

CASE STUDY

RENEWABLE ENERGY FEASIBILITY STUDY - SHELTERED HOUSING SCHEMES

BESPOKE DESIGN

Each installation is designed to meet specific client requirements with full computer simulation used to prove all designs.

ENERGY EFFICIENCY

As approved Carbon Trust Consultants, we will ensure that the system energy performance is optimised to produce lower operational costs.

PROJECT CDM AND MANAGEMENT

Our engineers and consultants will ensure that all aspects of the design and installation are fully compliant and all relevant permissions and safety requirements are fully adhered to.

MCS ACCREDITED

ESP is an accredited installer, approved under the Government's Micro-generation Certification Scheme.

CARBON TRUST

ESP are approved Carbon Trust Energy and Biomass Consultants.



- Assessment of renewable energy opportunities
- Energy audits in line with Carbon Trust best practice
- Dynamic thermal modelling of buildings using industry standard IES software
- Technical and financial analysis of micro-CHP, biomass and photovoltaic technologies
- Calculation of income from Feed in Tariff and Renewable Heat Incentive



South Tyneside Homes is an arms length management organisation (ALMO) created by South Tyneside Council to manage, maintain and improve its council homes and estates. It is a non-profit-making company that is 100% owned by South Tyneside Council. The organisation manages around 19,000 properties in total, including a number of sheltered housing schemes.



ESP was asked by South Tyneside Homes to undertake a renewable energy opportunities assessment for 23 of its sheltered housing schemes, which was kindly funded by Community Energy Solutions. The aim of the study was to assess the feasibility of installing one or more renewable technologies at some or all of the sites in order to reduce energy expenditure and carbon emissions.



The service offered by ESP included energy audits, dynamic thermal modelling of the buildings to determine future energy profiles, and an assessment of renewable energy opportunities at each site. The viability of technologies including micro-CHP, biomass boilers and photovoltaic panels was evaluated in terms of physical and technical constraints, installed cost and annual cash flows.



Revenue-generating opportunities from the Feed in Tariff and Renewable Heat Incentive were calculated, and savings associated with the Climate Change Levy and Carbon Reduction Commitment were also evaluated.



Findings of the study were presented to South Tyneside Homes in the form of a report which outlined the technical viability, budget cost, reduction in annual energy costs and reduction in annual carbon emissions associated with each technology option.



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