



## **Report on the implementation of the Chilterns Conservation Board's 06/07 Sustainability Plan (April 2007)**

The Chilterns Conservation Board (CCB's) Sustainability Plan was approved by the Board in March 2006. One year on this report monitors progress to date and identifies areas to focus on in 2007/08.

This report contains the following sections:

- Background to the CCB Sustainability Plan
- Summary of progress in 06/07
- CCB's use of energy and resource in 06/07
- Carbon Emissions generated by the CCB in 06/07
- Looking ahead; aims, targets and actions for 2007/08

### **Background to the CCB Sustainability Plan**

1. The Chilterns Conservation Board's statutory purposes include conserving and enhancing the natural beauty of the Chilterns, and promoting awareness and enjoyment of its special qualities. These challenges require the Board to operate to the highest environmental standards and to encourage others to do so as well. To that end the Board has prepared a sustainability plan to highlight how it will meet these standards, using targets against which its performance can be monitored. The aim is to minimise and reduce its environmental impact, particularly use of non sustainable resources. Where possible specific measures and targets are given.
2. This plan was approved by the Chilterns Conservation Board on 24 March 2006.
3. The plan covers the direct and indirect environmental impacts of the Conservation Board's own operations, including those of Board members and Staff connected to the duties on behalf of the Board, the operation of the Board's offices and implementation of the Board's work programme.
4. The plan looks at the following areas:
  1. Paper
  2. Waste
  3. Recycling
  4. Water

5. Energy Use and Carbon Dioxide Emissions
6. Transport
7. Purchasing and Contractors
8. Local Produce
9. Raising Awareness

### **Summary of progress in 2006/07**

5. The main areas of progress are listed below (this is in addition to the many small steps taken to improve the CCB's sustainability which have all had an impact):
  1. Advice on reducing energy use, installing renewable sources of energy and other aspects of sustainability was actively sought from a number of organisations including Thames Valley Energy (TVE) and Envirowise.
  2. Several steps have been taken to reduce energy use at the Board's offices and to investigate sources of renewable energy:
    - Additional loft insulation has been installed, doubling the total depth.
    - A planning application has been submitted to South Oxfordshire District Council for installing solar photovoltaic (PV) panels at the CCB office, capable of generating 1,600kWh of electricity and saving 680Kg of CO<sub>2</sub> per annum.
    - The number of fluorescent tubes in the CCB's overhead office lighting has been halved.
  3. An additional carbon off-setting initiative has been introduced (in addition to the annual programme of tree planting), with 5% of income from CCB chargeable events now contributing towards the Chilterns Conservation Board's carbon off-set initiative.
  4. Provision of grant aid from the Sustainable Development Fund for relevant projects including promoting local produce and creating new walking/cycling routes.

### **Monitoring the CCB's energy and resources use: 06/07 performance**

**Table 1: CCB consumption of energy and resources**

<b>Output</b>	<b>2005/2006</b>	<b>2006/2007</b>
Number of reams of paper per person	13.4	9.4
Waste produced (from bins), excluding recycling per person	78kg	Not measured but from observation this has stayed the same.  It has not proved practical to measure on a regular basis

<b>Output</b>	<b>2005/2006</b>	<b>2006/2007</b>
Weight of waste recycled per person	187 kg	Not measured but from observation this has stayed the same  It has not proved practical to measure on a regular basis
Water per person	6.84 m <sup>3</sup> per person	5.92m <sup>3</sup>
Gas used	Reliable figures not available.	40,070 kwh
Gas - total carbon emissions	Reliable figures not available.	7,613 kg
Gas -carbon emissions per m <sup>2</sup> of office space	Reliable figures not available.	50.75 kg/m2
Electricity used	Reliable figures not available.	9,606 kwh
Electricity – total carbon emissions	Reliable figures not available.	4,131 kg
Electricity- carbon emissions per m <sup>2</sup> of office space	Reliable figures not available.	27.54 kg/m2
Combined gas/electricity emissions of carbon dioxide	Reliable figures not available.	11,744 kg (78.29 kg/m2)
Total distance travelled per capita by car by CCB staff for work	2,089 miles	2,228 miles (some mileage relates to 2005-06 due to late mileage expenses claim)
Total number of car-share miles travelled by car by CCB for work, per person	n/a	520 miles
Total distance travelled by Board members by car per person for which claims were submitted	403 miles (total 8023 divided by 20 car claims.	700 miles (total 10507 divided by 17 car claims).
Total CCB staff and Board member mileage on CCB business		30,561 miles = 9.17 tonnes of carbon emissions

<b>Table 2: Summary of Total Carbon Emissions in 06/07</b>	
Gas (office)	7,613 kg
Electricity (office)	4,131 kg
Car mileage by staff and Board members associated with CCB work (30,561 miles)	9,200 kg
<b>Total</b>	<b>20,944 kg</b>

Note: kwh carbon emission calculations were made using the Carbon Trust conversion figures. Car miles travelled carbon emission calculations were made using the Carbon Neutral Company calculator.

It is estimated that events organised by CCB generate approx 35,000 miles of journeys which generates carbon dioxide emissions of 10,536 kg.

### **Implementation of aims in 2006/07**

<b>Practical actions for making better use of paper in 2006/07</b>	
<b>Action</b>	<b>Progress</b>
To reduce paper use to less than 11 reams per person per year	9.4 reams per person
To purchase paper that has 100% recycled content, is chlorine-free and from manufacturers with an environmental management system.	Yes
Cancel junk mail and unwanted publications to reduce the amount of waste that has to be thrown away.	Yes
Don't order more copies of publications than necessary.	Yes, on-going.
Send electronic version to others rather than paper copies.	Yes Hard copies are sent only if requested.  Board, Executive and Planning Committee papers are still sent as hard copy and in electronic form. This is done as members need a hard copy at meetings and saves them printing hard copies at home.
Do not print documents received electronically unless necessary	Yes, on-going.
Do not print out e-mails unless necessary.	Yes, on-going.
Send and receive faxes electronically	Yes, on-going.
Avoid overproduction of marketing and publicity material by reviewing distribution lists and regularly updating databases.	Yes, - improve stock control system in place

<b>Practical actions for making better use of paper in 2006/07</b>	
<b>Action</b>	<b>Progress</b>
Ensure that all reports, agendas, letters, publications etc. are produced in double sided format on recycled paper and 2 pages per side when practicable	Yes wherever possible.
Put reminder posters near printers and photocopiers regarding the above.	Yes, has been done.
Re-use unused side of paper for scrap	Yes - ongoing
Recycle all paper.	Yes, on-going.
Re-use envelopes wherever possible, especially for sending information internally.	Yes, on-going.

<b>Table 4: Practical actions for reducing waste in 2006/07</b>	
<b>Action</b>	<b>Progress</b>
<b>To reduce the amount of waste per person by 5% per year.</b>	<p>Both recycled and general household waste is collected weekly. The waste is kept in 240 litre containers.</p> <p>The amount of non-recyclable household waste generated has been very consistent over the last year, the container is generally around a third full. The recycled waste is more erratic, but from observation the CCB generates approximately one very full container every week. The CCB does not have scales large enough to weigh the recycled waste and this would take some time. It is felt that observation is sufficient if the amount of waste generated continues to be consistent.</p>
Choose minimally packaged products or ask suppliers to supply products in less packaging.	In reality it is often not possible to specify this, as most goods are pre-packed as standard.
Avoid purchasing disposable catering products such as individual milk containers, sugar sachets and paper plates.	Yes, on-going. Milk ordered in bottles
Prior to confirming catering arrangements for meetings, confirm the numbers attending to avoid wasting food.	Yes, on-going.

<b>Table 4: Practical actions for reducing waste in 2006/07</b>	
<b>Action</b>	<b>Progress</b>
Make use of local resource centres and charities that re-use computers, furniture and other materials from businesses.	Yes, on-going.
Recycle wherever possible – e.g. paper, printer cartridges	Yes on-going.
Re-cycle everyday waste - South Oxon DC collection service	Yes- ongoing

<b>Table 5: Practical actions for increasing recycling 06/07</b>	
<b>Action</b>	<b>Progress</b>
<b>To recycle over 80% of waste produced.</b>	See note above; the CCB's waste is not weighed regularly, but based on observation it is estimated that between 75-80% of waste is currently recycled.
Buy recycled products wherever possible.	Yes buy recycled toilet paper
Recycle paper, cans, glass, plastic	Most items recycled but there is room for improvement- recyclable items are sometimes spotted in household waste bin. More reminders.
Return toner cartridges for remanufacture	Yes – give to Solutions Centre charity
Buy remanufactured toner cartridges if possible.	Can't use recycled toner cartridges in printer/copier's (invalidates warranty) first year, but investigate for future
Arrange for fluorescent tubes to be recycled or safely disposed of in small quantities.	Yes- take to Bucks recycling

<b>Table 6: Practical actions for reducing water use 06/07</b>	
<b>Action</b>	<b>Progress</b>
<b>To use no more than 6 m3 (6000 litres) of water per person per year</b>	In 06/07 the CCB used 5.92m <sup>3</sup> per person, a 14% reduction from the previous year and probably reflecting increased staff awareness and a concerted effort to minimise water use during the summer drought. Over the summer washing-up water was recycled to water the Lodge garden during the drought. The CCB has purchased a water butt for the CCB office garden. In addition new taps have been installed in the kitchen with ceramic washers to replace the previous taps which dripped.

**Table 6: Practical actions for reducing water use 06/07**

Action	Progress
	Several press releases were issued by the Chilterns Conservation Board over the summer with environmental messages regarding saving water, increasing awareness amongst the general public of how they can minimise their water use.
Reminder notice about turning kitchen taps off fully.	New kitchen taps due to be installed, see below.
Fit a water displacement device in toilet cisterns to reduce the amount of water per flush.	Tried this but the Victorian drains kept getting blocked
Don't boil more water than needed for drinks.	Yes -put reminder by kettle

**Energy consumption and Carbon Emissions generated by the CCB at its office**

**Aim To produce less than 30 kg/m2/year of CO2 emissions at the CCB's offices**

6. The CCB generated the following carbon emissions in 06/07 through office consumption of gas and electricity:

<b>Gas:</b> Annual kwh ÷ Floor area (m2) = Annual figure (CO2 conversion factor) = Emissions per year	40,070Kwh ÷ 150m2 = 267.13 x 0.19 = 50.75 kg/m2/year
<b>Electricity:</b> Annual kwh ÷ Floor area (m2) = Annual figure (CO2 conversion factor) = Emissions per year	9,606 ÷ 150 = 64.04 x 0.43 = 27.54 kg/m2/year

7. Total carbon emissions generated at the CCB office in 06/07 was 78.29kg/m<sup>2</sup>. This is double the aim of 30 kg/m2/year set for 06/07, however this is the first year that reliable base-line data has been established and it is clear that the aim needs revising for 07/08 to make it realistic (in 05/06 reliable figures were not recorded for gas and energy consumption and this has now been addressed, with regular monthly records now kept so that more accurate trends can be identified). The aim for 07/08 has therefore been revised, to produce less than 80kg of carbon emissions per m<sup>2</sup>.
8. The CCB office is in an old building which is not very energy efficient; the building has solid walls (so no opportunity for cavity wall insulation), there are many large windows and, although the boiler is new, the gas central heating system has not been operating efficiently in the last year due to air locks in the system. The building is leased and cannot readily be adapted to make it more energy efficient. That said, the CCB has actively sought specialist

advice and undertaken a number of steps to reduce the energy consumption of running the office, as shown below.

9. Gas consumption is one area to focus on in 07/08, to see if there are ways of reducing consumption and perhaps making the central heating system more efficient; plumbers have been called out several times to sort out air locks and other 'niggles' with the heating, but the whole system needs reviewing. Envirowise has been contacted for advice.

### **Steps taken to reduce carbon emissions at the CCB office in 06/07**

10. This is the area where the CCB has concentrated its activities and where it is hoped it will have the greatest impact.

#### **1. Photovoltaic (PV) panels**

- 1.1 The CCB has thoroughly researched the various options for creating renewable energy and sought specialist advice. The possibility of a wind powered turbine was considered but discounted as there is insufficient wind at the CCB office location to make this viable.
- 1.2 PV panels were also investigated and look promising. The CCB has submitted a planning application to South Oxfordshire District Council to install an array of solar photovoltaic (PV) panels at CCB's offices in order to reduce the carbon emissions associated with the use of the building as an office. Visitors to the site will be able to see the installed panels on the roof and an electronic display will be mounted in the office reception area to allow people to see how much energy has been, and is being, generated and how much CO<sub>2</sub> has been saved to date. This would allow the CCB to inform and educate visitors and demonstrate best practice in reducing CO<sub>2</sub> emissions. The installation should generate approximately 1,600kWh of electricity (equivalent to 17% of current annual usage) and save 680Kg of CO<sub>2</sub> per year.
- 1.3 The CCB has submitted a grant application for approximately 50% of the costs of the PV panels to the Low Carbon Buildings Programme (administered by the Energy Saving Trust).

#### **2. Insulation**

- 2.1 Additional loft insulation (100mm depth) was installed in March 2007, doubling the depth of the original insulation. The insulation consists of recycled newsprint cellulose supplied by Warmcel.

#### **3. Office Lighting**

- 3.1 One of Thames Valley Energy's (TVE) observations following their visit to the CCB premises was that the offices were very strongly lit. The lighting consists of fluorescent lamps (previously 2 fluorescent lamps per lighting strip). TVE suggested removing some of the lamps. The



CCB has now removed 40% of the lamps without any detrimental impact on the working environment. This has proved a very simple way of making instant savings in energy use.

- 3.2 In addition, desk lamps are now used as an optional substitute for full-office lighting when only a small amount of additional lighting is required.

Other activities

11. In addition the CCB must continue to be mindful of the many small steps needed to reduce energy use on a day-to-day basis as set out in table 6. Spot checks will be undertaken as a reminder to CCB staff to switch off computers and screens when they are out of the office or at meetings for more than an hour.

<b>Action</b>	<b>Progress</b>
Investigate taking all, or a percentage, of energy from renewable sources or 'green tariffs'.	Currently on 2 year contract but investigate when this has finished (May 2007). Investigating opportunity for some photovoltaic panels.
Turn down radiator thermostats	Usually
Make sure windows and doors are closed when heating is on.	Mostly. Ill fitting windows in kitchen and computer room have been repaired.
Check that insulation (walls, roof and pipes) and draught-proofing is adequate to prevent unreasonable heat loss.	Solid walls preclude cavity wall insulation. Loft insulation has been improved
Ensure appliances such as fridges have a European Union Energy Rating of A or B.	Yes - fridge has A rate
Replace tungsten bulbs with energy-efficient, compact fluorescent lamps and slimline tubes. They typically make immediate savings of 50% and last up to ten times longer.	Yes
Use natural light wherever possible. Keep windows clean and encourage the staff to open the blinds rather than turn on the lights.	Yes
Turn lights off when not needed. It is always cheaper to switch off lights, however short the time period.	Mostly but room for improvement - staff reminders have gone up to switch off kitchen lights when kitchen not in use, and to switch off hall lights unless necessary.
Purchase equipment with 'power save' feature and make sure it is activated; machines are often set up with it disabled.	Yes

**Table 7: Practical actions for reducing energy use 06/07**

<b>Action</b>	<b>Progress</b>
Screen savers do not save energy. Enable power down settings and encourage staff to switch off at least their computer monitors (these use twice the energy of PCs) when not in use, including when they are away from their desks for meetings or lunch.	Usually but reminders needed - staff reminder has been posted next to photocopier.

**Annual programme of carbon off-set activities**

12. The priority for the CCB is to minimise the amount of carbon emissions produced through the running of the office, work programme and activities. A carbon off-set programme has been established, but it must be stressed that this is a 'last resort' activity to off-set carbon emissions that are unavoidable.
13. The CCB has set up a scheme to off-set carbon dioxide emissions generated by the Board's own mileage and that for journeys associated with attending events organised by the Board. The CCB's second tree planting event took place in March 2007, with 120 trees planted. (100 in 2006).
14. In addition it is proposed that 5% of income from events and conferences should go towards the CCB's carbon off-set initiative. The CCB organises a large number of events and conferences (up to 15 or so a year). Advice from the Government Office for the South West 2005 (Greener Events: a guide to reducing the environmental impacts of conferences and seminars) suggests that wherever possible larger regional conferences and seminars (attracting 50+ delegates) should be arranged as carbon neutral events.

**Board Travel – Aim to reduce the amount of car travel by CCB staff and members by 5% per annum**

15. CCB staff car mileage (for work) was an average of 2,089 per head in 2005/06 and 2,228 in 06/07, so there has been a slight increase (7%) and the CCB must be vigilant to ensure this does not creep up (small annual variations are to be expected). Comparison between years depends upon claims being submitted for the year in which they traveled. Around a quarter of CCB car travel consisted of shared car travel. Board members generated an average of 700 car miles per head in 06/07.
16. The CCB has to be realistic about car travel, it is often the only way of getting around the Chilterns and the nature of the work takes staff and members to different parts of the Chilterns. However the aim should be for a gradual decrease in car travel over time. Staff need to continue adhering to the actions below.

**Table 8: Practical actions for reducing travel 06/07:**

<b>Action</b>	<b>Progress</b>
Provide facilities for cyclists and walkers. Essentials are secure bike storage and a shower.	Facilities are in place and being used by staff and visitors.
Promote car sharing	Yes - CCB has special mileage rate for car sharing
Meetings to be held in locations to minimise distance travelled by the majority?	Yes,
Can meetings be held in locations that are easily accessible by public transport/cycle (or free transport from nearest railway station provided)?	Usually but venues in towns with railway stations are subject to congestion and expensive parking
CCB staff travel policy: change personal car mileage allowances to favour smaller cars, public transport and cycling.	The scheme has been introduced- there is flat rate payment with allowances for car sharing and travel by bike.
Only rail fares will be paid for journeys to central London and Birmingham	Yes
Consider rail option even for short journeys	Yes
Public transport or car-share should be used for all journeys over 100 miles (unless specific reasons this is not possible).	Yes
Provide a CCB foldable bike which can be carried on public transport and used to reach onward destinations.	Yes. Need to encourage greater use.

\*An essential car user allowance of £600 has been introduced, (taxable, but no NI or superannuation applies) and 40 pence per mile (not taxable). A supplement of 2 pence per passenger mile is payable. A new cycling rate of 20 pence and motorcycling rate of 25pence has been introduced.

**Purchase cleaning products which are less harmful to the environment.**

17. Ecover washing up liquid is used and recycled bin bags. There is scope to increase the range of green cleaning materials used, such as Ecover dishwasher tablets, eco-loo cleaners etc. This should be investigated.

**Require major suppliers (i.e. annual spend over £10,000) or large tenders (over £5,000) to provide environmental information prior to award of contract (i.e. do they have an environmental management system).**

18. The 2007/08 Sustainable Development Fund guidelines will now incorporate a paragraph specifying that SDF grant recipients must work to the CCB's own environmental guidelines (e.g. use of local materials).

**To specify, whenever possible, locally bought and sourced produce for events and meetings.**

19. This has been achieved, local suppliers are used wherever possible.

**The CCB to participate in two Green Travel (or similar) events a year, to raise awareness and participation of sustainability amongst staff.**

20. The CCB celebrated 'Bike to Work' week (a national event to raise awareness of green travel) by organising a bike ride from the CCB offices on 21<sup>st</sup> June 2006. This was combined with the launch of 'Cycle, Ride, Walk in the Heart of the Chilterns', encouraging people to explore the quiet lanes and bridleways between Princes Risborough and High Wycombe. Over twenty people attended the event and there was coverage of the event in the local press.
21. The Sustainability Plan looks at raising awareness of sustainability amongst staff, but more can be done to promote the aims of the Plan externally. The CCB has now made the Sustainability Plan available on the AONB web site. However much more could be done to promote it (e.g. through Chalk and Trees and other newsletters, press releases etc). In addition the CCB plans to produce a 2-page environmental policy (a summary of the CCB's Sustainability Plan) for public consumption.

**Aims, targets and actions to take forward in 2007/08**

22. In 2006/07 the CCB focused much of its activity on reducing energy use at its offices and much positive progress has been made. It is now felt that the CCB has gone as far as it can in this area, given that the CCB does not own the premises and it is not feasible to adapt the building any more. Unlike a new-build office it is less realistic to become carbon-neutral. That said, the CCB will continue to be vigilant as regards its day-to-day use of energy and other resources and continue to make small-scale improvements wherever possible. In addition the CCB will remain open to new technologies which are developing fast.

**Carbon Neutrality**

23. Looking forward to 2007/08, the CCB must focus on other ways of becoming carbon-neutral in relation to the running of its offices and the implementation of its work programme (the CCB should be aiming to become carbon-neutral over the next 3 years....phased approach as below?).
  - 2007/08 off-set 25% of total gas and electricity carbon emissions
  - 2008/09 off-set 50% of gas and electricity carbon emissions
  - 2010/11 off-set 75% of gas and electricity carbon emissions
  - 2010/11 off-set 100% of gas and electricity emissions

**Carbon Offset Fund**

24. To compliment its own efforts the CCB should consider creating its own carbon off-setting fund to help support projects in the Chilterns rather than contributing to national/international carbon off-setting projects. Given that that Board is being successful in reducing its carbon emissions the need to offset, after all other measures have been investigated, is relatively small. In practice the current tree planting scheme achieves this. However there is

scope to support other practical carbon offset measures in the Chilterns. There are a range of options:

- The CCB could provide small grants to fund local sustainability projects (smaller-scale than the Sustainable Development Fund, perhaps run on similar lines to the 40<sup>th</sup> Anniversary Fund).
- The CCB could providing free energy-efficient light bulbs for Community/Parish Halls in the Chilterns.

25. In addition to the above there are other areas where the CCB can have an impact:

- The CCB can play an important role in influencing others, through more awareness-raising and promotional work.
- The CCB can continue to support other organisations through its Sustainable Development Fund programme in 2007/08 (eg an application has been received for an interesting project, a Hydro-Power Scheme at Goring Weir).

### **Targets for 2007/08**

1) To continue purchasing paper that has a 100% recycled content, is chlorine-free and from manufacturers with an environmental management system.	Same as 06/07
2) To specify paper for publications that has at least 75% recycled content, is chlorine-free from manufacturers with an environmental management system.	Same as 06/07
3) To restrict the number of hard copies printed if electronic formats provide a reasonable alternative.	Same as 06/07
4) To use less than 10 reams of paper per person per annum	This is less than the 11 reams in 06/07, reflecting lower use achieved.
5) To ensure that the amount of waste per person does not exceed 200kg per annum.	Amended from 06/07, not realistic to keep on reducing the amount of waste generated.
6) To recycle over 80% of waste produced.	Same as 06/07
7) To use no more than 6 m <sup>3</sup> (6000 litres) of water per person per year	Same as 06/07
8) To produce less than 80 kg/m <sup>2</sup> /year of CO <sub>2</sub> emissions	Revised from 06/07, see page 6.
9) To continue and expand the annual programme of carbon off-set activities: - tree planting to off-set staff car travel associated with attending events	Broadened from just tree planting.

<ul style="list-style-type: none"> <li>- contributing 5% of events income to carbon off-set fund</li> <li>- off-setting 25% of gas and electricity carbon emissions with support for local sustainability projects</li> </ul>	
<p>10) To reduce the amount of car travel by CCB staff by 5% per annum</p>	<p>Same as last year, not realistic to increase further at this stage.</p>
<p>11) Purchase cleaning products which are less harmful to the environment.</p>	<p>Same as 06/07</p>
<p>12) Require major suppliers (i.e. annual spend over £10,000) or large tenders (over £5,000) to provide environmental information prior to award of contract (i.e. do they have an environmental management system).</p>	<p>Same as 06/07</p>
<p>13) To specify, whenever possible, locally bought and sourced produce for events and meetings.</p>	<p>Same as 06/07</p>
<p>14) To promote the CCB Sustainability Plan and raise awareness of sustainability amongst staff, Board members and people/organisations in the Chilterns:</p> <ul style="list-style-type: none"> <li>- Participate in two Green Travel (or similar) events a year, to raise awareness and participation of sustainability.</li> <li>- Get coverage through the AONB web site, newsletters, press releases.</li> </ul>	<p>Expanded to raise awareness amongst wider audience.</p>
<p>15) Proceed with installation of PV panels subject to planning permission and grant contribution.</p>	
<p>16) Produce 2-page summary of the Sustainability Plan for public consumption and add this to the AONB web site</p>	
<p>17) Investigate taking all, or a percentage, of energy from renewable sources or 'green tariffs' when 2-year contract is finished (June 2007).</p>	