

Report to: **Audit, Best Value and Community Services Scrutiny Committee**

Date: **1 June 2012**

By: **Interim Director of Corporate Resources**

Title of report: **Carbon Management**

Purpose of report: **To provide an update on activities undertaken and planned to reduce the Council's carbon footprint from its own activities and services**

RECOMMENDATION: The Committee is recommended to note and consider the report

1. Financial Appraisal

1.1 There is a direct correlation between energy usage, carbon output and expenditure on energy. The Council's annual energy bill including the Carbon Reduction Commitment (CRC) carbon tax is approximately £5M.

1.2 Market trends indicate that utility prices will increase from 5% to 10% each year, with the CRC carbon tax increasing approximately £2 per annum from the 2011-12 prices of £12/tCO₂.

1.3 As reported to the Scrutiny Committee in June 2011 the following financial resources are available to implement projects to reduce energy use and carbon emissions:

- the Council has accessed external funding through the Carbon Trust's SALIX programme to develop a self-sustaining energy efficiency fund which currently amounts to £1,020,500. All projects supported by the fund have a maximum 5 year pay back period.
- £350k is provided through the capital programme each year for Sustainable Building Design. Allocation of the budget is towards projects that don't meet the SALIX funding criteria and which can achieve a higher ranking in the national industry benchmark standard 'Building Research Establishment's Environmental Assessment Method' (BREEAM).
- For 2011/12 £300K was allocated in the Capital Programme to fund solar panel installations. This which was subsequently reviewed following the Government's reductions in the Feed in Tariff (FiT) which extended pay-back periods for such schemes and made them uneconomic when compared to other energy saving installations. This budget has been reallocated for 2012/13 for "Carbon Reduction Schemes".

2. Supporting Information

2.1 The Council's Climate Change Strategy aims to achieve an annual reduction of 3% in CO₂ emissions. An update was last given to the Audit, Best Value and Community Services Scrutiny Committee on 1 June 2011. Appendix 1 is a Carbon Tracker which summarises activities during 2011/12 which contributed to carbon reductions and financial savings. From this it can be seen that the reduction achieved was 3.2%. Reference to Invest to Save projects in the Carbon Tracker relate to a programme, funded by Salix, for the installation of low energy lamps in street lighting. Work is in hand to quantify and capture the carbon reduction and cost savings arising from the roll-out of the initiative to turn off some street lights after midnight, reduce the number of lights in some streets and dim others between midnight and the early hours and this will be included in the carbon tracker for 2012/13.

2.2 Recent capital projects and their BREEAM rating are set out in Appendix 2.

2.3 The CRC Energy Efficiency Scheme requires ESCC to calculate the emissions consumed over the period of 1st April - 31st March each year for all fuel types. From July 2012, ESCC will be required to participate in the purchase of carbon credits, equal to the amount of carbon reported, at a cost of £12/tCO₂. ESCC emit approximately 33,000tCO₂ with a carbon tax of approximately £400,000. In the 2011 CRC league table ESCC were placed 211th out of 1300 participants, the third highest ranked County Council.

2.4 Investment through the Salix fund accelerated in 2011/12 with a spend in advance of budget. This was well received by Salix and a revised commitment to spend 75% of available funds in 2012/13 has been made. Salix's February 2012 newsletter league tables, covering 147 participants reported that –

“East Sussex County Council has moved into the top 5 clients for spend vs fund size after a successful quarter three. They have committed a number of school insulation projects, voltage management projects in a library and a school and a second LED traffic bollards project. This year East Sussex has really started to recycle the funds effectively and make the fund work for them.”

Salix carried out an audit during February 2012 and awarded ESCC an “A” rating – the top score available, which Salix noted is rarely achieved. The audit assessed the quality of both our processes and our systems, including how we analysis consumption data to verify savings. This is great recognition of the hard work of the team.

2.5 The Scrutiny Committee meeting on 1 June 2011 considered how schemes are prioritised and requested that future reports on the subject cover how investment was prioritised towards the most financially and environmentally cost effective activities. The suggestions of the Committee together with an update on these are shown in Appendix 3.

3. Other developments since the last report

3.1 The Sustainable Schools initiative on Appendix 1 relates to guidance to schools on good housekeeping measures to reduce energy consumption. From September it is planned to roll-out the experience at pilot schools across the schools estate, alongside a similar campaign for the non-schools estate. An additional post to take this forward has been enabled within existing budgets following a further review of the staffing structure.

3.2 Retendering of framework agreements for insulation and lighting installations will enable progress on such projects in 2013. We will also be resolving other supplier issues where over-optimistic savings projections have been received and complete a number of voltage optimisation installations. Appendix 4 identifies where surveys for these works are planned.

3.3 Work will continue with Economy, Transport and Environment to identify and fund further street light schemes

3.4 Pilot work with two energy saving companies (ESCO's) has been carried out. ESCO's provide funding and installation of energy saving works and share in savings achieved. Surveys have been conducted at County Hall and St Mary's House which are under evaluation.

3.5 Much effort has been successfully employed in challenging and resolving billing errors by energy suppliers.

4. Conclusion

4.1 The report summarises actions to reduce carbon emissions using available resources. The Committee is invited to note and comment on actions taken.

ANDREW TRAVERS
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Local Member: All

Background Documents
Carbon Management Action Plan 2005
Corporate Sustainable Buildings Strategy

Appendix 1 – Carbon Tracker 11/12 projects for 3.2 % saving

Energy Saving Projects	Projected Savings	Annual Tonnes	Projected Financial Savings	Annual Financial Savings	Projected CRC Saving @£12/tCO ₂	Annual Spend	Simple Payback (Years)	£/tCO ₂	Percentage of 3% reduction
Salix Funding	282.88	767.06	£ 47,765.61	£ 107,808.93	£3,394.51	£ 507,352.69	4.71	£661.43	26.95%
Sustainable Buildings Budget	228.80	360.98	£29,155.33	£ 46,098.07	£ 2,745.62	£352,423.00	7.65	£976.30	21.80%
Photovoltaic (PV) Planned Program	0.00	0.00	-	£ -	£ -	£ 300,000.00	-	£ -	0.00%
Sustainable Schools	231.64	303.60	£32,238.93	£42,253.27	£ 2,779.69	£11,000.00	0.26	£36.23	22.07%
Invest to Save	161.00	161.00	£22,349.54	£ 22,349.54	£1,932.00	£ 174,880.76	7.82	£ 1,086.22	15.34%
Planned Maintenance	92.20	165.72	£11,650.54	£20,940.15	£ 1,106.41	£2,171,328.37	103.69	£13,102.71	8.78%
Capital Projects	-38.24	-46.27	£4,831.88	-£ 5,847.01	-£458.86	N/A	N/A	N/A	-3.64%
Estates Opening and Closing	78.11	99.44	£10,682.81	£13,500.90	£ 937.34	N/A	N/A	N/A	7.44%
ICT Projects	8.25	44.00	£1,145.24	£6,107.95	£ 99.00	£35,000.00	5.73	£795.45	0.79%
Private Works WIP	5	17	£1,038	£4,957	£ 59.39	31,098	6.27	£1,848.43	0.47%
TOTALS	1,049.59	1,872.34	£ 149,010.88	£ 247,103.85	£ 12,595.10	£ 3,516,984.82			

	%taking account for when projects installed during years	% savings for installation for full year of operation
Total Projected (Including Capital Projects and Estates Buy/Disposed)	3.2%	5.6%
Accountable Projected (percentage savings for projects / elements of work funded to reduce carbon)	3.035%	5.5%

Appendix 2 - Recent capital projects and their BREEAM rating

01 May 2012

Property	Rating	Financial year	
Etchingham Primary School	Anticipated BREEAM - Very Good		2014/15
Hastings Library	Anticipated BREEAM -		2013/14
Landowne Secure Home	Anticipated BREEAM - Very Good		2013/14
The Haven CE - Extension	Anticipated BREEAM - Very Good		2013/14
Hastings Academy East (Hillcrest)	Anticipated BREEAM - Excellent		2012/13
The Keep	Anticipated BREEAM - Excellent		2012/13
Eastbourne Academy (ETC)	Anticipated BREEAM - Very Good		2012/13
Hastings Academy West (Filsham)	Anticipated BREEAM - Very Good		2012/13
Warwick House (inc Seaford Library)	Anticipated BREEAM - Good		2012/13
Diploma Exemplar Beacon CC (Crowborough)	Anticipated BREEAM - Excellent	Completed	2011/12
Diploma Exemplar Claverham CC (Battle)	Anticipated BREEAM - Excellent	Completed	2011/12
Diploma Exemplar Ringmer CC	Anticipated BREEAM - Excellent	Completed	2011/12
The Haven CE&MPS - New Nursery	Anticipated BREEAM - Good	Completed	2011/12
Frant	BREEAM - Excellent	Completed	2010/11
Chyngton (Seaford)	BREEAM - Very Good	Completed	2010/11
Cradle Hill (Seaford)	BREEAM - Very Good	Completed	2010/11

Hurst Green	BREEAM - Very Good	Completed	2010/11
Bexhill High School	BREEAM - Very Good	Completed	2010/11
Bexhill Vocational Skill Centre	BREEAM - Very Good	Completed	2010/11
Bonnars CE School - New Nursery	BREEAM - Good	Completed	2010/11
St Peters, Chailey - New Children's Centre	BREEAM - Good	Completed	2010/11
Churchwood (Hastings)	BREEAM - Good	Completed	2010/11
Cradle Hill (Seaford) - Children Centre & Nursery	BREEAM - Good	Completed	2010/11
Northiam School - Nursery	BREEAM - Good	Completed	2010/11
Ringmer CC - New Children Centre	BREEAM - Good	Completed	2010/11
Rotherfield Village Hall - New Nursery	BREEAM - Good	Completed	2010/11
Ticehurst School - New Children Centre & Nursery	BREEAM - Good	Completed	2010/11
Rye Library	BREEAM - Good	Completed	2010/11

Appendix 3 – Update on Scrutiny Committee meeting 1 June 2011 item 11.2 requesting clarification on how projects were prioritised towards the most financially and environmentally cost effective activities. The suggestions of the Committee together with an update are shown in the table below.

Committee Suggestion	Officer Update
<p>Provide information to enable easier comparison to the benefits of investing in disparate activities (such as solar panels or water recycling)</p>	<ul style="list-style-type: none"> ○ Our carbon tracker report used to monitor the annual reduction of carbon from projects against the business plan 3% target includes a comparison of the cost that each project has expended to save a ton of carbon set out in table 1 below. ○ The report also includes the financial savings made from lower energy bills and the reduced Carbon Reduction Commitment (CRC) carbon credits payment set out in table 2 below. ○ These inform our future decision making on the most economically viable energy saving technologies and projects to be progressed.
<p>Aim to include consideration of the impact of investment on the lifetime cost of a building</p>	<ul style="list-style-type: none"> ○ Lifetime costs are generally calculated against a 25-year period. When assessing projects for their energy saving performance we use a payback of ten years or less. ○ For many of the energy saving technologies such as insulation, lighting etc the maintenance cost is negligible or the equivalent of the existing installation so does not form part of the lifetime costing. ○ Where energy technologies being considered such as biomass boilers do have a high maintenance costs these are included. Best and worse case scenarios are assessed based on projected fuel cost predictions to enable full lifetime costing assessment. ○ Careful consideration of the future use of the sites is undertaken so that projects are not undertaken where the building may be disposed before the projects pays back its installation costs.
<p>Aim for an 'Excellent' BREEAM rating rather than being satisfied with 'good' whilst recognising that this would not always be possible e.g. when converting part of an existing building, and the budget may not always allow this.</p>	<p>Energy savings elements of capital projects have historically been seen by clients as an easy item to be omitted to bring projects within budget. Automated Meter Reading (AMR) consumption data can now be used both to inform the design team and make clients aware of the long terms cost benefits of ensuring that budgets allow the delivery of "Excellent" BREEAM buildings. This is demonstrated by the ratings of recently completed capital projects in Appendix 2.</p> <p>The issue with achieving an Excellent rating where converting a building has been recognised by BREEAM who are to introduce a new "Refurbishment and Development " guide which we will be incorporating into the ESCC Sustainable Brief to enable ESCC refurbishment and conversion schemes to achieve an "Excellent" BREEAM rating where the project constraints permit.</p>

Table 1 – Cost per tonne of carbon saved

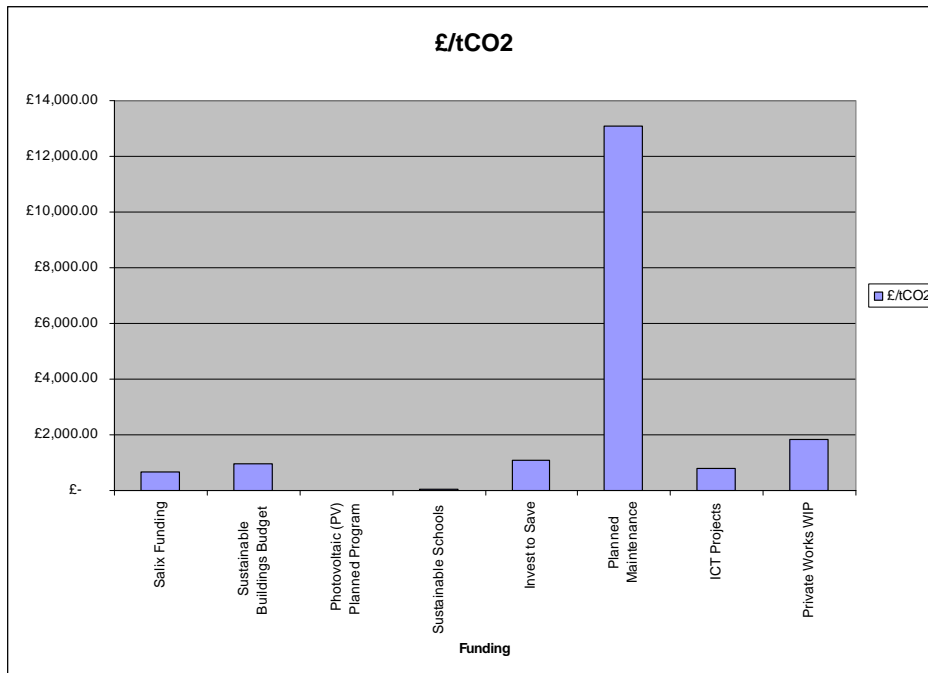
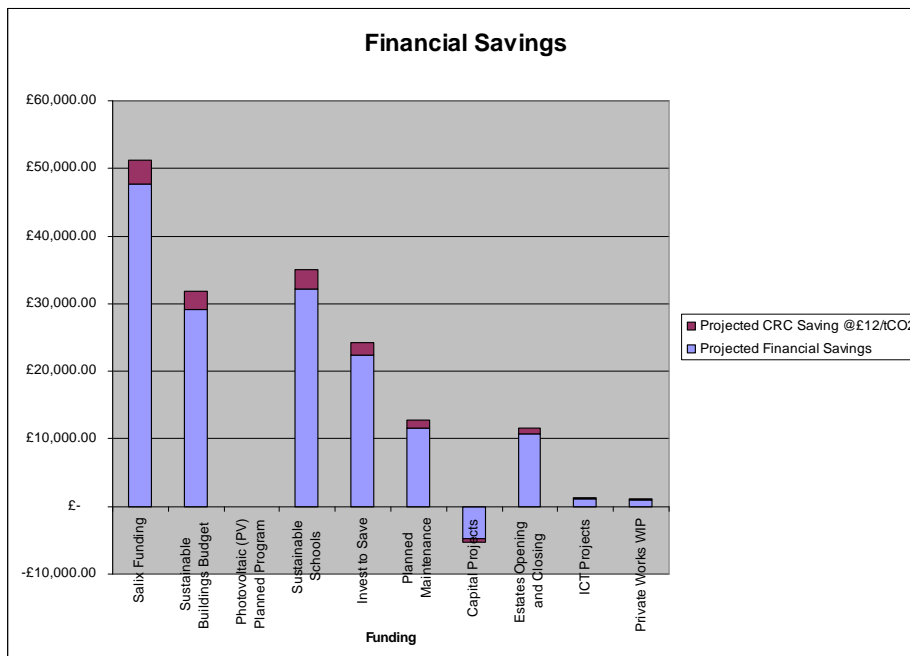


Table 2 – Financial savings



Appendix 4 –surveys for energy saving works 12/13

SITE	SURVEY / WORKS TYPE
The Cavendish School	Insulation
The Haven Ce Methodist Primary School	Insulation
Herne Junior School	Insulation
Chantry Community Primary School	Insulation
Salehurst Ce Primary School	Insulation
Seaford Head	Insulation
St Mary's House	Insulation
Christ Church Ce Primary School	Insulation
Uckfield Community Technology College	Insulation
Bodiam Ce Primary School	Insulation
Priory School	Insulation
Silverdale Primary School	Insulation
Uckfield Youth Centre	Insulation
Danehill School	Insulation
Pells School	Insulation
Sidley Child's Centre	Insulation
Western Road 47A AKA the Wellbeing Centre	Insulation
Little Common School	Insulation
County Hall	Lighting
Castledown	Lighting
Christchurch	Lighting
Chyngton	Lighting
Cross-in-hand	Lighting
Herne Jnr	Lighting
West St Leonards	Lighting
Jarvis brook	Lighting
Little ridge	Lighting
Ocklynge	Lighting
Wallands	Lighting
Southover	Lighting
Roselands	Lighting
County Hall	Lighting
Castledown	Lighting
Christchurch	Lighting
Chyngton	Lighting
Cross-in-hand	Lighting
Herne Jnr	Lighting
West St Leonards	Lighting
Seaford Head CC & Seaford Head Lower Voltage Reduction	Voltage Reduction
St Pauls CofE Voltage Reduction	Voltage Reduction
Stone Cross Mains 1 Voltage Reduction	Voltage Reduction
Uplands CC Voltage Reduction	Voltage Reduction
William Parker Lower & Upper Voltage Reduction	Voltage Reduction
St Pauls CofE	Voltage Reduction
Stone Cross Mains 1	Voltage Reduction
Uplands CC	Voltage Reduction