

Appendix 2

Oakwood Park Estate -Potential for an Energy Centre?

The Estate

Parkland Estate built on the grounds of Oakwood House, includes a number of public buildings :-

Establishment	Estimated annual energy spend	Estimated annual CO2 emissions (Tonnes)
Astor of Hever School	£ 95,070	523
Oakwood Park Grammar School	£ 67,870	373
St Francis Roman Catholic School	£ 17,570	97
St Simon Stock primary School	£ 91,170	501
Oakwood House	£ 75,000	500
Mid Kent college	£ 151,104	756
University for the Creative Arts	£ 229,356	1147
Total	£ 727,140	3897

Oakwood Energy Centre

An Energy Centre on the estate could provide some or all of the buildings on the estate with Electricity and/or Heat. The most likely generation sources could be gas (Combined Heat and Power) or Biomass – or a mixture of the two. Solar and Ground Source Heat pumps should also be considered.

Heat could be circulated through an estate wide hot water Heat Main and electricity via an estate electricity network. Electricity grid connection could be maintained in order to export electricity at times of low load on the estate and to improve supply security.

Other options could be investigated such as including a data-centre on the site to provide lower energy and cost data storage and processing, and possibly making use of the waste heat. Provision of central cooling could also be considered.

Because the estate is still mostly parkland it should be possible to find space for an Energy Centre and excavation to lay heat and electricity mains should be less expensive than in a more urban environment.

Potential Benefits

- Significant CO2 savings
- Lower cost energy to buildings on the estate

- Possible income to KCC through energy sales, Feed in tariffs, Renewable Heat obligation, Renewables Obligation certificates or rent.
- Better energy and price security

Potential Barriers

Although all of the buildings on the estate can be viewed as publically owned responsibility for the buildings is spread amongst a diverse group of organizations. The project would be financially risky unless a good degree of commitment is received from all or most of the relevant organizations which would become either shareholders or customers.

The project would be capital intensive and a long term view on recovering the financial investment would be needed.

Timing may be complex as there is a lack of clarity about when or if Building Schools for the Future will have an impact.

Next Steps

Explore Member interest / support

Seek KCC and Carbon Trust funding to commission consultants to carry out high level feasibility study.