

The potential for wood fuel in south east England

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- Policy drivers
- The potential resource
- Market niches

Policy Drivers:

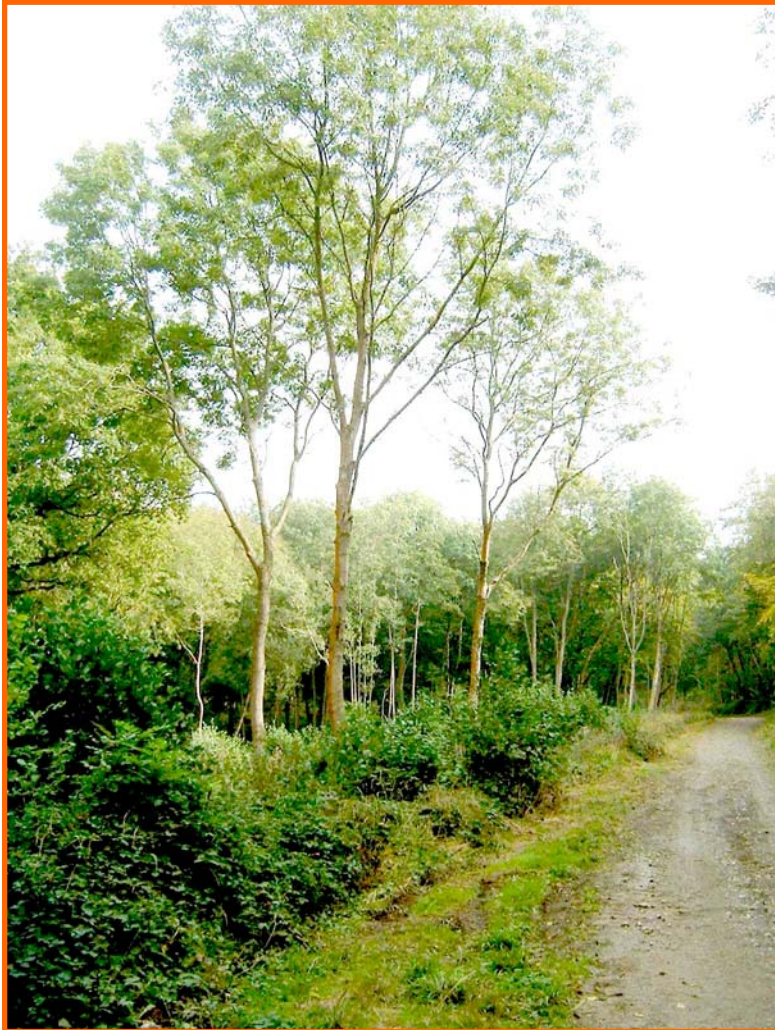
- **Regional Renewable Energy Targets**
 - 175 MW from biomass by 2010
(32% of overall target)
 - rising to 250MW by 2016
- **The Regional Forestry Framework**



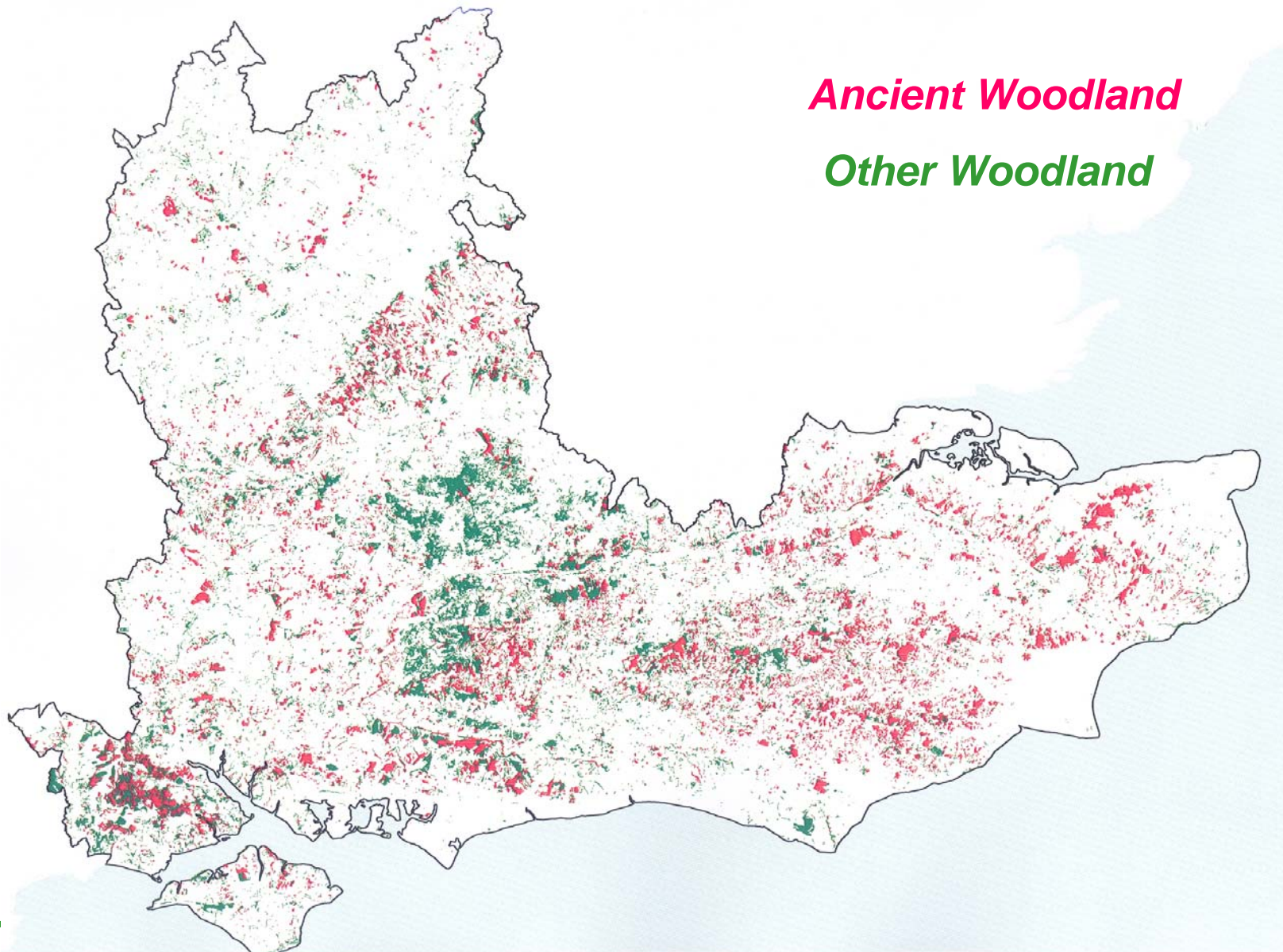
1 MW - how much wood?

- 1 MWhr requires 1 tonne of wood at 20% moisture content
- 1 MW installed in a 25% efficiency power station at 80% usage will require approx. 7,000 tonnes per year (20% moisture content)
- This represents approx. 12,000 m³ of wood per year.
- Which can be obtained from:
- *3,000 ha of mixed broadleaved woodland (YC4)*
- *2,000 ha of sweet chestnut coppice (YC6)*
(coppice 130 ha per year)
- *1,000 ha of conifer plantation (YC12)*
- *600 ha of short rotation coppice (YC20)*

Other benefits of using wood:



Woodland Cover in SE England:



Woodland Cover in South East England

<i>County:</i>	<i>Woodland Area</i>	<i>% Woodland Cover</i>	<i>Total Land Area</i>	<i>Ancient & semi-natural woodland</i>	<i>Plantations on ancient woodland sites</i>	<i>Total ancient woodland</i>
	<i>(as per 2002 Inventory & inc. all woods > 0.1 ha)</i>			<i>Figures comprise all land which featured on the Provisional Ancient Woodland Inventory and in the 2,000 Inventory</i>		
Berkshire	18,308	14.5	125,880	3,600	1,770	5,370
Buckinghamshire	17,573	9.4	187,675	4,885	3,910	8,795
Oxfordshire	18,235	7.0	260,595	5,075	2,650	7,725
Surrey	37,564	22.4	167,715	6,640	2,640	9,280
Hampshire	66,939	17.7	377,870	18,680	9,290	27,970
Isle of Wight	4,549	12.0	38,015	800	710	1,510
West Sussex	37,507	18.9	198,810	9,530	7,300	16,830
East Sussex	29,924	16.7	179,540	12,055	6,135	18,190
Kent	39,487	10.6	373,500	18,780	8,280	27,060
TOTALS:	270,084	14.0	1,909,600	80,045	42,685	122,730

What might this provide?

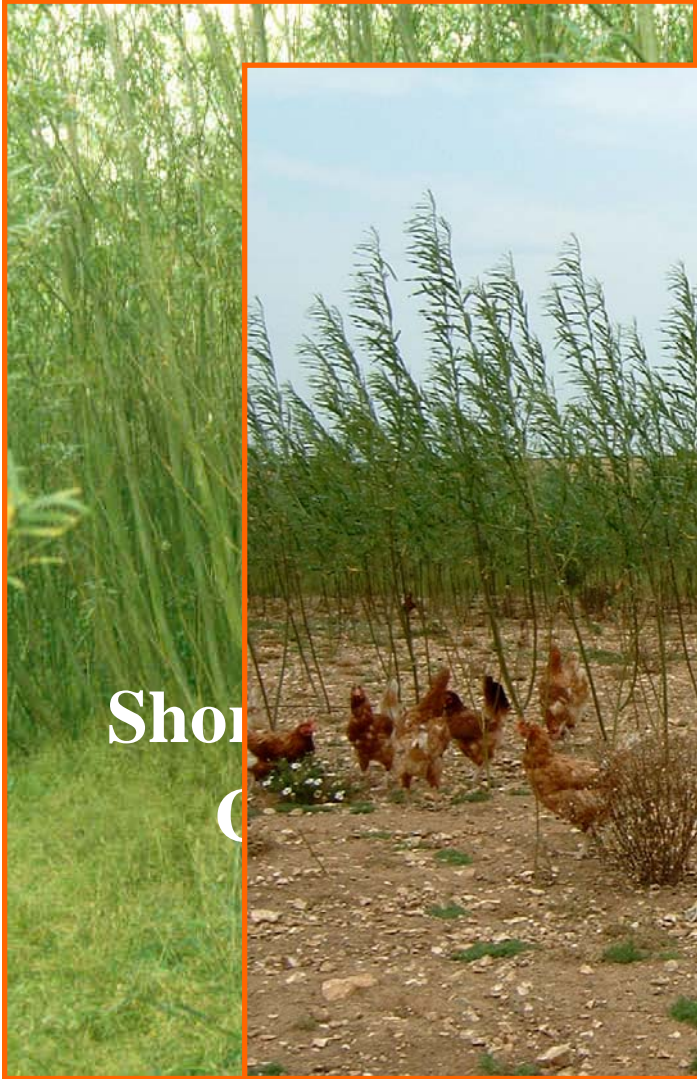
- Conservatively all woodland in SEE is growing at, at least, 4m^3 per ha per year = > $1,000,000\text{m}^3$
- Of this perhaps 20% may be readily available for the wood fuel market = 200,000 wet tonnes or 17 MW
- Could be much more but is price dependent
- If SRC provided the rest we'd need 95,000 ha or 5% of our land area

For a more detailed appraisal see:

<http://www.woodfuelresource.org.uk/>

- Co-firing in conventional power stations
- ‘Old fashioned’ log fires?
- CHP/District Heating
- Medium scale heat
- Wood pellets

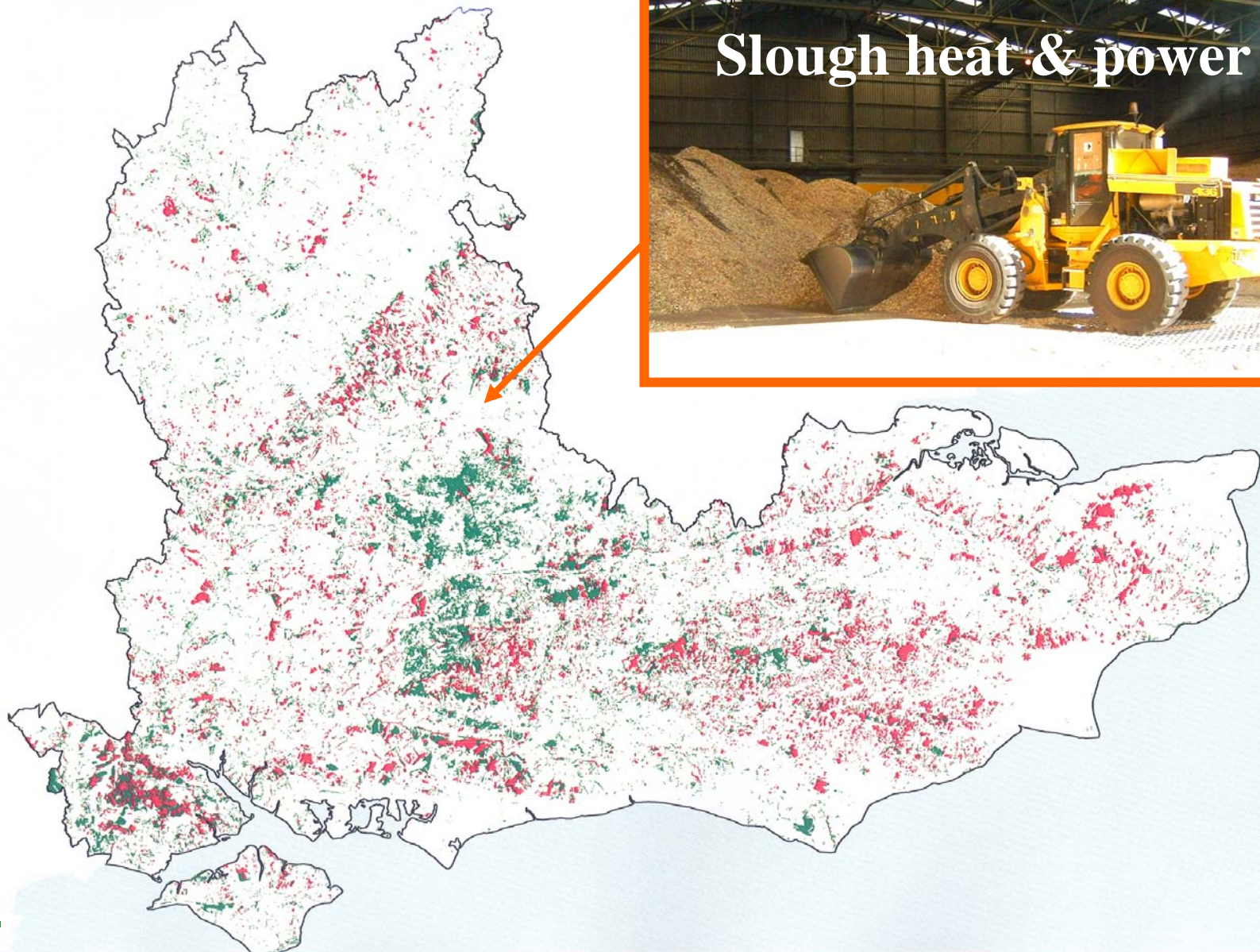
Didcot



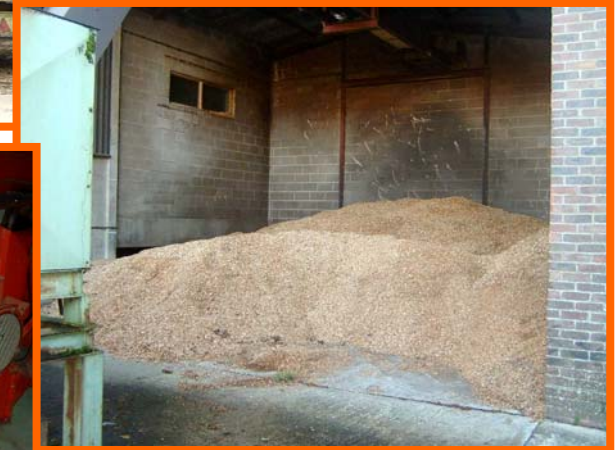
Conventional logs:



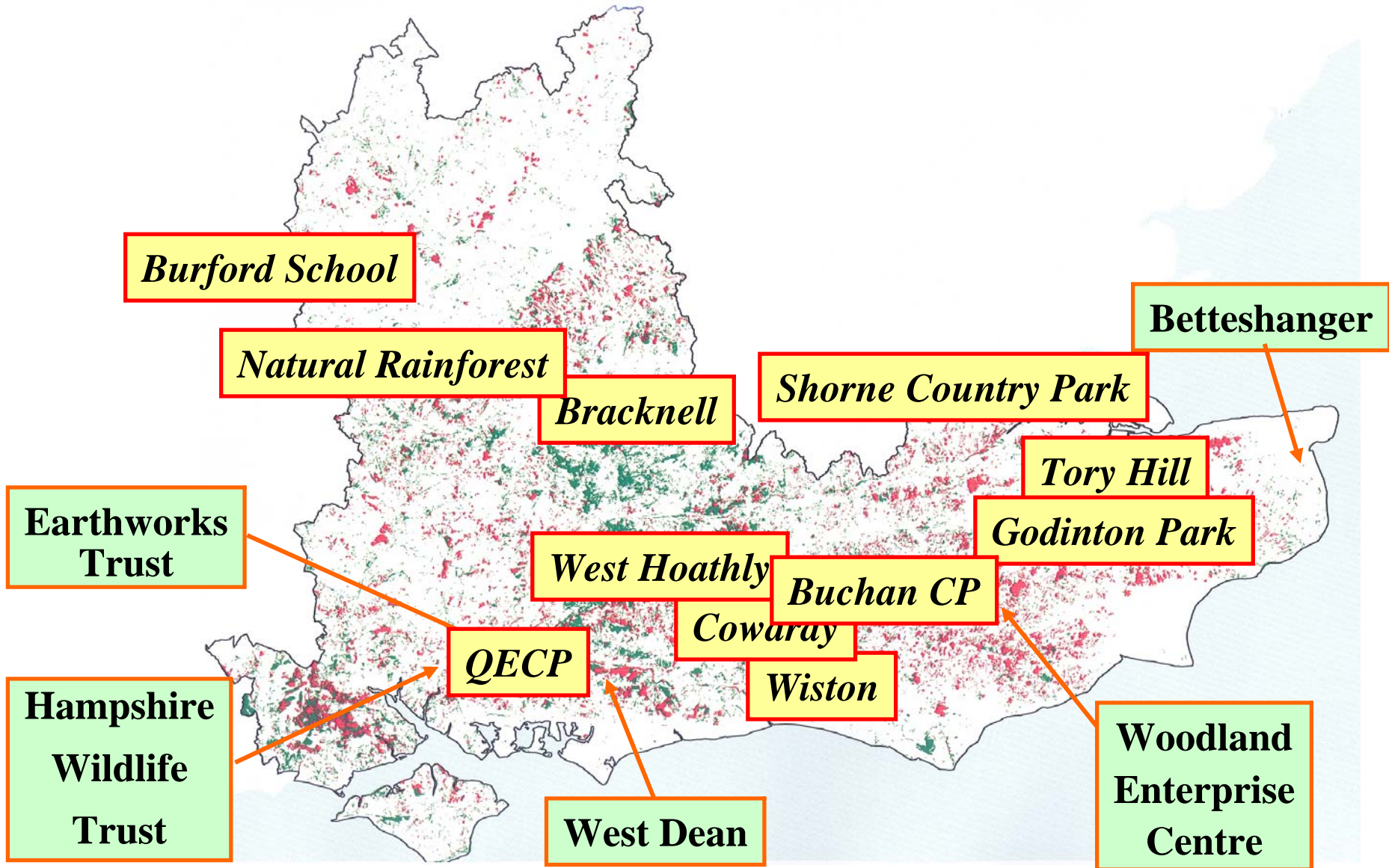
CHP/District Heating:



Medium scale heat:



Medium scale heat:



Medium scale heat:



Wood pellets:

