

## Association for Environment Conscious Building

Administrative Office - PO Box 32, Llandysul  
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Dear Frazer,

### **Re: Comments on Draft Supplementary Planning Guidance – Planning for Renewable Energy Technology and Energy Efficiency**

Please find below our response to the draft Document, I have also included information on our organisation.

#### **Introduction**

Your document contains welcome and important guidance to developers and homeowners. As with all guidance it is crucial to have backup at all levels to continue to guide those looking to adopt the principles and to help them implement them on the ground. The AECB is ideally placed to provide this help – I will outline suggestions for how we might have a role in helping the council implement its guidance, amongst our main comments.

We appreciate the Energy Hierarchy outlined in the paper is crucial to direct resources towards the areas where most CO2 reductions can be made. We advise a similar set of priorities concerning the detailed design of developments:

1. **Energy Conservation Targets** consistent with the Governments stated target of an overall 60% CO2 reduction by 2050.
  - The AECB will soon be publishing its standards for new housing (also applicable to small public / commercial) that appear to be the only energy conservation standard that is likely to produce this reduction. We therefore strongly suggest that the council adopts the AECB energy standard as the main yardstick for energy efficiency in domestic new build. This would work well alongside BRE's

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ecohomes method which covers other important aspects of sustainable construction.

### 2. Passive Solar design and future proofing of buildings for retrofitting of solar technologies.

- Passive solar design works best when buildings are built to a high energy conservation standard – see above. Most buildings built now will be unlikely to afford extensive installations of PV panels or dedicated wind turbines to offset their electrical energy demands. However it is crucial that in addition to the proven benefits of passive solar design providing immediate energy benefits (well illustrated in your document) that new developments are future proofed for a time when these technologies are more affordable. We suggest that new ('stand alone' i.e. no shared local power generation solutions such as CHP) domestic designs should demonstrate how they can accommodate, at a future date, a **minimum** of 4 metres square metres of thermal solar panels, in a +/- 30 degree South orientation on an unshaded portion of the building, typically the roof. The heating system also needs to demonstrate a similar future proofing. The AECB can advise on the technical requirements if required.
- The promotion of high levels of daylighting and promotion of lighting controls should not be underestimated, both for reducing a building's electrical energy demand and for the associated health benefits.
- A region wide strategy for the implementation of renewable energy solutions should bear in mind that PV and wind turbine solutions need to work together to prevent the production of peaks in electricity generation. Due to the ecological problems and cost implications associated with batteries, grid related solutions are most ecologically and economically viable. A 'PV heavy' strategy will still require a high fossil fuel / nuclear generation component to cover peak demand. Wind (or other 'non solar' renewable generation) and sun working together goes some way to reducing this, and if applied nationally is more likely to result in a significantly renewable grid. (Papers on this subject available from AECB if required.) In reality this means that where a scheme is being promoted based on extensive PV installation, then a local (regional) and complimentary scheme based on non solar renewables should be prioritised and supported in preference to further PV developments.

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- Electric space heating should not be allowed as it is completely inconsistent with moves towards a renewable grid. The government is currently seriously concerned at the increase in electric space heating – which is based on the fallacious argument for the use of ‘dedicated’ green electricity supply for new developments (an AECB paper is available on this issue if required).
- 3 **Maximising uptake of currently available energy efficient appliances.**
- A key part of the solution to meeting the 60% reduction is to reduce the electricity demand of householders, which is rising at a higher rate than originally predicted. We commend any scheme that **promotes the installation of the most efficient domestic appliances**: *for example* Iceland’s affordable & AA rated ZODP ‘Kyoto’ fridge is a well kept secret! ‘Advertising’ an updated list of the most efficient products to householders (and developers) is an important way to capitalise on what is currently available & stimulates the energy efficiency market. Publishing energy savings related to AA appliances may also provide incentives (more on this in the AECB energy standard).

### Why construct an energy efficient building – p7

- The AECB’s members, particularly its energy consultants, ecological architects, Quantity surveyors & products / materials suppliers represent the cutting edge of ecological design and construction. It would be beneficial for developers working in your area to be put in touch with the AECB in order to partner with green professionals. Getting the right team results in a genuine and successful sustainable project. The developers’ capacity for understanding green design is improved and the local area develops inspiring and successful exemplars.
- In addition the AECB’s sussED initiative (sustainable construction skills and education) is providing a service to businesses in the construction industry who are hoping to understand and develop skills in the emerging green markets. Each training course, which is developed for either groups of trades people or a single developer, has a proportion of its profit used to fund places for a number of local construction students. Each course aims to cover ecological design and hands on skills training in the chosen construction elements e.g. building for airtightness, use of clay or lime plasters, correct application of natural / traditional insulations, rainwater harvesting, biomass / solar installations etc.

**Again we suggest that you may wish to promote the sussED service to developers aiming to implement your guidelines.**

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### Promotion of 'low carbon' building materials industries

*Extract from our response to PPS7 consultation, which has some relevance here:*

- Rural areas need to be developed to encourage the sustainable production of: food; construction timber and other forest products; building materials based on renewable natural fibres (e.g. sheep's wool, hemp and flax insulations, wood fibre boards, straw boards, straw bale for contemporary building construction etc), biomass fuels and so on. There are several European examples of rurally based industries integrated with their locally grown agricultural raw materials production (e.g. crop or forestry based) including wood fibre building boards (Switzerland) to non petroleum based paint production (Germany). This includes the continuation and development of related skills through rurally based demonstration and training ventures. Several members of the AECB are running 'low carbon' building materials (import) businesses, and are attempting to develop them further in line with these integrated principles, moving some production to the (rural) UK.

### Design and the character of rural settlements

- Planning authorities should be encouraged to take a positive approach to innovative, modern designs. This should be stressed as including genuinely environmentally sensitive buildings which embody all of the above criteria and allow (where shown to be required to achieve a 'low energy / low carbon' or other environmentally low impact development) the use of solar panels, wind turbines, high levels of [south-facing] glazing, 'low carbon' materials and products, "green / habitat" roofs and other features usually considered as "inappropriate" by planning authorities. In fact, given the seriousness of the subject of Sustainability, these should be thought of as mandatory.
- The advice to planning officers for developments to favour making use of existing structures through refurbishment / repair should be changed to encourage a more open minded approach in cases where a new build solution can be shown to deliver a dramatic reduction in CO2 emissions, whilst still being designed using local materials, and respecting the history and spirit of the locality.
- **We recommend at present Good Practice Guide 155 - energy efficient refurbishment of existing housing available from the Energy Saving Trust.**

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### About us:

#### **The Association for Environment Conscious Building**

The Association for Environment Conscious Building (AECB) was formed in 1989 to encourage greater environmental awareness and the adoption of environmentally responsible practices within the UK construction industry. We are an organisation with a very diverse membership that encompasses most sectors of building construction and management. Our membership of over 1500 includes, Local Authorities, Housing Associations, Design Professionals, Trades people, Construction companies, Building Materials suppliers, Students and Homeowners.

The aims of the AECB include:

- Promotion of products and materials that are safe, healthy and sustainable.
- Encouraging projects that respect, protect and enhance the environment.
- Dissemination of information and guidance about products, methods and projects.
- Support for the efforts of members in achieving these aims.

The AECB charter encourages our members towards improving environmental standards in exchange for dedicated support and promotion from the Association.

- The AECB sits on the Design Panel of the Associated Parliamentary Group for Design and Innovation based at Portcullis House
- Is working with the CITB and other regional partners on a sustainable education and training initiative for the Construction Industry (**sussED**)
- Is working with Greenpeace / Small Woods Association / Forestry Commission on the practical solutions available for using sustainably grown timber for UK construction
- Is developing a Sustainable Energy Standard for new build domestic construction that will be consistent with the UK's commitment to reduce CO2 emissions by 60% by 2050

We have recently been actively involved in lobbying government on a series of issues such as the Sustainable Construction Strategy, Climate Change Programme and changes to Part L of the Building Regulations.

The AECB has been cited as the one of the most influential organisations concerned with environmental performance of construction in the construction industry. AECB

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**Honorary President** - Prof.Chris Baines    **Chair** -Andrew Simmonds    **Founder** - Keith Hall

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members consistently win leading industry awards for their energy efficient and ecologically sensitive buildings.

AECB, in partnership with the Green Building Press, provides a comprehensive information and guidance service about environmentally sensitive products and sustainable construction practices. This includes a quarterly magazine (Building For a Future), a newsletter, regular workshop events, a comprehensive library, a CD Rom containing a database of material and component data (Greenpro), an annual edition of products and services directory - the Green Building Bible. Furthermore the AECB is involved in developing new resources for the industry in the form of CPD information, web sites and written information.

Yours sincerely,

**Andrew Simmonds**

Chair AECB