

MEETING:	ENVIRONMENT SCRUTINY COMMITTEE
DATE:	14TH SEPTEMBER 2009
TITLE OF REPORT:	ENVIRONMENT & CARBON MANAGEMENT PERFORMANCE
REPORT BY	SUSTAINABILITY OFFICER

Wards Affected

County-wide

Purpose

To review the Council's performance against the corporate Environmental Strategy targets and to update the committee on the Council's targets in relation to climate change and carbon management, with particular reference to the Council's own carbon emissions.

Recommendation

THAT subject to any comments members may wish to make to the Cabinet Member, Environment and Strategic Housing, the report be noted.

Key Points Summary

- Progress with the delivery of the Council's Environment Strategy is identified within this report. This includes a number of highlights of actions to improve environmental performance over the past year.
- The Council has retained ISO14001 certification for Good Environmental Management. Internal audits and external surveillance visits during the year have been carried out to ensure good practice and identify areas for improvement.
- Reports regarding the new national indicators relating to climate change have now been submitted. The NI185 return for council carbon emissions showed 22,730 tonnes of CO₂ were released from council operations (buildings & transport) in 2008/09. This figure is larger than those previously reported to this committee as it now includes the Council's major contractors.
- The current 1.25% target requires an annual carbon reduction of 284 tonnes on the NI185 return. On average the council will save £32K for every 1% reduction it makes at current prices. The programme for 2009/10 is estimated to provide reductions of 260 tonnes – though some initiatives have not yet been quantified in tonnes of CO₂. Contractors form a major element of emissions so work with them will be a priority to achieve future reductions.
- Use of gas is likely to have risen around 11% due to the colder winter. However the Council's direct spend on energy rose over £870K in 2008/09, mainly due to wholesale price rises.

Expenditure was up from £2.34 million in 2007/08 to £3.21 million in 2008/09, a rise of 31%. This direct spend on energy and in Council buildings and transport fuel includes schools' spend on energy, which is over half of the total.

- On the new NI188, planning to adapt to climate change, the council is performing at level 0. In order to progress to Level 1 the council must demonstrate that the potential vulnerabilities and opportunities relating to the changing climate that have been identified, eg in the Local Climate Impacts Profile, are communicated to department/service heads and other local partners and that the Council sets out the next steps in addressing them.
- NI186: Latest figures from DEFRA (2006) show that on average Herefordshire's population emit 9.5 tonnes of carbon dioxide per person, well above the West Midlands average (7.1 tonnes). New figures are due out in the autumn.
- The Council has performed well in relation to the Environment Strategy targets set in 2005. However, the Environment Strategy will need to be reviewed over the coming year to reflect changes in priorities and indicators.

Reasons for Recommendations

To ensure the committee remain updated on environment & carbon related issues.

Introduction and Background

1. The committee takes twice yearly reports on environmental & carbon performance as part of the top management scrutiny of environmental performance. This is part of the council's environmental management system, supporting corporate ISO 14001 certification. The council's certification provides a mechanism to monitor progress and environmental performance and to assess risks and options relating to natural resources and carbon. It fits well with the new Comprehensive Area assessment (CAA) requirement to demonstrate good practice in the use of natural resources.
2. The committee have paid particular attention to carbon and climate change in the last 18 months. The current council carbon reduction target, set in 2005, is 1.25% a year (20% by 2020). It is proposed to review this target in the coming year to ensure the Council effectively contributes to national level targets. The introduction of the new National Indicator 185 provides a nationally comparable baseline and a timely opportunity to review the current target.

Key Considerations

Environmental management & strategy

3. The Council continues to maintain its certification to **the international environmental management standard, ISO 14001**, for all unitary council functions. This was featured in the Council's return for new CAA Use of Natural Resources element of the Use of Resources assessment. The assessment results are awaited. The roll out of ISO 14001 certification to the PCT is included in the updated joint environmental policy (agreed January 2009). This policy revision also strengthened the commitment to include environmental factors in procurement and commissioning.
4. The report against the **Environment Strategy**, passed in June 2005, aims to give non-experts an overview of our performance against our key environmental commitments. The Environmental Strategy report for 2008/09 (Appendix 1) generally shows good performance. The strategy will need to be updated over the coming year to more accurately reflect the

council's current commitments and targets, to ensure all entries are quantifiable, to make reference to the new national indicators, and to include priority topics identified in the recent Staff Sustainability Opinion Survey. The report shows a sharp rise in the number of members of the public seeking advice on energy efficiency and fuel poverty. It also shows traffic volumes declining across the county, though this may have been a temporary response to high fuel prices. Mileage claims in contrast appear to have risen after several years of decline. The number of schools achieving Ecoschools awards has reached 80, showing the remarkable dedication of schools in their engagement with environmental issues.

5. In addition to the actions identified within the Environment Strategy the council has delivered wide-ranging environmental initiatives across a various disciplines and directorates. Some highlights of recent activities are listed below.
 - The **Library service is loaning out energy meters and plugs** free of charge to help householders track how much energy they are using.
 - The Local **Carbon Calculator on myherefordshire.com** has been updated by ICT. The calculator gives users hints on reducing their carbon footprint, shows how users are doing compared to others locally and nationally and signposts out to sources of help. 395 people have so far completed their footprints and to date have an average footprint of 6.7 tonnes.
 - Special Environment Scrutiny on March 2nd on carbon heard that the **Council achieved a 10% reduction from 2005-2009** on an inventory including landfill gas. This was greatly helped by installation of up to date landfill gas flare at Stretton Sugwas burning methane and contributing a reduction of 4162 tonnes per year.
 - **Forward Planning** are currently finalising their 'background paper on climate change', identified as a priority during the 'Developing Options' consultation last summer. This will be available this autumn.
 - **Prudential borrowing**: bids must now provide information on the carbon emissions /reductions resulting from their bids. The Director of Resources has signalled a willingness to receive Invest to Save bids and Halo has benefited from this after presenting a rigorously costed reduction plan.
 - Salix: **Property** administers a grant to set up a **revolving loan fund for energy efficiency** measures in buildings. Investments to date include several PowerPerfectors in High Schools.
 - **Highways** are trialling ways to **reduce emissions from street lighting** and presented a report on options and progress to the last meeting of Environment Scrutiny.
 - **Training**: In the last half of 2008/09 the Sustainability Unit ran a full programme of '**carbon curriculum**' **events** for schools, the public and our own staff using Energy Saving Trust funding.
 - **Training: the Age of Stupid film has cascaded out to officers** after the Leadership Academy on July 8th to fulfil a commitment by Cllr Jarvis at the Borderlines Film Festival seminar. So far 60 managers, 80 officers and 4 councillors have attended the workshops. Two more showings are programmed for early September. A report on actions pledged and proposed goes to Joint Management Team in November.
 - **Sustainable procurement**: a seminar on sustainable procurement will be added to the current programme of procurement training in November 2009.
 - **Amey Service Delivery Review**: The new agreement with Amey to delivery Highways, Parks and Public Rights of Way services on behalf of the Council includes performance targets in relation to biodiversity, carbon emissions, traffic congestion, recycling and use of local products and services.

ISO 14001 certification

6. The council has successfully retained certification to the international environmental management standard for all unitary council functions. There have been 2 external surveillance ISO 14001 visits since the last report. These visits provide an opportunity to review performance and identify areas for improvement to be addressed by Management. At both visits 3 non-conformities were raised, signalling areas requiring improvement. This is an increase on the previous year when only one was raised at each visit. Three non-conformances relate to keeping the system up to date – gaps in directorate summaries, delays in the audit programme close out of findings and the need for regular review by top management. Two relate to management of the environmental performance of contractors and their subcontractors. One related to the Officer in charge system that ensures good environmental management of our buildings.
7. The increase in non-conformities indicates that more attention is needed to maintain systems underpinning good environmental performance effectively and ensure directorate information is up to date and well communicated. The non-conformances raised in February were closed out in July 2009. Findings from July are due to be closed out at the next surveillance visit in January 2010. More attention is also needed to ensure that our contracts and buildings are well managed with regard to environmental impacts. A seminar for key client officers has been arranged for November that should help increase knowledge of this increasingly important area. A Management Review by Joint Management Team is also scheduled for November, as recommended by the recent surveillance visit.
8. ISO 14001 requires the council to evaluate its compliance with legal and other requirements regularly and act to remedy areas of weakness. The last **legal compliance review** with regard to environmental legislation covers the period up to the end of August 2008. This annual review is carried out as part of the Council's corporate commitment to protecting our environment, which is in turn monitored through the council's certification to ISO 14001.
9. The legal compliance review identified no major areas of non-compliance, though as always, there are several areas where action is recommended to reduce risk of breaches. Of particular note during this review period is the need to demonstrate our response to the duty in the 2006 NERC Act that a public authority must in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.
10. During the review period the legislation relating to carbon management and climate change strengthened considerably, spelling out a number of areas where the council has specific responsibilities. These include:-
 - A requirement to display and regularly update Energy Performance Certificates in all main buildings
 - The forthcoming Carbon Reduction Commitment, a mandatory carbon trading scheme which the council is expected to enter in April 2010
 - A statutory requirement for Planners: - "Development plan documents must (taken as a whole) include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change"
11. ISO 14001 requires a rigorous process of **internal audit**, covering all areas over a three year cycle with more frequent attention to higher risk areas. During 2008/09 53 internal audits were carried out and 2 non-conformities and 58 observations were raised for attention. A successful training course to IEMA standards was held during the year to widen the pool of environmental auditors, attended by 10 officers. The ISO 14001 system has now been integrated with the ISO 19001 quality system in place over parts of Environment & Culture and Regeneration. This means fewer procedures are needed and joint audits can often be undertaken.

Council Vehicle Fleet & Fleet Management

12. Transport data for council owned and staff vehicles used on council business was collected and submitted to the Energy Saving Trust (EST) for a review. This review will be completed shortly and will identify opportunities for improved environmental performance and cost savings.
13. Total emissions from contractor and council transport recorded for NI185 were 6,772 tonnes of CO₂ in 2008/09. The summary return for transport emissions in tabular and graphic form at Appendix 4 shows the total mileage and CO₂ of council transport operations, including major contractors. The contrast between the mileage and the CO₂ emissions show the very different efficiencies of the vehicles. This is unsurprising as they vary between small cars and refuse lorries on continual stop-start.
14. Only 12% of the total transport carbon emissions relate to in-house transport and business mileage in staff owned cars: 88% of emissions are from contractor-managed vehicles. Whilst contractors are entirely responsible for the management of their own fleet, working in partnership with them to increase transport efficiency is a carbon management priority. Both Focsa and Amey continually monitor fuel use, as transport efficiency is a key business parameter. Amey keep very detailed data week on week data and have agreed to targets to reduce their carbon emissions.

Local Area Agreement targets – biodiversity and county carbon reduction

15. Now half way through its 3 year period, the LAA sets targets both for reducing carbon emissions in the county and the condition of Special Wildlife Sites (SWS), the national indicator on biodiversity. The Planning and Transportation service lead on this target and have surveyed 33 SWS and drawn up management plans during 2008/09.
16. Over 100 councils have adopted the NI 186 indicator in their Local Area Agreements. Herefordshire's target is an overall 13.1% reduction in county per capita carbon emissions over 3 years. Of this 8.1% is due to be delivered by national programmes and 4.9% is deemed to be under the influence of the Council. The main areas covered by the target are the emissions from business and public sector, domestic housing and road transport. Meeting this 4.9% target requires an average carbon reduction of 500kgs per head – a major challenge.
17. Herefordshire Partnership has recently allocated £72K to the Herefordshire Environment Partnership for work on these priorities from the Area Based Grant for spend in the current year. This includes £47K allocated to work on county carbon reductions. An action plan has been drawn up for a county Carbon Descent Plan and supporting work. Work on this strategy will be co-ordinated by the Herefordshire Environment Partnership working with the Sustainability Unit.

Council carbon emissions - NI185

18. The **NI185 council carbon emissions** submitted for 2008/09 (Appendix 2) show 22,730 tonnes of CO₂ were released from council operations (buildings, street lighting & transport) in 2008/09. This is made up of 10,216 tonnes from electricity use, 5,742 tonnes from gas use and 6,772 tonnes from transport.
19. This is over 5,000 tonnes a year higher than the previous total, as this did not previously include contractor operations and several data sets that have now become available. On the current figure the Council, through its management of its own estate, its schools and its contractors, will need to make reductions of at least 284 tonnes of carbon dioxide each year to meet its 1.25% target. The Action Plan will need continued development to achieve this and

ensure the most effective interventions.

20. Works to reduce carbon emissions during 2008/09 are outlined at Appendix 5. Schemes include Planning and Modern records moving files by Pedicabs, a major server virtualisation project reducing the need for cooling and increasing use of LED bulbs in street signs. Work to raise public awareness was given a boost by the Museum on the Move climate display tour of the county, which recorded over 7,500 visits.
21. Asset Management & Property initiatives to improve Carbon Performance in 2008/09 included:-
 - Completion of new builds at Sutton St Nicholas School, Eco classroom at Lady Hawkins High School, Kington, replacement Crematorium.
 - Installation of power perfectors in two High Schools.
 - Replacement of outdated Transmittion systems in 66 sites with new TREND Building Management Systems.
 - Installation of wind turbine generator at Queen Elizabeth II High School in Bromyard and minor schemes at Marden and Burghill schools.
 - Various re-roofing insulation and curtain walling schemes in county schools.
 - Re-lighting schemes at John Kyrle High School, Colwall primary school plus Wigmore High and Holmer Primary Assembly Halls.
 - Improved lighting in Maylords car park & roof lighting scheme at Burley Gate school
 - Ongoing energy efficiency schemes in partnership with HALO funded via SALIX scheme.
 - Installation of three new biodiscs to replace septic tanks.
22. Considerable work was required during the year to produce display energy certificates (DECs) for 25 public buildings of 1000m², over 50 schools and some investment properties to comply with the Buildings Performance Directive 2002. Energy Performance Certificates (EPCs) are now also required for some tenanted properties ahead of lettings. These annual requirements will be extended to properties of 750m² by 2011.
23. The street lighting energy was re-procured during the year and continues to be sourced from green electricity. However this does not affect the NI185 emission figures as only dedicated on-site renewables, such as a wind turbine in the grounds of a building, can be counted as reductions.
24. Energy spend for the authority rose by over £800,000 in 2008/09 compared with 2007/08 to over £3.2 million – a rise of 31%. Over half of this spend was in schools and other CYPD premises. Annual heating requirements for the year (based on degree days) were 11% above the previous year and the rest is accounted for by increased energy prices. Both changes in the weather and price fluctuations expose the authority to some financial uncertainty. Our energy brokers, WMS, provide a cap so that customers know the maximum price per unit that they will have to pay – WMS are often able to better this price during the year.
25. The next step is to use the improved NI185 inventory to develop and deliver an evidence based long-term carbon management and reduction programme that meets our emissions targets for our own activities, reduces our exposure to price increases and leads local efforts to combat dangerous climate change for the next decade.
26. Managers across the organisation will need to build carbon reductions into Directorate and Service Plans for 2010/11, into our procurement process and into planning for the next decade, such as the forthcoming Strategic Asset Management Plan. Training may be needed, as accounting for and reducing carbon emissions is a new area of work for many officers.
27. Investment will be needed in order to achieve future savings: the current low interest rates

should make projects with paybacks up to ten years more attractive. Energy Saving Trust guidance is that councils should dedicate a member of staff to energy management for each £1million energy spend, and that 10% of council's energy expenditure should be spent on energy efficiency. This is not currently the case, and may lead to difficulty in reaching current and future reduction targets. Further resources invested now to reduce future utility use should see multiple payoffs economically, socially and financially.

28. The carbon management and reduction programme will need to examine capital spend and contracts to ensure that high standards of energy efficiency are built into new projects and contracts to reduce future running costs. There may be opportunities for Invest to Save projects to help deliver improvements. For example, last year Halo successfully bid for energy efficiency improvements, backed by a rigorously costed plan.
29. Entry into the Carbon Reduction Commitment next April provides an additional financial spur to increase energy efficiency of our buildings, including schools. This is a mandatory scheme to promote energy efficiency and help reduce carbon emissions. It will introduce an emissions trading scheme that will provide an incentive to remove CO2 emissions by placing a price on them. There will be a financial incentive scheme to reward high performers and performance league tables will be published and available for scrutiny. A report to cabinet on 25th June anticipated council expenditure of up to £200K per year for credits, based on current levels of consumption.

NI188 - planning to adapt to climate change

30. Progress has been made on adaptation to climate change, NI188. A Local Climate Impacts Profile (LCLIP) investigating the council's vulnerability to future extreme weather by tracking response to past events has been completed and is published on the Council's website.
31. This is a significant issue for Herefordshire and an action plan is will be developed to respond to the assessment and also drive improvements in relation to NI188. The Council are currently on Level 0 of 4 for NI188. In order to achieve Level One the Council will need to communicate potential vulnerabilities and opportunities identified in the LCLIP to department/service heads and other local partners and set out the next steps in addressing them.
32. New climate predictions (UKCP09) based on Met Office data were released this summer. These document the consequences of climate change expected due to past emissions. Some of the predicted regional stresses are outlined below.
 - Built Infrastructure – heat stress may be an issue in major urban centres, due to the urban heat island effect
 - Natural Environment & Biodiversity - habitats and species could be adversely affected. This could be exacerbated by the fragmented nature of habitats in the region
 - Water availability - Currently the uses for abstraction and the environment have just enough water in the summer.
 - Flooding - Urban drainage systems might not be able to cope with the projected increase in winter precipitation intensity and become overloaded.
 - Agriculture - general impact on crops across the region.
 - Infrastructure – Roads and railways have been affected in previous floods

Community Impact

- 33 Climate change is predicted to have a major impact nationally on all communities. Latest national UKCP09 scenarios released this summer predict significant increases in winter rainfall, reductions in summer rainfall and increases in summer average temperature. Intense

localised rainfall episodes are likely to increase. These will affect service delivery, local businesses and infrastructure condition. Further information can be obtained from the UKCIP predictions (see link in background papers).

- 34 Protecting the environment is a key value for the council and is a Community Strategy theme. This is because the environment is such a significant asset for the county. Good environmental performance is thus critical to the ongoing prosperity and resilience of Herefordshire communities.
- 35 There are many community groups actively engaged in a local response to climate change. Herefordshire Environmental Partnership maintains an active interest in responding to climate change and will take an active role in delivering the NI186 carbon descent plan.

Financial Implications

- 36 There is a strong link between carbon emissions, which mainly relate to use of fuel, electricity and gas, and cost. The Council spends significant amounts of money on energy and fuel – and this amount rose sharply in 2008/09. In 2008/09 overall spend was up 31% at over £3.2 million, for direct expenditure in council buildings (including schools) and vehicles. The major contributors are heating oil £142K (up 29%), vehicle fuel, £137K (up 20%), gas £729K (up 28%) and electricity £2.2 million (up 33%). £1.7million of this was spent in schools and other CYPD premises. Schools pay their own energy bills and the council has no direct control over schools' energy usage. Nevertheless the council now has a strong motivation to work with schools to reduce their energy use and expenditure as school usage is counted in both the NI185 return and the Carbon Reduction Commitment credit requirements.
- 37 The council also spends significant amounts indirectly on utilities and fuel via contractors working directly on our behalf. Major contractors are now included in the NI185 inventory but their energy spend has not been quantified in financial terms at present.
- 38 The Carbon Reduction Commitment comes in next year and is expected to cost the Council £200K a year in credits. If the council performs less strongly than other organisations in reducing carbon emissions from its properties, including schools, it will have to buy credits. If it performs above the norm it will be able to sell credits.
- 39 The costs of increased flooding to the council and county, related to the changing climate, are expected to be considerable. The Environment Agency are pitching to double national spending on flood defences by 2035 to £1 billion – estimating that this could save £1.5 billion a year in disruption, infrastructure damage and loss of business. This extra spend will not however address surface water flooding, caused by intense local rainfall: two thirds of the major floods of 2007 were caused by surface water.¹

Legal Implications

- 40 None identified.

Risk Management

- 41 Climate change is predicted with a very high level of probability and a very high impact. It has huge implications for delivery of council services and is thus a high risk. Much of the climate change that will occur over the next thirty to forty years is inevitable as it has already been

¹ ENDS report, June 2009

determined by historic emissions and inertia within the climate system. However if we act now we will be able to reduce current and future emissions and thus reduce the risk associated with climate change towards a level more in line with low emissions scenarios. There is increasing international and national pressure to act swiftly to reduce carbon emissions because of the scientific consensus that deep cuts in carbon must be made urgently to avoid irreversible changes to our climate and environment. Delay will entail future costs far greater than the costs of acting now to reduce emissions and reduce vulnerability to predicted climate changes.

- 42 The Council leads on the Herefordshire Partnership Local Area Agreement target to cut county carbon emissions by 4.9% over 3 years to March 2011. This means that there is likely to be continuing public interest in both the council's work to reduce county carbon emissions, the council's management of its own emissions and its performance against its 2005 Nottingham Declaration target of a 20% reduction by 2020 (an average of 1.25% per year). Failing to act effectively and show leadership would be a risk to the council's reputation.

Consultees

None

Appendices

Appendix 1: Environment Strategy performance 2008/09

Appendix 2: Summary NI185 return – council carbon emissions

Appendix 3: Principal stationary sources of CO₂ (NI185 return)

Appendix 4: Summary transport emissions from NI185

Appendix 5: Performance against Action Plan to reduce carbon emissions in 2008/09

Background Papers

- **UKCP09 – latest UK climate predictions** for the 2020s, 2050s and 2080s. Summary West Midlands information at <http://ukcp09.defra.gov.uk/content/view/41/6/>
- **NI186 figures for Herefordshire carbon emissions** from homes, transport & businesses (http://www.herefordshire.gov.uk/docs/Herefordshire_Emissions_Graph_2005.pdf) The 2006 figures are expected to be released in September 2009
- **Carbon Reduction commitment:**
 - Extract from the Review of Asset Managed & Property services report to Cabinet on 25th June 2009:
[http://councillors.herefordshire.gov.uk/Published/C00000251/M00002844/AI00015944/\\$RevisionofAMPS170609.docA.ps.pdf](http://councillors.herefordshire.gov.uk/Published/C00000251/M00002844/AI00015944/$RevisionofAMPS170609.docA.ps.pdf)
 - National: <http://www.defra.gov.uk/environment/climatechange/uk/business/crc/pdf/crc-userguide-090312.pdf>
- **Herefordshire's Local Climate Impact Profile (LCLIP)**
http://www.herefordshire.gov.uk/docs/Local_Climate_Impact_Profile_Herefordshire_-_NI188.pdf