

Handouts of presentation: Littlecombe Development Wood Chip District Heating Scheme & Community Interest Company, Pete West, SWEA UK

**Centre for Alternative Technology  
Community Renewable Energy Seminar  
16<sup>th</sup>- 18<sup>th</sup> August 2008**

**The Littlecombe Development Wood  
Chip District Heating Scheme and  
Community Interest Company**

Pete West, Sustainable Energy Project Manager  
Severn Wye Energy Agency

[http://www.inforse.org/europe/seminar08\\_Energy21.htm](http://www.inforse.org/europe/seminar08_Energy21.htm)

**Wood chip district heating, Copenhagen**

**Wood chip district heating, Copenhagen**

**Wood chip boilers supplying district heating**

**Danish district heating, Copenhagen**

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Community scale biomass district heating, Austria

Village scale wood chip district heating, Gussing, Austria – 170 houses

Wood chip district heating in Denmark- Hjortshoj Eco Village

Hjortshoj Eco Village Denmark.

Woodchip boiler linking 86 houses at Hjortshoj eco village through a district heating network.

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**The Littlecombe Development, Dursley, Gloucestershire**

The South West Regional Development Agency, owners of the Littlecombe site comprising 39 hectares of brownfield land near Dursley, Gloucestershire, tendered for developers for a mixed use redevelopment with overall site CO2 emissions reduction target 30% below 2006 building regulations

**St Modwen Developments** won the SWRDA tender to develop the Littlecombe site and appointed Severn Wye Energy Agency as consultants to carry out an options appraisal into use of on-site renewable energy.

Working closely with Halcrow Yolles and architects Stephen George and Partners, wood chip district heating plus 200 PV installations were selected as the preferred renewable energy options, coupled with improved insulation levels and air tightness compared to 2006 Building Regulations.

Severn Wye Energy Agency assisted with the tendering and procurement of the wood chip district heating network and securing £1m financial support through the Low Carbon Buildings Programme Stream 2B

**Littlecombe project, Dursley, Gloucestershire**

**Final choice of low carbon technologies**

- 450 new dwellings supplied by woodchip district heating
- 200 dwellings to have 1.4 kW photovoltaic installations
- Possible heating link to Rednock School
- Total site CO2 emissions 55% below 2006 Building Regs

**What's big in Littlecombe?**

If you live in Dursley you'll know there's a lot going on! Work on the old Lister Paper industrial site is well underway led by the South West Regional Development Agency, a mixed use site for housing, employment and recreation is under construction. Stroud District Council has been working closely with the developers to ensure that this £150million redevelopment scheme benefits the economy and the community. Some of the newly created business units on the site are already occupied and there's the potential for the creation of 1,000 jobs.

Work will shortly start on the building of 400 new homes. 150 will be heated by a single biomass boiler and 200 will be fitted with solar panels. 180 will also be for affordable housing.

Other highlights include:

- ten play areas for all ages - including six about areas and dedicated toddler areas;
- a new Dursley base for Stroud College;
- land set aside for a doctors' surgery;
- a 45 bed nursing home and 13 assisted living units;
- the opening up of the River Cam - creating a new ecological corridor.

As part of the development Stroud District Council also negotiated a £100,000 investment to improve sporting facilities in the area. This money has been put forward to create an all-weather sports pitch at Rednock School, as part of its own redevelopment. For more information on the Littlecombe development visit: [www.southwestra.org.uk](http://www.southwestra.org.uk)

Biomass energy centre on industrial estate

Rednock school

180 affordable housing units

Littlecombe will have 3X 500kW modular wood chip boilers, a 2 MW back up gas boiler and approximately 4km of insulated underground district heating pipes.

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Each house has a heat exchange unit mounted on the kitchen wall. It is housed in a white outer case and is almost identical in appearance to a gas combi boiler

Model: Vital Aqua Varm - Indirect Heating

Each house has an ultrasonic heat meter. Householders are billed for the heat they use in the same way as they receive gas and electricity bills. The meters are read remotely via a radio module. Heat will be the same price as gas or slightly lower

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### Issues for DH network - phased development over 5 years

Permanent EC 2009

REDKNOCK SCHOOL

VITAL ENERGY

### Littlecombe Temp Boiler House

Temp. G-F boilerhouse

One MW boiler

DH Network for next phase connections

Connection to DH Network

### Lessons learned (to date) –

- Consider district heating at an early stage:
  - e.g. Density of properties
  - e.g. Phasing of development
- There is a lack of biomass DH technical knowledge and experience in the UK. Clients (developers, architects, building services engineers) need more experience and training.
- Complexity of biomass DH network ownership issues, ESCo's Community Interest Companies, service and maintenance costs.
- Difficulty in persuading external existing heat users to connect to a new biomass DH network (they don't have CO2 reduction targets + lack of familiarity and perceived risk)

### Thank you for your attention

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