,000 tonnes of waste timber that is produced annually from arboriculture (the planting and care of woody plants, especially trees) activities in the area.

If you have any questions or comments on biomass, the boiler room or energy efficiency contact the Sustainable Housing & Affordable Warmth (SHAW) Team on:

Telephone: 0114 273 5837

Email: shawteam@sheffield.gov.uk

Website: www.sheffield.gov.uk/greenhomes

If you don't own a computer you can still view the web pages by visiting your local library and using the Internet for free.

Carwood Close Community Heating – Biomass

Background

The boiler house at Carwood Close provides heating and hot water to almost 100 houses. The original prefabricated boiler room consisted of 2 gas boilers. Both the boilers and the boiler room were in very poor condition and were reaching the end of their useful life.

This provided the perfect opportunity for the installation of a biomass boiler. We have now completed the installation of a 320kW biomass boiler and a 1mW gas backup boiler.

As well as replacing the boilers we also removed the existing boiler house and replaced it with a permanent, brick built structure that has a fuel storage area underneath. This makes for a safer, more efficient community heating system.

What is Biomass?



Willow

Biomass involves using wood as a fuel to generate heat. The fuel can be sourced from forest thinnings, clean wood waste, and from general tree maintenance off-cuts. It is also sourced from specifically grown crops such as willow or elephant grass.