

Sustainable Energy;
Protocol For Planning Applications



Mendip District Council; 25th October 2006

Why do we need to use energy more sustainably?

Our use of fossil fuels is changing the world's climate. If CO2 emissions are left unchecked, global average temperatures could be as much as 5 – 8 degrees Celsius higher by the end of this century, with devastating impacts on the economy and the natural world (UK Climate Impacts Programme, DEFRA, 2006).

Energy used in homes accounts for 19% of U.K. carbon dioxide emissions. Businesses (excluding transport) are responsible for 40% of the U.K.'s carbon emissions (DTI Energy Review 2006).

What do we mean by sustainable energy?

In this document “sustainable energy” means energy which is used to provide the services which we all need, such as heating, lighting and cooling, without contributing to global climate change or otherwise damaging the environment. It will of course not be possible to completely eliminate all the consequences of using energy, but this protocol aims to guide applicants towards creating buildings which use less energy and where energy is used more effectively to provide a comfortable and convenient building environment.

A sequential approach can be taken to reducing the impacts of energy use in buildings.

1. reduce the need for energy

This can be done through simple design measures which reduce the need to use energy to create a comfortable and convenient living or working environment. People do not need energy as an end in itself, but rather need the services, such as heating, lighting or cooling that energy is used to provide. These “energy services” can be delivered using less or even no energy by measures such as passive solar design, passive cooling, sheltering and shading of buildings, building in accessible locations reducing the need to travel and use of building forms such as terraces and flats, which reduce the need for energy.

2. use energy more efficiently

This would include increasing levels of insulation, specification of efficient appliances and embedded generation of power (generation close to the point of use) which reduces losses in transmission.

3. use renewable energy

Renewable energy generating capacity can now be integrated into new and existing buildings. Available technologies include solar panels (both water heating and photovoltaic, which produce electricity), micro wind turbines, biomass fuelled boilers and ground source heat pumps. Small scale generation can also be achieved using small wind turbines (typically 2.5 – 15 KiloWatt), hydro turbines and small scale biomass burning plant (including timber and energy crops). Large scale commercial generation has so far been restricted to large wind turbines (typically around 1 MegaWatt)

Local Plan Policy

Policy ER1 of the adopted Mendip District Local Plan reads

“development will only be permitted where all practicable measures for the conservation of energy have been included in the design, layout and siting of the proposal”.

Applicants for planning permission for

- 1 or more new build dwellings
- new build development in use classes B1 – B8 over 500square metres
- new build development in use classes A1-A5
- new build development in use classes C1-C3 and D1-D2
- new build development which is sui generis.

Will be asked to demonstrate how they have complied with policy ER1.

Energy Assessments

Applicants are required to provide a statement setting out how they have complied with policy ER1. They will need to demonstrate that all the no and low cost measures which are appropriate to the development have been included in the design.

Developers will be asked to first employ measures to reduce the need for energy. If this is demonstrated to be impractical or energy use is outweighed by other considerations, measures to use energy more efficiently and/or to use on site renewable energy generation may be substituted.

A list of questions is provided in part 2 of this document, which will be used to assess whether a proposal complies with policy ER1.

You are asked to answer the questions, setting out any areas where the sequential approach has been used i.e. where measures to reduce the need for energy are not possible and measures to improve energy efficiency or include on site renewables have been used instead.

This energy assessment will **not be required** where accreditation at “very good” or “excellent” grade has been achieved through the BREEAM (Building Research Establishment Environmental Assessment Method). The scheme covers both non residential development and homes, through the “ecohomes” standard. Developers will be required to provide evidence of accreditation.

Where applicants fail to show that sustainable energy has been sufficiently taken into account in the design and construction of their proposal, planning permission will be refused.

Renewable Energy

Policies ER2 – 5 of the adopted local plan set out the Council’s approach to applications for renewable energy infrastructure. The policies are set out in annex 1 to this protocol.

In considering applications for small and micro-scale renewable energy the Council will;

- take into account the wider benefits of renewable energy in terms of its contribution to tackling climate change and supporting the local economy,
- recognise that renewable energy developments can only be located where natural resources exist, and this may sometimes mean that developments need to be sited outside development limits,
- recognise that renewable energy developments can be accommodated in urban as well as rural areas,
- base judgements about detriment to the landscape and amenity on an assessment of the direct impact on affected buildings and viewpoints. In some circumstances developments may be visible in the landscape/townscape without causing harm.

The Town and Country Planning Association’s “Sustainable Energy By Design” provides further guidance on design measures to introduce sustainable energy at neighbourhood, street and individual building scales. It can be viewed at www.tcpa.org.uk/downloads/TCPA_SustEnergy.pdf

Annex 1; Adopted Local Plan Policies (Mendip District Local Plan, adopted 2002)

Policy ER2 - Wind Energy

Wind turbines, whether in groups or singly, will be permitted where they:

- 1) are sited and designed so as to minimise their impact on the landscape, and will not significantly affect the landscape value of an Area of Outstanding Natural Beauty;
- 2) will not have an adverse impact on the character or setting of a settlement;
- 3) will not lead to nuisance by reason of noise, safety, shadow flicker, electro-magnetic interference or reflected light. Particular attention will be given to the impact on dwellings and other regularly occupied premises, unless it is part of a development served by that turbine;
- 4) will not detrimentally affect the character or setting of a Listed Building, Conservation Area or a Scheduled Ancient Monument;
- 5) will not result in damage to a site designated for its ecological or archaeological value either during or after construction; and
- 6) provision is made for the removal of redundant turbines and associated structures.

Policy ER3 - Hydro Energy

The generation of hydro-electricity will be permitted where a scheme will not, through either construction or operation:

- 1) significantly detrimentally affect the landscape value of an Area of Outstanding Natural Beauty;
- 2) detrimentally affect an SSSI, a County Wildlife Site or a protected species;
- 3) adversely affect the water quality or the amenity or wildlife value of the watercourse either at the site or downstream, or
- 4) result in the loss of water flow or an increased risk of flooding downstream.

Policy ER4 - Solar Energy

Generation of energy from the sun, whether by active solar heating or photo-voltaic cells, will be permitted where they:

- 1) will not have a significant detrimental affect on a Listed Building or Conservation Area; and
- 2) can be satisfactorily incorporated into the fabric of an existing building without undue loss of amenity or form an integral part of the design of a new building

Policy ER5 - Biomass Energy

Proposals for the generation of energy from biomass, whether an energy crop or farm waste, will be permitted where:

- 1) the proposal would not cause loss of amenity to neighbouring properties by reason of noise, dust, smoke or smell;
- 2) the site can be satisfactorily accessed and will not result in the large scale generation of additional traffic ; and
- 3) the proposal is of a scale appropriate to its location.

Planning Reference: (for office use only)	
Project Address:	
Applicant/Agent:	
Contact Telephone No:	

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Reducing the need for energy

1. Detail how the layout and design of buildings encourages conservation of heat, by minimising the external wall and roof area through which heat can escape? *(NB Flats and terraces are inherently more efficient than semis and detached houses).*

2. Describe how the development has been laid out to provide orientation for optimal solar benefit (either loss or gain, depending on use of building)? *(Consider layout of habitable rooms/workspace and window design and positioning)*

3. Detail how passive measures for shading and cooling of the buildings will be incorporated?

4. Detail how the use of planting and landscaping will take account of opportunities to shelter buildings from the prevailing wind and from colder winds from the north and east.

5. Detail how will the use of planting and landscaping take account of opportunities to provide shade to buildings in the summer, without loss of natural light in winter?

6. How does the design allow for the use of natural light throughout the building?
(Consider use of roof-lights, light wells, light tubes or atriums where appropriate)

7. How will efficient natural ventilation be provided?
(through trickle ventilation, air bricks, passive stacks or an alternative method)?

Using energy more efficiently

8. If a new heating system is to be installed, will it be one that conserves energy?
(Specify details of system and energy efficiency rating)

9. Will insulation be provided over and above building regulation requirements?
If yes please specify details.

10. Will high performance glazing **above** minimum building regulations be specified?
If yes please specify details.

11. Will an air conditioning system be installed? *If yes please specify details.*
(commercial developments only)

12. Will energy efficient lighting (external and internal) be fitted throughout the development? Please specify details.

13. Explain how the energy embodied in materials will be minimised during construction?
Through the use of recycled materials, reuse of demolition materials on site and low embodied energy products (such as timber; unfired clay bricks or tiles; cork; wool; cellulose or flax insulation).

Using renewable energy

14. Will on-site renewable energy be included? If yes please specify details.
(This could include building integrated wind, solar or biomass power or free standing wind, hydro, solar or biomass installations adjacent to the site).