

## **Cabinet – 25 July 2012**

### **Developing and sustaining a low carbon economy in Walsall**

**Portfolio:** Council A Andrew, Deputy Leader, Regeneration  
Councillor T Ansell, Transport and Environment  
Councillor C Towe, Finance and Personnel

**Service:** Property Services

**Wards:** All

**Key decision:** No

**Forward plan:** Yes

#### **1. Summary**

This report outlines the progress made in relation to the implementation of the various dimensions of Walsall's environmental and low carbon programme. The focus of the programme has been on improving the energy efficiency of many homes in Walsall thereby helping to combat fuel poverty and in improving the energy efficiency of Council buildings thereby making an impact on the council's overall energy costs. The report also outlines Walsall's pioneering work in developing the next generation of low carbon housing and in developing innovative ways to generate energy and reduce future costs. The Council is very aware of the requirement to reduce its future carbon output and will continue to develop an effective programme of activity and investment to achieve this which is able to respond to future opportunities and changes in circumstance which have affected previous plans.

This annual report provides a comprehensive summary of the Council's overall environmental and carbon management approach and reflects an internal audit requirement to report progress annually to Cabinet

#### **2. Recommendations**

- 2.1 That Cabinet note the contents of this report and the aspirations for, and work currently underway to, improving energy efficiency in Council buildings including schools and the housing sector, our approach to the Green Deal, sharing best practice.
- 2.2 Note progress made against the 30% CO2 reduction target in the Carbon Management Plan.
- 2.3 Note, if the target is to be met further invest to save initiatives will be necessary before implementation of the Action Plan for Year 3 can take place.

### 3. Report detail

- 3.1 The five key themes referred to in the summary above focusses on the benefits for Walsall in developing and sustaining a low carbon economy by exploring funding and finance options to secure investment locally and regionally, looking at the potential for generating energy locally ie Combined Heat and Power (CHP), Solar/PV both in the Council's estate and within housing retrofits -using, where possible, local suppliers. Some of those benefits could include training for local people working in partnership with Walsall College for skills dimension and retrofit qualifications. See low carbon activity map at Appendix A.
- 3.2 There are many benefits of reducing carbon emissions, not only environmentally but socially and financially. Fuel and energy prices are currently very volatile, and the trend is for a rapid rise. In addition to this, in order to meet the demands of the feed in tariffs rebate system, Government has legislated that energy suppliers must pay a contribution based on market share. Suppliers will recoup the cost through customer bills. For our centralised and FM buildings this additional cost is estimated at nearly £30,000. This is in addition to our annual energy bill and purchase of our CRC carbon allowances of nearly £400,000.
- 3.3 An aspirational target of reducing Council carbon dioxide emissions by 30% by 2014 and 40% by 2019 based on 2007/08 levels was set and the projects and actions to deliver this are included in the Council's Carbon Management plan approved by cabinet in March 2010.
- 3.4 Council activity to assist in carbon reduction over the last year is as follows:

**Carbon Trust Standard re-accreditation (CTS)** – the Council was first awarded the Carbon Trust Standard in 2009. Having the CTS in place has helped the Council in the Carbon Reduction Commitment Performance League Table (PLT) which was published October 2011. (Walsall Council's position in the CRC performance league table last year was 291 out of over 1500 public/private sector organisations submitting data (top 20%). Following expiration of the CTS in November last year, an application for re-certification was made and the Council has been successful.

**Carbon Management Programme** – Cabinet approved the Carbon Management Plan (CMP) in March 2010. This set out the case for reducing the Council's carbon footprint from buildings, street lighting, vehicle fleet, waste and travel (business and commuting) - 30% reduction in carbon emissions by 2014 and 40% reduction by 2019. This equates to an annual reduction of 3,465 tonnes of CO<sub>2</sub>. In the first year of the Carbon Management Programme 2009/10, the majority of the planned/funded energy saving projects were implemented and completed. In some cases projects have not proceeded due to the closure of the Building Schools for the Future (BSF) rebuilding programme that would have contributed to 19.49% of the target. Taking into account the projects already completed, it is estimated that the Council's carbon emissions has been reduced by 4% (2,371.2 tCO<sub>2</sub>) at the end of the first year.

Projects in the second and third years (2010/11 and 2011/12) of the Carbon Management Programme are estimated to produce an annual carbon emissions saving of 1,845.8 tCO<sub>2</sub> and 1,297 tCO<sub>2</sub> respectively. These figures are still to be

confirmed as not all projects may have been taken into account. Currently there is a shortfall of 5,836 tCO<sub>2</sub> against the target. A number of projects are planned for 2012/13 and future years that will further reduce our carbon emissions and progress towards the 30% target. If the target is to be met further invest to save initiatives will be necessary. Examples of projects included in the plan are:

- Civic Centre office lighting: Low energy lighting installed including LEDs in corridors. Carbon footprint of existing lighting is 150.208 kg CO<sub>2</sub>/kWh (post refurbishment will be 52.77 kg CO<sub>2</sub>/kWh). Overall reduction anticipated of 65% carbon footprint and 18% energy savings equating to £63,731.
- Use of LEDs in Public Lighting; Phase 1 replacement LED lanterns have recently been completed. Planning for Phase 2 is currently underway to identify location and lanterns. This measure will save approximately 72,600 kg of CO<sub>2</sub> from each Phase.
- Renewable Energy – Solar PV installed on Christ Church School and registered on 10 December 2011 to receive the feed in tariffs (estimated income at around £16,000 from export back to the Grid in the first year – the school will benefit from this income.)
- Solar PV is also being looked at for the Civic Centre and quotes being obtained for Solar Thermal panels for hot water at the Gala Baths. Other forms of renewable energy utilised in our buildings include wood fuel boiler, air source and ground source heat pumps.

#### Summary of progress against target

Year		Actual Emissions (tCO <sub>2</sub> e)	Estimated Emissions Savings (tCO <sub>2</sub> e)	Progress towards 30% target
2007/08	Baseline	57,753	-	-
2008/10	Year 1	55,456	2,297	Decrease: 4%
2010/11	Year 2	55,382	1,845	Decrease: 0%
2011/12	Year 3	53,611	1,297	Decrease: 3%
2012/13	Year 3	52,314		
2013/14	Year 4			

In order to meet our 30% CO<sub>2</sub> reduction target by 2014, the Council will need to further reduce its estate and also further significant investment in energy saving projects.

#### Combined Heat & Power (CHP)

The Council has recently completed a feasibility study into the viability of a CHP scheme for Council town centre buildings. The study has proved viability and an investment bid is being submitted for consideration as part of the capital programme for 2013/14.

**Green House Gas Emissions (GHG)** – In March 2011 Chris Huhne, former Secretary of State for Energy and Climate Change, signed a Memorandum of Understanding (MOU) with the Local Government Group recognising the role that local councils have in tackling change. Within this MOU it was agreed that all local councils would use a new approach to reporting their carbon emissions.

Walsall Council's published GHG emissions for years 2009/10 and 2010/11 are as follows:

	GHG Emissions in tCO2e		
	2009/10	2010/11	% Change
<b>Scope 1 (recommended)</b>			
Natural Gas	21,003	19,797	-6%
Liquid Fuels (Gas oil, diesel, petrol)	5,628	5,796	+3%
<b>Total</b>	<b>26,631</b>	<b>25,593</b>	<b>-4%</b>
<b>Scope 2 (recommended)</b>			
Electricity	33,941	29,682	-12%
<b>Total</b>	<b>33,941</b>	<b>29,682</b>	<b>-12%</b>
<b>Scope 3 (discretionary)</b>			
Outsourced services	309	308	-1%
Business Travel	606	594	-1.98%
<b>Total</b>	<b>915</b>	<b>902</b>	<b>-1.42%</b>
<b>TOTAL Scopes 1 and 2</b>	<b>60,572</b>	<b>55,275</b>	<b>-8.74%</b>
<b>Total ALL Scopes</b>	<b>61,487</b>	<b>56,177</b>	<b>-8.64%</b>

We will again be required to publish our carbon footprint in tonne CO2e for 2011/12 sometime in August 2012. This 8.64% reduction in tonne CO2e has contributed to our overall CO2 reduction target in the Carbon Management Plan.

**Carbon Reduction** – In an effort to reduce the authority's energy spend and as a byproduct save on CO2 emissions, a number of measures have been or are in the process of being implemented. With the national adoption of Feed in Tariffs (FiTs), all organisations have to pay a percentage on top of their energy bills to cover the FiTs rebates. For Walsall Council this works out at an additional £29,904 annually. Obviously this figure will fluctuate with rising energy prices.

**Schools Sustainable Modes of Travel Strategy 2012-2014** – Walking levels in Walsall have increased however a number of areas fall below the national average and still requires attention. Areas to be targeted include Car Share, Public Transport and Cycling. In terms of local trends, 98% of Walsall schools have a School Travel Plan in place; car use across the borough has decreased from 31.2% (2006/07) to 28.4% (2010/11); walking to school has increased both in primary and secondary aged children from 54% to 58.5% and 46.1% to 48.5% respectively; increase in cycling figures in secondary schools from 1.8% to 2.4% - below the national average of 3.1%.

**Low Energy Asphalt (LEA) resurfacing** – a trial has taken place of Tarmac/MQP's Low Energy Asphalt in Bloxwich (Clarendon Street). The aims of trialing this product includes: reduction in energy consumption and GHG in manufacture; reduce site application temperatures to provide improved H&S for laying crews and the public; provide competitive cost against standard hot mix materials. The use of LEA in Clarendon Street received a total of 380 tonnes of binder and surfacing materials delivered to site giving an overall carbon reduction of 3,895 kg CO2 an equivalent of 22,630 car miles for the completed works. Performance requirements of LEA have been met and consideration will be given to wider use of the material to meet Walsall's environmental and sustainability objectives within its future planned maintenance programme.

**Carbon Trust Low Carbon Schools Service (CLCSS)** – A pilot programme working with the Carbon Trust and 12 Walsall schools was undertaken between May 2011 and April 2012. Following the successful pilot programme, this five year programme will be rolled out in the autumn to the rest of the schools estate (working with 20-25 schools a year). Projected energy cost savings of almost £640,000 per year and £48,000 CRC cost savings top sliced from the Dedicated Schools Grant (DSG). This represents a 16% saving on schools' energy costs and a reduction in carbon emissions by almost 4,000 tonnes per year. These figures are based on projected schools' take-up. Schools carbon/financial saving opportunities identified during the pilot were either no cost or low cost and included:

- active labeling of light switches
- Switch off lighting when not required
- IT equipment switch-off
- Reducing out-of-hours electrical load
- Improved heating time control
- Adjustments to heating temperatures
- Weather compensation control adj
- Replace breakfast club toasters

Currently the split between education and non-education sites is 65% and 35% respectively in terms of costs and 64.6% and 35.4% for CO2. For the roll out programme schools will be targeted based on highest consumption and energy spend. The exception to this will be the schools who have already expressed an interest in participating in this next phase.

**Walsall Adult and Community College** – Following on from the two Awards received in 2011: West Midlands Green Leader and Business in the Community (BITC) winner for Staff Engagement in Sustainability, WACC are in the process of applying for Learning in Future Environments (LiFE) Index. The LiFE Index is a performance improvement system, a performance accreditation programme and a support package for participants. WACC is only one of two participating institutions in the West Midlands region the other is the University of Gloucestershire. Institutions are using LiFE to review existing sustainability and social responsibility commitments, promote existing activity across the institution and externally and to stimulate whole institution engagement on sustainability. Maria Gilling is already sharing best practice and has already undertaken 26 speaking engagements and is also sharing best practice with an organisation in Australia.

**Community Energy Saving Programme (CESP) / Carbon Emissions Reduction Target (CERT)** – The average poorly insulated house wastes around £200 per year on fuel. The average home loses 30% of heat through the roof and 35% through the walls. By installing loft insulation and cavity wall insulation major savings can be made on fuel costs. Few people realise that the average home pumps out more carbon dioxide every year than a car, so to be able to reduce fuel bills whilst at the same time reducing pollution levels locally is a real advantage.

Cold and damp homes also make a major impact on the health and wellbeing of residents.

The Council with its partners NHS Walsall, Walsall Housing Group and a range of national energy suppliers has been at the forefront of tackling the related issues of:

- Energy inefficient homes
- Carbon dioxide emissions from dwellings
- Fuel poverty especially as experienced by vulnerable households in the borough.

Walsall was the first borough in the country (in 2010/11) to have a CESP which helped all tenures of homes assisting 300 properties in the Blakenall area. This initiative was funded by British Gas and the Regional Housing Pot together with WHG.

The Council's allocation of £1M of capital funds to support home energy efficiency projects has been instrumental in securing and increasing the range of assistance available to residents in the borough. Our work in 2011/12 extended CESP to the development of new CESP's (Birchills and Darlaston South) which are continuing into 2012/13 and securing major investment for free cavity wall insulation (irrespective of owners means) to all private homes in the borough through the Carbon Emissions Reduction Target (CERT) and since January this year some 724 properties have been referred to the free scheme.

The CESP and CERT programmes are due to be replaced by the Energy Company Obligation (ECO), which will form part of the Green Deal detailed in below. Our previous success with the CESP and CERT programmes will put the Council in an advantageous position to access ECO funding.

**Black Country Approach to Green Deal** – The Green Deal is due for a 'soft' launch in October 2012. This is the Government's flagship approach to reducing carbon emissions in the housing sector, primarily through external wall, cavity and loft insulation. There are 3 recognised roles that local authorities can take, these being:

- As a Green Deal **Provider** – raising finance and delivering measures themselves within their area;
- As a Green Deal **Partner** – partnering with a Green Deal provider (or consortia) to direct investment and activity in their area; and
- As a Green Deal **Advocate** – facilitating and supporting other Green Deal providers in their area but not having any direct influence or involvement in delivery.

Walsall is working together with Sandwell, Dudley and Wolverhampton Councils to see if a Black Country approach to the Green Deal will deliver greater environmental and employment benefits than working individually. To that end the Black Country (Walsall being the Accountable Body) have commissioned consultants Energy Saving Trust (EST) and Verco to do a risk benefit analysis of the above three options, and will report the findings and future proposals to Cabinet in due course.

**Timber frame new build Eco Friendly housing** – In 2010/11 the Council provided significant assistance (£306 from the Regional Housing Pot (RHP)

grant) to Accord to set up a new business in Walsall at the Beechdale former Links to Work building. The new business (Local Homes) is now operational and is producing approximately 3 new homes per week. These homes are highly insulated closed panel timber frames, which are erected on site in a matter of days, and the first development of approximately 100 new homes in Walsall is currently underway at Richards Street, Darlaston. The manufacture of these homes creates a fraction of the carbon emissions compared with the manufacture of traditional brick and block materials. The homes themselves are highly insulated to Code for Sustainable Homes (CSH) level 4 as standard, with reduced carbon emissions compared with standard building regulation homes. If successful, Accord intends to expand this business in Walsall in future to be a provider of these homes regionally and nationally.

#### **4. Council priorities**

4.1 Carbon reduction in Council activities will support each of the Council's priorities:

- Communities and neighbourhoods
- Economy
- Health and well-being

#### **5. Risk Management**

5.1 There is a financial risk in failing to reduce carbon emissions (increased purchase of carbon allowances) and a risk of an unfavourable position in the CRC performance league tables published if the council does not continue to reduce emissions as outlined in the CMP. Due to the ever increasing cost of and uncertainty of its supply, energy expenditure could rise over the period of the management plan by as much as 50%.

#### **6. Financial implications**

6.1 In the longer term substantial savings will ensue from energy efficiency and other measures currently being quantified by the Carbon Management Programme. It is currently expected that these additional savings will be offset against inflation and price increases expected for fuel and energy expenditure and are not expected to be cash-releasing savings, but will avoid the need for an increase in budgets for energy inflation.

6.2 The Carbon Reduction Commitment (CRC) scheme which commenced in April 2010 required the council to purchase carbon allowances for carbon emissions from 2011/12 onwards. This equates to approximately £400,000 for 2011/12 (65% from schools). This has already been accounted for in the council's medium term financial plan for 2011/12 onwards. Savings identified as part of the Carbon Management Programme will in turn have an impact on the Council's financial outlay towards the CRC.

6.3 In order to maximise benefits from carbon reduction measures Property Services will be carrying out pilot energy audits of three or four buildings, the Civic Centre, The New Art Gallery, a Leisure Centre and/or a secondary school.

## 7. **Legal implications**

There are no direct legal implications as a direct result of this report.

## 8. **Property implications**

Reduction in carbon emissions will require both a reduction in Council assets and investment in those retained. These proposals are detailed in the carbon management plan and the corporate asset management plan

## 9. **Staffing implications**

There are no direct staffing implications contained in this report

## 10. **Equality implications**

As this report is an annual report to update Cabinet on activity over the last year it does not require an EqIA.

## 11. **Consultation**

The carbon management programme includes representatives from all Council Directorates

## 12. **Background papers**

- Carbon Management Plan
- Low Carbon activity map **Appendix A**
- Carbon Trusts Low Collaborative Schools Programme (CLCSS) Delivery Roll Out Plan

### **Author**

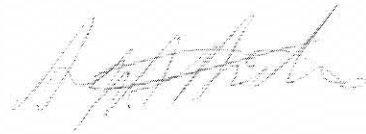
Kevin Kendall  
Head of Property Services  
01922 471259  
[kendallk@walsall.gov.uk](mailto:kendallk@walsall.gov.uk)





Tim Johnson  
Executive Director, Regeneration

25 July 2012



Councillor A Andrew  
Deputy Leader Regeneration

25 July 2012



Councillor T Ansell  
Transport & Environment

25 July 2012



Councillor C Towe  
Finance and Personnel

25 July 2012

