Energy & CO_2 Emissions Strategy

Consideration of energy efficiency and low carbon impact of new developments is becoming increasingly more prevalent at national and regional planning levels through emerging core strategies. In addition, mandatory minimum standards for CO_2 emissions are continually increasing and enforced by the Code for Sustainable Homes (CSH) and Part L of the Building Regulations. Under the CSH, it is proposed that new dwellings achieve net zero CO_2 emissions (CSH Level 6) by 2016. Therefore, the requirement for developers to adopt robust and compliant energy strategies for to all new and proposed developments is increasingly significant.

High Level Baseline Reviews

For clients to fully understand the local planning and legislative context and their potential impact on a new scheme, SoI routinely conducts high level reviews of the local, regional and national statutory and non-statutory planning policies (pertaining to energy and climate change). Subsequently, relevant requirements and key principles can be ascertained and addressed through incorporating the requirements into development design at the earliest stage.

The review scope typically comprises standards set out in current / emerging national and local policy as well as liaison with relevant local authorities (where appropriate).

Low-Zero Carbon Feasibility Assessment

SoI Environment provide a range of services associated with selection and assessment of suitability of Low-Zero Carbon (LZC) Technologies for new developments.

Based on relevant standards detailed within CSH and local planning policy, SoI conduct detailed studies for new developments to ascertain the feasibility of potential LZC / renewable energy generation facilities for each site.

These studies identify the most appropriate LZC energy schemes for the development on a site wide (decentralised) and building-integrated basis, in consideration of an estimated energy profile for each site.

The Feasibility study process utilises modelling software in order to assess all potentially feasible technologies against the following criteria;

- Predicted generation capacity / annual generation;
- Payback;
- Land use & suitability;
- Planning constraints;
- Potential environmental impacts;
- Life cycle assessment (regarding carbon impacts);
- Available grants / tariff (FIT / RHI); and
- Reasons for approval / exclusion.

Development Site Energy Strategy

The Energy Strategy is increasingly considered as a key document in providing assurance to local planning authorities regarding energy performance of a development and, for exemplar developments, acting as a provisional marketing tool.

SoI can provide detailed Energy Strategies for potential new developments. These documents are typically submitted with outline planning applications and assess the performance of the potential development against defined 'Energy Criteria'.

The strategy is informed by the high level policy review and LZC feasibility assessment, comprising a report demonstrating the compliance of a development with local planning requirements and government standards.

Building Design Briefs

SoI can provide detailed building design advice and produce project-specific 'minimum standards' for each proposed dwelling / building type.

SoI work closely with design teams and utilise modelling and calculation software in order to produce specifications for building integrated LZC technologies (where appropriate), air permeability, heat loss parameter and fabric energy efficiency values which must be achieved in order to gain sufficient credits under CSH modules Ene1, Ene2 and Ene7 such that the required level can be awarded during formal assessment.

SoI Environment Ltd

SoI Environment Ltd are fully licensed assessors for both CSH and BREEAM schemes and are CIBSE accredited Low Carbon Building Design Consultants. SoI have significant experience in low carbon strategy and are currently assisting several of the UK's largest residential and commercial developers in devising sustainable energy strategies and optimising energy performance of their developments.

CIBSE LOW CARBON CONSULTANTS

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