DIOCESAN ADVISORY COMMITTEE
(INFORMATION NOTE)

SUSTAINABLE BUILDING WORK TO CHURCHES AND ANCILLARY CHURCH BUILDINGS

1.0 INTRODUCTION

1.1 Reasons for the Statement

This document is intended to assist parishes in making ethical decisions when contemplating building works or reviewing the way the church is maintained and managed. It is in the form of a check list of headings. These should be considered with your architect early in any building project. It should be read in conjunction with the Diocesan Environment Policy and the DAC's booklet "The Environmental Impact of Building Works and Services on Church Buildings".

The Diocese is committed to achieving a significant reduction in carbon dioxide emissions. Parishes might consider linking to Eco-Congregation (Arthur Rank Centre, National Agricultural Centre, Stoneleigh Park, Warwickshire CV8 2LZ, tel 02476 853061, www.ecocongregation.org who could help them to initiate an environmental audit).

2.0 REASONS TO MAKE THE EFFORT

2.1 Theological

i) Duty of care to God's Creation and future generations
ii) Commitment to the Fifth Mark of Mission – *to strive to safeguard the integrity of creation and sustain and renew the life of the earth*
iii) As part of the Diocesan policy 'Commitment to the Environment'

2.2 Pragmatic

i) To reduce the whole-life costs of a building
ii) To make construction more efficient, reducing the use of resources and overall costs, and reducing travel times and costs
iii) To support local craftsmen and suppliers
iv) To re-use and recycle material, furniture and fittings

v) To make the public, staff and clients aware of the church's beliefs, principles and policies

3.0 MAINTENANCE AND MANAGEMENT

3.1 Transportation

i) If there is an option, go for a development location with good public transport links
ii) Try to use local companies for building work and supplies, taking into account the cost of travel and transport

3.2 Heating, Cooling and Lighting

i) Consider alternative methods of heating and electricity generation e.g. heat exchange – heat exchange ventilation – solar heating – geothermal heating
ii) Use energy efficient equipment, e.g. low energy bulbs for electric lighting. Sub meter separate areas
iii) Install sufficient heating capacity so that the building has residual heating which can be brought up to the desired temperature rapidly, avoiding initial heat loss during heating up.
iv) Consider changing to an electricity supplier which uses energy from renewable sources, e.g. Good Energy, Ecotricity. For further information, see Friends of the Earth's website of green energy sources at www.foe.co.uk/campaigns/climate/press for change green energy. These have initial start-up costs that may challenge the viability of the project.
v) Consider the building form (shape and orientation) and materials to conserve energy and utilise natural ventilation and light
vi) If floodlighting is contemplated, consider the implications, in particular light pollution and increased energy use

3.3. Water

i) Minimise run-off
ii) Keep hard paved areas to a minimum and allow to drain naturally
iii) Store rainwater
iv) Use double-flush toilets
v) Install water meters, and keep taps maintained
vi) Consider composting toilets

3.4 Waste and Pollution

i) Store materials to avoid accidental waste and pollution
ii) Plan the management of waste
iii) Check for presence of asbestos (see separate DAC booklet) in existing buildings before any works start
iv) Check for presence of old lead paint
v) Design to ensure users can recycle waste
vi) Ensure there is an above ground bund around oil storage, (check detailed requirements).

3.5 Healthy Buildings

i) Use minimum polluting paints, adhesives and sealants
ii) Use natural fibre carpets and soft furnishing
iii) Avoid chemicals in pest and rot control – they are often ineffective and unnecessary
iv) Use low electromagnetic field wiring and appliances
v) Consider use of indoor plants for healthier indoor atmosphere

3.6 Landscaping

i) Adopt a landscaping and management plan for the churchyard to ensure an integrated and harmonious design, and the provision of a habitat valuable for local flora and fauna
ii) Respect setting (genius loci)
iii) Take account of local culture
iv) Contribute to the local scene
v) Keep hard surfacing to a minimum and use permeable surfaces where possible

3.7 Biodiversity

i) Identify species present in the building and on the site which are included in the County Biodiversity Action Plan, and manage them to ensure their conservation
ii) Have a survey of the churchyard carried out by the Essex Churchyards Conservation Group (tel 01376 584386)
iii) Plant and landscape with native plants and trees
iv) Protect existing natural water systems (watercourses and ditches).

3.8 Social Sustainability

i) Who are the users?
ii) Involve all the local community
iii) Encourage local producers and fair trade

4.0 NEW BUILDING WORK

4.1 Using Nature and the Site

i) Consider orientation to the sun
ii) Consider the wind direction, and exposure to prevailing winds
iii) Plant for screening and protection, and consider the long term effects
iv) Consider windows which open for natural ventilation (security v. fresh air)
v) Optimise natural light but avoid glare
vi) Ensure that building works have a minimal impact on the churchyard flora and fauna

4.2 Energy and CO2

i) Be aware that many modern materials are produced at considerable expense to the environment in energy and CO2, though may be relatively cheap to purchase – accept that doing the right thing may cost more
ii) Strive to achieve the highest possible levels of thermal insulation

4.3 Materials

i) Prefer local, renewable resources when sourcing materials
ii) Use suppliers with proven environmental record
iii) Avoid products that involve unnecessary mineral extraction (exclusions: local bricks and slates)
iv) Source timber for structure and fittings from sustainable sources, e.g. with a Forest Stewardship Council Certificate
v) Use reclaimed and recycled materials, (furniture, fittings, masonry, tiles etc.)
vi) Complain about excessive packaging
vii) Avoid over-ordering
viii) If demolitions are involved, can materials be salvaged, reused or recycled
ix) Use where possible local producers and suppliers

4.4 Design and the Building's Lifecycle

i) Use environmental awareness as a criterion in selecting your architect
ii) Design building for energy efficiency
iii) Use Design Quality Indicator (DQI www.dqi.org.uk) for clients to work out priorities (the DQI is an on line interactive tool for assessing the design quality of a building under the headings of Functionality, Building Quality and Impact)
iv) Consider the impact of transport in the long term
v) Consider the natural advantages of the site/location
vi) Consider the long-term relationship with the local community
vii) Small is beautiful – keep 'design' to the minimum
viii) Strive for quality with economy - quality usually equates with durability
ix) Consider the impact of demolitions
x) Ensure the minimum of disturbance to neighbours (noise, dust etc) during building works.

DAC
Topics Sub-Committee

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RESOURCES

Any list will quickly become out of date, and readers are encouraged to search the internet and to ask around for the latest advice.

BOOKS

Green Building Bible (a cheap but helpful annual publication including list of suppliers and advisors) Green Building Press ISSN 1479 4616 (www.newbuilder.co.uk)

Green Guide to Specification; Jane Anderson, David E Shiers, Mike Sinclair (2002); BRE, ISBN 0-632-05961-3

Field Guide for Sustainable Construction; produced for the Pentagon (2004); download from http/renovation.pentagon.mil

Timber Decay in Buildings: The Conservation approach to treatment; Brian Ridout (1999) Spon Press; ISBN: 0419188207

The Ecology of Building Materials; Bjorn Berge (2000) Architectural Press; ISBN 0 7506 3394 8

Survey and Repair of Traditional Buildings – a sustainable approach; Richard Oxley (2003) Donhead Publishing; ISBN 1 873394 50 0

ORGANISATIONS AND WEBSITES

Building Research Establishment and link to BREAM and GreenSpec: www.bre.co.uk

BSRIA, the Building Services Research & Information Association; www.bsria.co.uk

Centre for Alternative Technology; www.cat.org.uk

The Centre for Sustainable Design facilitates discussion and research; www.cfsd.org.uk

Construction Industry Environmental Forum – can join; www.ciria.org.uk

Big site on construction with useful info sheets; www.constructionexcellence.org.uk

DTI, go to Construction Sector Unit (see especially their latest "Sustainable Construction Brief"; www.dti.gov.uk

Ecological Building Network; www.ecobuildnetwork.org

Environment Agency, Alert sheets for all sorts of activities; www.environment-agency.gov.uk

Free telephone advice line 0800 585 794; www.envirowise.gov.uk

Forest Stewardship Council; www.fsc-uk.org

A useful American site; www.greenbuilder.com

Association for Environment-Conscious Building: network; www.aecb.net

Publications section of AECB, *Green Building Bible* and *Building for a Future* magazine; www.newbuilder.co.uk

UK Sustainable Construction; www.sustainableconstruction.co.uk

The Design Quality Indicator (DQI) is a new method for assessing the design quality of buildings from the Construction Industry Council; www.dqi.org.uk

Government-funded programme for energy saving; www.actionenergy.org.uk