# A Carbon Budget for the Lake District National Park:

# Progress report, June 2013

The Lake District National Park Partnership is committed to leading the way on climate change. The Lake District is one of the first local areas to set itself a carbon budget, as part of our Low-carbon Lake District initiative.

The principle behind a carbon budget is simple: like a financial budget, we aim to find out how much carbon the Lake District is responsible for, and then reduce the carbon 'spend' year on year.

We aim to reduce the emission of carbon and other greenhouse gases, measured on a consumption basis, by 1% per year, against a baseline of 2.3 million tonnes in 2010. The target tracks the national carbon budget, as set out in the 2008 Climate Change Act.

The baseline was established through a carbon footprint analysis in 2010. This analysis, together with regular updates on progress, is available at www.lakedistrict.gov.uk/carbonbudget .

Progress is monitored regularly by the Climate Change Sub-group of the Partnership. Each year, Small World Consulting undertakes an assessment of carbon savings to date. This informs the revision of the Partnership's Plan each September.

**Progress since July 2012**

In the past year, there have been some significant initiatives aimed at reducing carbon within the Lake District. These include the first full year of the GoLakes Travel project, the Cumbria Warm Homes Programme improving the energy efficiency of houses in the National Park, the CBEN advice service which helps businesses identify efficiencies to save money and carbon, new renewables installations, and efforts by community groups to engage people and reduce energy use.

Small World Consulting has done an audit of projects which aim to reduce carbon within the National Park, and has identified measurable carbon savings of nearly 25,000 tonnes of savings, using optimistic assumptions. This is an increase on previous years, and the rate of savings has also increased. In other words, we are doing better than last year. However, we are not on course to meet the target we have set.

The table at Annex A table shows where the carbon savings have come from. Projects to note include:

- The Cumbria Warm Homes Project, providing energy efficiency measures to households, which saved an estimated 12000 tonnes of CO2 over the past year
- The GoLakes Travel project, saving an estimated 2336 tonnes in its first full year
- Small-scale renewables projects, saving around 2354 tonnes per year in total

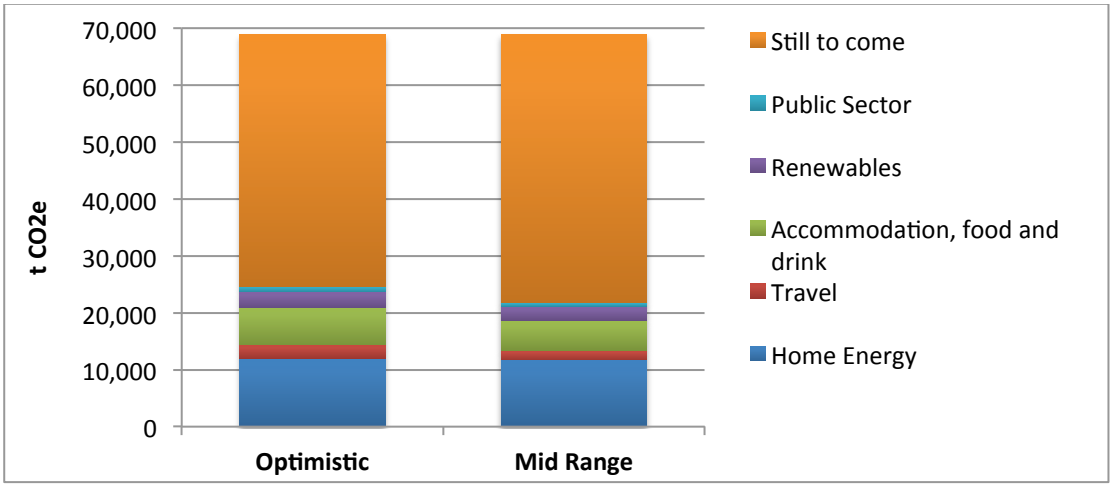
- Advice to businesses through Cumbria Business and Environment Network, resulting in 3604 tonnes of savings
- The Taste Cumbria initiative, promoting local food and drink, with an estimated 683 tonnes saved.

In addition to these savings, there are actions which will result in carbon savings, but can't be easily estimated. For example, the switch to superfast broadband may result in reduced business travel, but we don't have a good way of estimating savings.

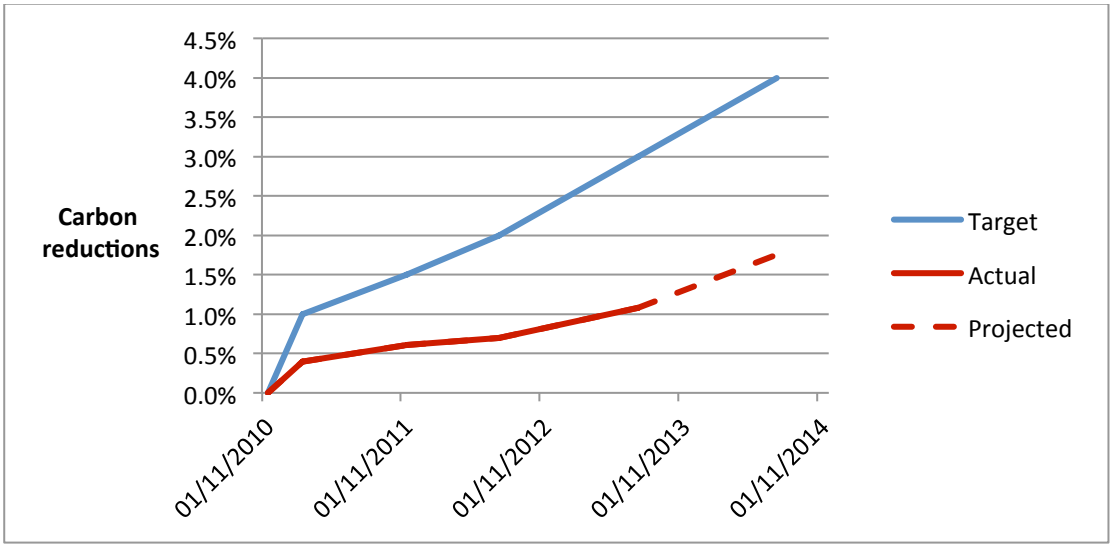
**Progress against the target**

We are seeing an increase in the rate of carbon savings, we are not yet on track to meet the target of 1% savings per year. We are saving nearly 25000 tonnes. To hit the target of 3% after three years, we should be saving 69000 tonnes.

The graphs below shows our performance against the target.




***Progress towards year 3 reduction target of 69,000 tonnes CO2e (3% of footprint of the LDNP baseline of 230,000tonnes CO2e / annum)***



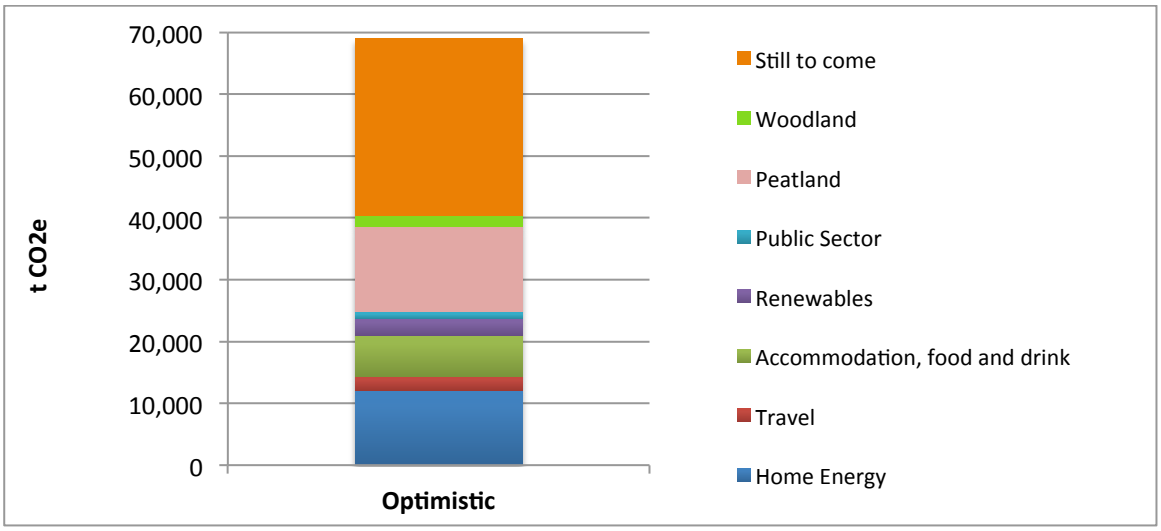

***Cumulative carbon savings over three years: target vs actual***

**Carbon savings from land management**

For the first time this year, we have included estimates for carbon saving from land management. It has been difficult to estimate carbon savings from land management, due to its complexity, but we wanted to be able to measure the savings from land management and compare it, in broad terms, to other savings.

There are two main areas of savings from land management: peatland restoration and woodland creation. We estimate that the savings from peatland restoration are approximately 14000 tonnes, and from woodland creation, 1687 tonnes. See Annex B for the assumptions behind these calculations.

If these savings are included in the total, and optimistic assumptions are used, the total carbon saving is just over 40,000 tonnes (1.75% savings against the baseline).




***Progress towards year 3 reduction target of 69,000 tonnes CO2e including land management (3% of footprint of the LDNP baseline of 230,000tonnes CO2e / annum)***

**Further actions**

In March 2013 the Lake District National Park Partnership agreed a Climate Change Action Plan. The priorities in this Plan are summarised below. Some plans are subject to winning external funding.

- Carbon budget: Continued joint strategy on climate change and carbon reduction, including engagement of Partnership members, monitoring, and raising awareness nationally. Lead: LDNPA
- Travel: Continuation of the GoLakes Travel initiative, and wider support for sustainable travel in the National Park
- Local, seasonal food and drink: Continue the Taste Cumbria initiative, to support local food and drink producers and encourage uptake, particularly in the tourism sector. Lead: NFU / Cumbria Tourism
- Environmental advice for businesses: Support will be provided to businesses, particularly SMEs, to enable them to improve the efficiency of energy and resource use. Lead: CREA

- Sustainable communities: Learning from a major Big Lottery-funded project in Eden, the Partnership will look at how communities within the Park can best be engaged, for example through the neighbourhood planning process. Lead: CAfS
- Sustainable tourism: Carbon emissions from the tourism sector will be reduced through the new low-carbon cottages initiative, and through an expanded 'Green at Heart' scheme to promote environmental messages to tourism providers. Lead: Nurture Lakeland
- Re-use, repair and recycling: Details to follow from CCC. Lead: Cumbria County Council
- Sustainable travel within Partnership organisations: A package of support will be developed to help Partnership organisations reduce carbon emissions from staff travel, through initiatives including travel planning, smarter driving and a cycle challenge. Lead: CREA / tadea
- Managing land for carbon: This will be taken forward through the Carbon Landscapes project and the Carbon Brokering initiative. Lead: LDNPA

These actions will result in additional carbon savings, and may increase the rate of savings. However, judging by experience to date, we are unlikely to meet our carbon reduction target without significant extra resource. This is in part due to changes in national policy – for example, the CERT scheme, which funded the Cumbria Warm Homes Programme, and provided our biggest single source of carbon savings, has now been replaced by the Green Deal, which has had a modest take-up so far.

Although we are not meeting our target, the process of setting and managing a carbon budget provides a useful strategic framework for responding to climate change. Our efforts in this area have been recognised and praised – the Local Government Association highlighted our work as best practice, and we were finalists in the Climate Week awards this year.

**Becky Willis, June 2013**

**Annex A: Summary of carbon saving actions in the Lake District National Park**

This table shows the carbon saving actions identified across the National Park, and a mid-range estimate of savings from each action. A more detailed list, the full calculations and an explanation of assumptions made are available.

| Action | Who? | Mid range estimate for 2013 |
|---|---|---|
| **Accommodation, food & drink** | | |
| Cumbria Business & Environment Network Enworks programme | CBEN / CREA | 3,604 |
| Taste Cumbria Programme 2010-13 | CT | 683 |
| Tourism Connect Grant Scheme | CT | 186 |
| Listing and promotion of green accommodation on Golakes Website | CT | 139 |
| Carbon Calculator for Tourism Businesses; Pilot scheme and now available on website | CT | 102 |
| Reduced flow showerheads; blog and mailing list | Nurture Lakeland | 82 |
| Promotion of green accreditation schemes to the industry | CT / Nurture Lakeland | 28 |
| Laundry cards | Nurture Lakeland | 26 |
| Water saving events | Nurture Lakeland | 11 |
| Green Workshops for Tourism Businesses during 2010. | CT | 413 |
| Cumbria Food and Drink Summit | CT | 40 |
| | | **5,313** |
| **Home energy** | | |
| Warm Homes Project; CERT funded project to offer energy efficiency surveys to Cumbrian households | LDNPA | 11,200 |
| Green Ways to Work programme | Impact Housing/CAfS | 294 |
| SENS project | Cafs | 181 |
| Seeing the Stars; engaging people on energy efficiency | FLD / EST | 47 |
| | | **11,722** |
| **Public sector** | | |
| Public sector targets to cut emissions from energy use by 25% by 2014 | | 750 |
| | | |
| **Renewables** | | |
| Ellergreen Hydro developments | Ellergreen | 1,191 |
| Ellergreen Hydro developments (forthcoming) | Ellergreen | 277 |
| Kirkstone pass turbines | | 22 |
| Micro-Hydro and Biomass Boiler | Blencathra FSC | 82 |
| Core Strategy planning | LNDPA | 571 |
| Rural Carbon Challenge Fund (RDPE) | Envirolink | 201 |
| Grizedale and Whinlatter visitor centre improvements | FC | 6 |
| Farms Project | Envirolink | 4 |
| | | **2,354** |

| | | |
|---|---|---|
| **Travel** | | |
| Core Strategy planning | LNDPA | 454 |
| Service development advice on future LDNPA involvement & ownership | LDNPA / operators | 222 |
| Fuelling & EV recharge | LDNPA / EA | 143 |
| Go Lakes Travel Project | CT | 874 |
| New free bus from Newby Bridge - Holker Hall | LDNPA / operators | 4 |
| | | **1,698** |
| | | |
| **Total (mid-range estimate)** | | **21,836** |

**Annex B: estimating carbon savings from land management**

It has been difficult to estimate carbon savings from land management, due to its complexity. However, research continues to improve and this year we have estimated savings from peatland restoration and woodland creation. This is a first attempt at estimating savings from land management, and we will continue to improve the data used. Figures should therefore be seen as provisional and may change.

The basis for the estimates is as follows:

**Carbon savings from peatland:**

- There are 91,451 ha of peatland in the National Park.
- Degraded peat bogs in the Lake District National Park have been estimated to emit 31,984 tonnes $CO_2e$ per year (which on average equates to approximately 0.35 tonnes $CO_2e$ per ha per year).
- 39,650.8 ha of peatland within the National Park have been identified as subject to restoration management (estimate drawn up by the LDNPA following contributions from partners, and is available separately).
- If the peatland under restoration management is no longer emitting CO2e (but is not yet sequestering), the savings will be 13,878 tonnes.
- In further years additional savings are expected as these sites recover and start to sequester carbon.

**Carbon savings from woodland creation:**

Woodland creation for the financial year 2011/12 has been estimated with reasonable accuracy using Forestry Commission Woodland Creation Grant, and woodland creation options from the HLS agri-environment scheme. This gave a total of 382.08ha.

Using the figures from the report 'A carbon account for the woodlands in the Lake District National Park (2012)' (using calculations from the Woodland Carbon Code), a typical new Lake District broadleaf woodland will save a net 441.5 tonnes of CO2e over 100 years. Although emissions are usually greater than sequestration in the first few years after planting, for the purpose of the carbon budget it is easiest to assume a linear uptake of carbon. The 382.08ha will therefore provide a carbon saving of 1,687 tonnes of Co2e per year for the next 100 years.

**Inclusion of land use in the carbon budget:**

Note that these savings cannot be directly compared to savings from other areas (eg transport, energy use etc) because land management is not included in the baseline calculations. They are included in the graph to help measure the effectiveness of carbon savings from land use compared to other actions. It should be highlighted though that these actions are equally as valid. Some are included in the national greenhouse gas inventory.