



SHRINKING THE FOOTPRINT

Diocese of Exeter
Shrinking the Footprint
REPORT ON ACTIVITIES
2007-09



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Summary

The Church of England needs to reduce our carbon emissions, for the sake of caring for our planet home and for the sake of climate justice. In Exeter Diocese, an action plan was developed against the five areas: Procurement, Property, Transport, Lifestyle, Theology and Worship.

Many of the action targets were achieved. Highlights were:

- Installation of a biomass boiler at Gulworthy church, which has attracted a lot of interest
- Reduction in weekly waste at the Old Deanery, from 25-30 black bags to 2-4 black bags plus an average of 7 bags of recyclable material.
- Loft insulation has been installed in 24 clergy houses, and 100 properties are in the pipeline.
- An ASHP was installed in Ogwell clergy housing, with savings of nearly 20% in electricity usage.
- 4 churches in Devon (1 CofE) are now Eco-congregations.
- www.exeterstf.org.uk has been developed as a resource.
- Martyn Goss' blog from Copenhagen

The Diocesan Synod motion of October 2009 gives a strong mandate for future action. The Diocese has adopted the Church of England targets for reducing its carbon and wider ecological footprints. The next step is to develop a ten-year strategy, which will contain a mix of projects across the Diocese (including Carbon Management Plan) or SW Group of Dioceses, and local encouragement and action.

Introduction

Scientists agree that climate change is happening and human activity has caused it. The developed world has primary responsibility, while the developing world is already suffering the consequences. The Church of England as a whole - churches, Cathedrals, offices, halls, schools and clergy housing - has a carbon footprint the size of Sainsbury's. We need to reduce our carbon emissions, for the sake of caring for our planet home and for the sake of climate justice.

Globally and nationally the three biggest contributors to greenhouse gas emissions are *power production* (mainly electricity), *buildings* (including homes) and *transport* (the fastest growing sector). We applied this to our own Diocesan situation, concluding that we need to radically examine our:

1. Procurement: Electricity, oil, gas, water, food and office supplies

2. Property: Parsonages, schools, offices, halls and churches as principal energy consumers and emitters. Also the possibility of using church buildings and land for renewable energy production.

3. Transport: Clergy and staff mobility, journeying to meetings and church, location of events, and alternative communications to reduce need to travel.

To these three we added two other essentials – how our personal lives deeply affect others in the struggle for global justice, and the wider value-base of our faith tradition:

4. Lifestyle: Leading by example at home and in the community, including engaging with localised alternatives such as Transition Towns.

5. Theology and Worship: Rediscovering approaches to Creation Theology and Spirituality, which are more sensitive to the human role within the wider created order, including liturgical expressions appropriate to addressing climate issues.

We also used Devon Churches' Green Action pack on Policies for Sustainability ('**World Without End**'). Reducing our footprint also corresponded with other policies, such as buying local to support local farmers, growers and businesses; and investing and trading more ethically in a globalized society, e.g. fairly traded goods.

Action Plan

An action plan was developed against each of the above five points. The plans evolved during the three years. Particular highlights are picked out in **bold**.

Activity	Progress in 2007-09	Progress in 2010/Outstanding/Future
I. Procurement		
a) Purchasing green electricity from Autumn 2009 through Ecotricity deal	The Ecotricity green electricity scheme was agreed in September 2009, and publicized through Measuring Our Footprint 2009. About 60 parishes expressed an interest.	The scheme started in early 2010 for both churches and households. 36 parishes have signed up, resulting in a contribution to Diocese of £1,200. Ecotricity introduced gas and dual fuel offers for households in summer 2010, and expect to extend this to churches in early 2011.
b) Using as much local produce as possible for church events (e.g. LEAF initiative)	Meetings at the Old Deanery use food from the Cathedral Refectory, which seeks to use local and Fairtrade produce where possible. The Old Deanery also buys bottled milk, in support of local dairies. The Old Deanery offices are in the Exeter Fairtrade Directory.	Educate Old Deanery staff further regarding purchasing food from local sources for smaller meetings.
c) Producing renewable energy from churches and land (3-4 schemes)	Renewables installed: biomass boiler at Gulworthy church, which has attracted a lot of interest , PVs on Shiphay church hall. Projects in progress: PVs at Noss Mayo, Torrington, Wolborough, etc. Guidance and case studies have been made available on www.exeterstf.org.uk .	Feasibility studies (see 2b) continue to be undertaken in other churches, with some feasible options appearing. A community energy company is being scoped with the Development Trusts Association and Bath & Wells and Gloucester Dioceses, to develop PVs on church roofs. Also under investigation: the use of Diocesan land for wind, solar and biomass; and the spread of Diocesan investments.
d) Phasing out bottled water	Bottled water has been replaced by water filters in the Old Deanery.	Note that some of the water filters consume electricity for cooling.
e) Office materials from sustainable sources (recycled paper, envelopes, etc.)	Some office materials from sustainable sources, but not all.	Will be audited in the autumn 2010.
f) Duplex Printers for two-sided printing and re-use of office paper	Where printers need to be replaced, Old Deanery policy is to replace with duplex printers.	Educate staff to set two-sided printing as the default printer setting.

Activity	Progress in 2007-09	Progress in 2010/Outstanding/Future
g) Monitoring of waste and energy at Old Deanery	<p>Gas, electricity and water use is monitored centrally. Consumption in 2009 was about 28,000 kWh electricity, 12,000 units gas, 220 cu.m water. Monitoring the sub-systems using Automated Meter Readers is too expensive and would not give a return on investment.</p> <p>A recycling scheme was introduced in Old Deanery, and wormeries for compostable waste.</p> <p>Weekly waste has been reduced, from 25-30 black bags to 2-4 black bags plus an average of 7 bags of recyclable material. Waste generated in 2009 was about 350 kg.</p>	<p>Ecotricity will be installing a central SMART electricity meter, with output to be viewable on a website.</p>
2. Property		
a) Rolling programme to insulate all 330 parsonages and update boilers (using grants through Westcountry Energy Action and Local Authorities)	<p>Loft insulation has been installed in about 24 properties, and 100 properties are in the pipeline. Cavity wall insulation is being considered on a case-by-case basis, as not all properties are suitable.</p> <p>Double-glazing is being installed when windows need replacing.</p> <p>Boilers are being updated when they need replacing.</p> <p>An ASHP was installed in Ogwell clergy housing, which has given savings of nearly 20% in electricity usage in 2009/10 compared with 2007/08 and 2008/09.</p>	<p>The boiler replacement programme has not started yet, except where necessary.</p>
b) Carrying out energy feasibility studies of churches through DARE and Carbon Trust	<p>23 studies of CofE churches were conducted between 2004 and 2010: 18 by DARE, 5 by Carbon Trust / AECOM. Further DARE studies are being commissioned.</p> <p>Clare Bryden was appointed from late Sep09 to follow up these studies. Some of the churches have followed the more straightforward recommendations, such as using energy efficient lighting.</p>	<p>No churches have really addressed the more ambitious recommendations, e.g. to change heating systems. Support has been directed to churches with an appetite for moving forward, and further site visits undertaken on request.</p>

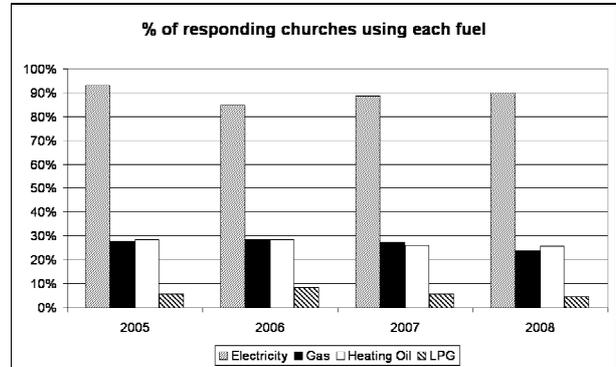
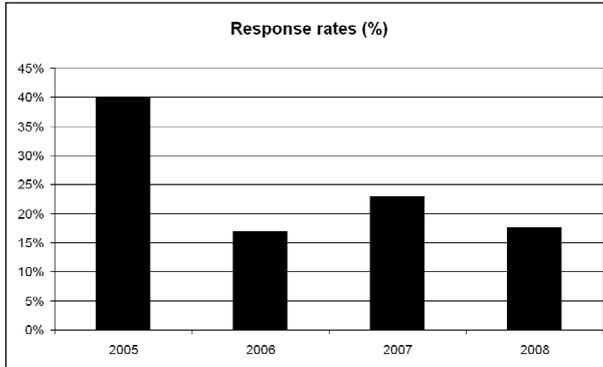
Activity	Progress in 2007-09	Progress in 2010/Outstanding/Future
c) Pilot studies on 4 church halls carried out by Envision	4 studies were conducted.	Follow-up as 2b).
d) Audit of Old Deanery and action plan (Envision)	Envision conducted an audit, and a short-/medium-/long-term action plan was developed, covering many of the activities in this action plan.	
e) Offering free low-energy light bulbs to churches (through WEA)	About 1,000 low-energy light-bulbs have been distributed.	Light-bulbs are still available.
f) Outline audit carried out of Bishop's Palace	Martyn Goss conducted an outline audit, and some actions have been taken, e.g. improving the lighting.	Some actions are outstanding. The Church Commissioners will be contacted regarding a more detailed audit, possibly of all Bishops Palaces.
g) Energy study of Exeter Cathedral and follow up heating scheme (Carbon Trust)	Carbon Trust conducted a study, and the Cathedral subsequently commissioned studies by Envision, NPS and Gifford.	Follow-up study by Gifford proposed a 'Carbon Neutral Cathedral', which has been agreed by Chapter and is starting to be taken forward.
h) Solar Schools programme (Okehampton Learning Centre)	No progress.	A meeting will be held with the Council for Children and Young People regarding future work in this area.
i) Measuring annual energy use in up to 624 buildings	A Measuring Our Footprint exercise is undertaken each year, requesting information on electricity, gas and oil consumption. See below for details.	2009 figures will be requested in June 2010.
3. Transport		
a) Staff travel clinic (with Devon County Council)	Took place in 2008.	
b) Diocesan Bike for local use by staff	A Diocesan pool bike is available. The Bike to Work scheme was investigated, but it was complex and the Labour government ended it.	The bike needs to be publicized more, as it is not well used.
c) Personal travel plans for Old Deanery	The Old Deanery travel plan was drawn up in 2005. Current staff do not have personal travel plans. Conditions are written into the contracts for new staff members. Procedures were drawn up in late 2009 for use of the Diocesan car park.	Future plans will form part of the Carbon Management Plan (see below), and will be influenced partly by new national and local government policy. Charges could be introduced for parking.
d) Salary Sacrifice scheme for bus travel (Stagecoach)	The scheme was found to be impractical, and not pursued	

Activity	Progress in 2007-09	Progress in 2010/Outstanding/Future
e) Investigating train fare discount	As 3d)	
f) Audit of senior staff travel	An audit was undertaken in 2009.	A meeting will be held with the Bishop regarding next steps, and Martyn Goss will put a scoping paper to a meeting of the Bishop's staff in autumn 2010.
g) Review of Diocesan air travel	Air travel is primarily on visits to link dioceses, and flights are offset.	Video-conferencing should be investigated.
h) Promotion of car-free days (September 20th and 22nd)	The annual Car-Free Day is promoted at the Old Deanery, in 2009 with a staff picnic and a reduction in car-park usage of two-thirds. Some churches also promoted Car-Free Sunday.	There are plans to repeat the 2009 Car-Free Day event in 2010.
4. Lifestyle		
a) Staff workshops led by Global Action Plan	Workshops were held in 2009 on energy efficiency and renewable energy, waste and travel.	
b) Linking local churches with transition communities (and Devon Climate Action Network)	4 churches in Devon (1 CofE) are Eco-congregations. Some churches have links with Transition initiatives, e.g. Bovey, Buckfastleigh. Links have been promoted on www.exeterstf.org.uk and at the DCGA meeting in Tavistock.	Other churches are working towards Eco-congregation status.
c) Poster on environmental Do's and Don'ts	A poster has been created, for display in each office in the Old Deanery.	Few offices are displaying the poster. It has been made available on www.exeterstf.org.uk .
d) Gardening for God leaflet		A DCGA leaflet was produced in early 2010, and has been published on www.dcgga.org.uk .
e) Recycling and composting at the Old Deanery	See 1g)	
f) Support for Devon Christian Climate Change Coalition events (e.g. Hope Rising, banner)	Events included: Hope Rising, presentation of a banner petition to No.10, The Wave climate march in December 2009.	As requested by DCCCC.

Activity	Progress in 2007-09	Progress in 2010/Outstanding/Future
5.Theology and Worship		
a) Promotion of green liturgy resources (e.g. Green Bible)	The Justice Bible has been made available in the JPC chapel in the Cathedral.	The Green Bible was also made available in the JPC Chapel from May 2010. Green worship resources have been published on www.exeterstf.org.uk . The Diocesan Liturgical Committee is also looking into resources for creation and alternative liturgy.
b) Talks and presentations to local churches (30+)	Martyn Goss, Clare Bryden and other members of CCS have spoken at deanery synods, clergy chapters, and Churches Together meetings; preached in churches across the Diocese; conducted workshops and site visits to look at renewable energy options; and attended Cathedral Chapter and Community Committee.	Continued in 2010.
c) Use of written articles and website	www.exeterstf.org.uk has been developed as a resource, with good feedback. The focus initially was on energy, but it also includes e.g. articles on climate justice, and Martyn Goss' blog from Copenhagen. Articles have been published regularly in Diocesan News.	Website continues to be updated and publicized. Further articles in Diocesan News; March 2010 edition had a particular focus on StF. www.dcgga.org.uk is also being developed, for publication of DCGA magazine articles and leaflets. Martyn Goss has reported on the June 2010 ECEN meeting.
d) CME workshops	One CME workshop was run in 2009, but was poorly attended. Workshops run on renewable energy as part of the Mission Community Resource Days	Renewable energy workshops continued in 2010 – Mission Community Resource Days, training for QI architects.
e) Theology workshops (4)	Workshops were run at the Old Deanery in 2008, and further workshops at Exeter University. Speakers included: Michael Northcott, Margaret Barker, Ernst Conradie, Tim Gorringe and Ghillean Prance.	
f) Special services (JPC Chapel, Vigils, Copenhagen)	A DCGA service is held annually in the JPC chapel. Several vigils for Copenhagen were held across the Diocese, and a meditation in the Cathedral.	

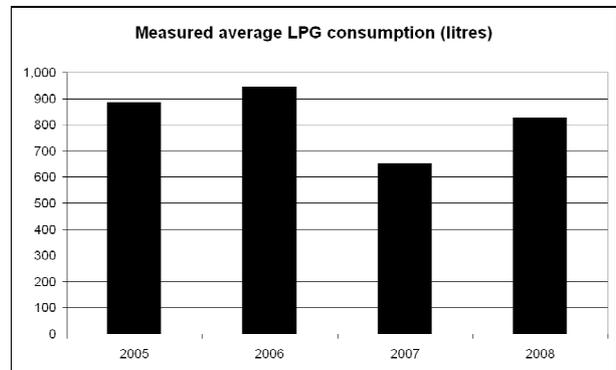
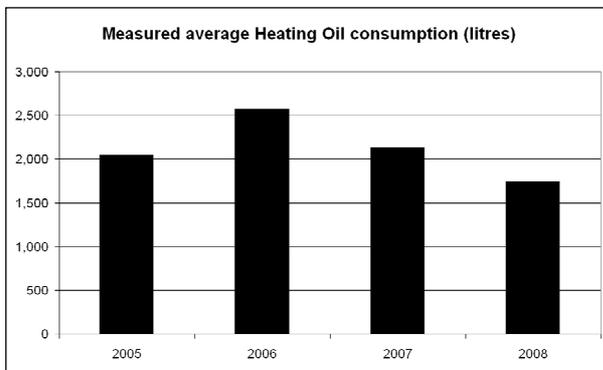
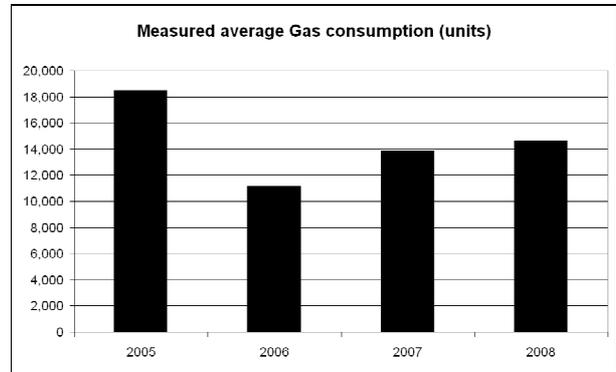
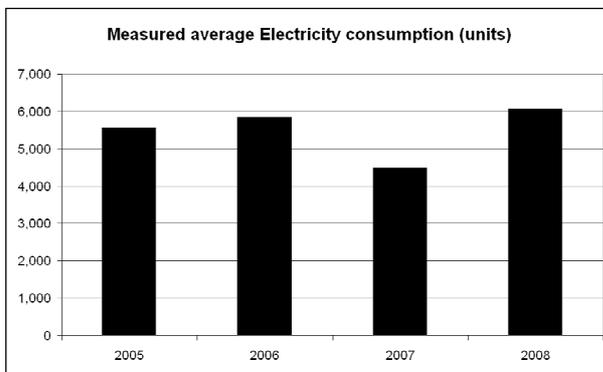
Measuring Our Footprint

The Measuring Our Footprint exercise started in 2005. Questionnaires for each year are sent out in the following June, requesting information on consumption of electricity, gas, oil and other fuels (typically LPG). Response rates fell from about 40% of 620 churches in 2005 to 17% of 623 in 2008.

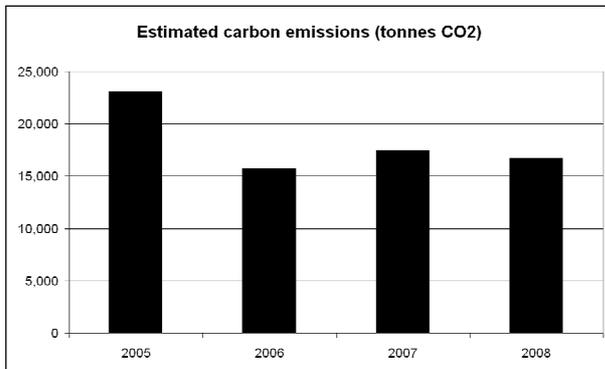
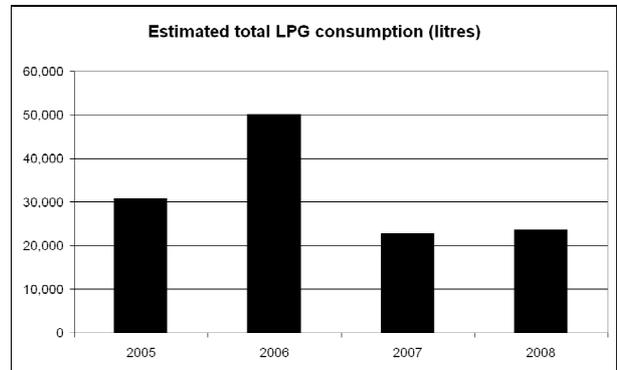
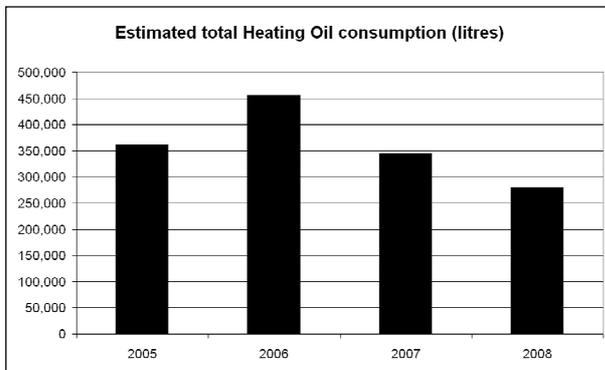
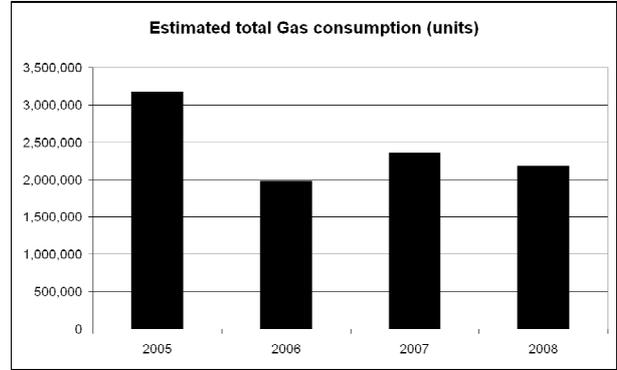
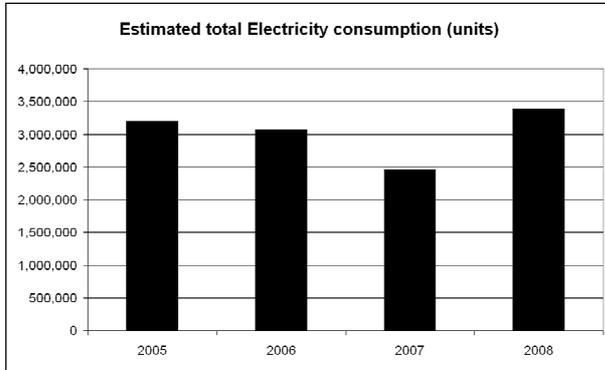


The data needed substantial cleaning. Some data had to be converted into the standard units, e.g. from bills, based on national data on price per unit. Some assumptions had to be made regarding the units of consumption, e.g. LPG was assumed to be litres if not specified. Some responses could not be used, e.g. LPG reported in terms of canisters, without specifying size. No attempt was made to fill holes in the data, e.g. if a church missed just one year out of the four.

Average consumption was found to vary widely year by year, which could be due to e.g. changes in severity of winters, or lack of representativity of the responses.



In estimating total fuel usage and carbon emissions, it was assumed that churches which report are representative in terms of building usage and size, and energy usage. Again, the estimates vary widely year by year, probably showing that this assumption does not hold. The higher the response rate and the higher the percentage of churches using the fuel, the higher the confidence in the estimates.



Average carbon emissions per church were found to be 2-3 tonnes CO₂ from electricity, and 24-35 tonnes CO₂ from fossil fuels.

The national Shrinking the Footprint toolkit¹ quotes benchmarks of 9 and 29 tonnes respectively, in which case the benchmark for all churches in the Diocese would be 23,674 tonnes CO₂. The targets for 2020 and 2050 (reductions of 42% and 80%) would therefore be 13,731 and 4,735 tonnes CO₂.

The results reported are for churches only, and are assumed to include parish offices and church halls. Future analysis should also include fuel usage and carbon emissions from the Cathedral, Diocesan Office, Bishop's Palace and other clergy housing, and church schools.

¹ Available at <http://www.shrinkingthefootprint.org/action.php>.

Diocesan Synod

In October 2009, Exeter Diocesan Synod overwhelmingly passed a motion calling for action to protect the environment:

This Synod

- i. Calls upon all Dioceses, PCC's, Governing bodies of VA/VC schools, and all church members to (i) take steps to reduce consumption of energy derived from fossil fuels and, (ii) to purchase their electricity from any supplier which provides a Green Tariff and which undertakes to invest heavily in the production of energy from renewable sources and, (iii) to invest in renewable energy sources.
- ii. Calls upon the Prime Minister to forge a new partnership between the government and the church (all denominations), with the aim of ensuring that the buildings and land in the control of the church can be the means of producing 100% green electricity and heating from such as wind, biomass and solar sources; facilitated by (i) relaxation of planning constraints and (ii) the provisions of grants and long term interest free loans.

In March 2007, Synod passed an earlier motion:

This Synod, in order to address serious global climate change as part of the 'Shrinking the Footprint' campaign:

- a) urges parishes/mission communities, deaneries and departments to produce and implement action plans to reduce their carbon footprint
- b) requests a progress report from the Director of the Council for Church & Society at its second meeting in 2008

Together, the motions give the StF campaign a clear mandate for future action.

Partnerships

Partnerships are vital to the success of our work, and much was undertaken in collaboration with the wider Diocese and other agencies.

Exeter Diocese is a member of the South West Diocesan Regional Environment Group, which was set up in order to provide a regional response from Anglican dioceses to the demands of climate change. On 4th March 2009 representatives of the dioceses of Truro, Exeter, Bath and Wells, Salisbury, Bristol and Gloucester met to agree the following aims:

- To seek a commitment for the dioceses in the region to work together and develop clear aims for work on environment issues.
- To create a regional energy/utilities policy for the Anglican dioceses in the region, which would include water and oil, and look at other opportunities to ensure the impact of our carbon use is reduced.
- To set up a regional working party with a mandate to do significant work.

The Group jointly developed the 2009 Diocesan Synod motion, which was debated and passed by all six Diocesan Synods. The SW Group is recognised as an exemplar by the national StF campaign. The Dioceses were able to work together to negotiate the deal with Ecotricity, and are now working together on setting up the community energy company, also involving the Development Trusts Association.

Exeter Diocese plays a full role in the national StF campaign, through supporting its activities and promoting the use of its toolkits for churches, cathedrals and clergy housing. Martyn Goss attended the first national StF conference at Lambeth Palace in June 2009.

Within the Diocese, it is the aim that each Council and function has a representative on the StF steering group: Council for Mission & Unity; Council for Worship & Ministry; Council for Children & Young People; Property Services; the Diocesan Advisory Council for the Care of Churches; Finance. Some posts are currently vacant.

Exeter Cathedral is also represented on the StF steering group. There is a close working relationship with the Cathedral, and particular encouragement given to the Social Justice and Environment Group, which was set up in October 2008. The Cathedral is a potential exemplar with iconic status.

The Council for Church & Society and Devon Churches Green Action (DCGA) are the formal vehicles for collaboration with other denominations. Informal links have also been made, with the opportunity to share experience and learn from each other. One of the roles of DCGA is to encouraging local churches to develop 'green groups' or teams to activate wider community. The Cathedral's Social Justice and Environment Group is a good example. Other churches work towards Eco-congregation status, or on local conservation issues. The StF campaign has set up a 'virtual' Green Clergy Group, for clergy across denominations to support each other in green action. The StF campaign also has links with the Devon Churches Energy Network; the Environmental Issues Network of the Churches Together in Britain and Ireland; Christian Ecology Link; Operation Noah; and the Devon Christian Climate Change Coalition.

The Devon Faith and Belief Forum is the formal vehicle for collaboration with other faiths. Martyn Goss attended the Faith and Climate Change seminar in October 2009.

The StF campaign has also formed good working relationships with local energy consultancies, such as the Devon Association for Renewable Energy, Renewable Energy for Devon, Global Action Plan, and Envision.

Communications

A Shrinking the Footprint leaflet was developed, describing the issues, the campaign, and giving some ideas for activities.

The StF campaign has worked closely with the Diocesan Communications team. Articles are published regularly in Diocesan News.

Martyn Goss, Clare Bryden and other members of the Council for Church & Society have spoken at deanery synods, clergy chapters, and Churches Together meetings; preached in churches across the Diocese; conducted workshops and site visits to look at renewable energy options; and attended the Cathedral Chapter and Community Committee.

A new website was developed and went live on 4 November 2009. www.exeterstf.org.uk is intended to be a permanent ongoing resource to support churches in shrinking their carbon footprints, and in particular in energy projects in buildings. Content of the site covers:

- Signposts to content relevant to clergy, PCCs and church members
- Guidance on developing environmental policy and setting targets for reducing carbon emissions

- Information about actions in the five areas of Shrinking the Footprint, including signposts to material on other sites, including national Shrinking the Footprint and Eco-congregation, as well as guidance adapted for the local church
- Specific guidance on running energy efficiency and renewable energy projects:
 - The process, including steps that should be taken before a project is considered
 - How to commission energy studies
 - Guidance on renewable technologies and lists of installers and consultants
 - Up-to-date lists of grants for feasibility studies and installation, information on the forthcoming Feed-in Tariffs and Renewable Heat Incentive
 - How to engage with the DAC and planning authorities regarding permissions
- Specific information about the Ecotricity green electricity scheme, including downloadable forms
- Case studies in the five areas of Shrinking the Footprint, in Devon churches, other similar buildings in Devon, and other churches in England

Plans for future publications:

- Annual Environmental Report on Diocesan central office and senior staff
- Publish the Ten Year Strategy and Plan 2010-20
- Annual report on the progress of Shrinking the Footprint
- Update the Shrinking the Footprint leaflet to focus on ideas for actions

Evaluation of Progress

Many of the Activity targets were achieved. However, no overall criteria were set by which success could be judged, which also means that the contribution of achieving the Activity targets could not be evaluated. Nevertheless, Exeter is recognised nationally as being one of the Dioceses in the forefront of Shrinking the Footprint.

In general, good progress has been made in shrinking the carbon and wider ecological footprint of Diocesan offices, and in laying the ground for future actions across the Diocese. The Diocesan Synod motion of October 2009 gives a strong mandate, and good relationships have been built, which will help in delivery. However, it is also clear that hearts and minds are not yet fully engaged. For example, the response rate to Measuring Our Footprint fell off dramatically after its first year, and is now less than 20%. The environment is just one of many issues facing churches, and further persuasion is needed regarding the need, urgency and benefits of action (e.g. to finances, mission).

It is becoming apparent that more of a difference could be made by projects across the Diocese or group of Dioceses, such as the Ethical Energy Enterprise and strategic use of Glebe. Future strategy should contain a mix of these cross-organisation initiatives and local encouragement and action.

Looking Forward

In October 2009, the Church of England published “Church and Earth 2009-2016”, its seven-year plan on climate change and the environment. It laid out targets for reducing carbon emissions by 42% by 2020 and 80% by 2050; and reducing the wider ecological footprint to a ‘One Planet’ level by 2050.

Exeter Diocese has adopted these targets, and is developing a ten-year strategy and plans for 2010-20, i.e. on the timescale of the earlier carbon target. The plans will include a Carbon Management Plan, which is currently being scoped by the consultancy Global Action Plan.