



REGENERATION AND ENVIRONMENT SCRUTINY COMMITTEE – 17TH MAY 2016

**SUBJECT: IMPROVEMENT OBJECTIVE: CARBON MANAGEMENT - REDUCE OUR
CARBON FOOTPRINT (ANNUAL REPORT – YEAR END) – 2015/16**

REPORT BY: CORPORATE DIRECTOR COMMUNITIES

1. PURPOSE OF REPORT

- 1.1 The Local Government Measure 2009 requires all local authorities in Wales to set and publish a set of Improvement Objectives. The Wales Audit Office (WAO) will use these Improvement Objectives to evaluate the council's likelihood of improvement and following that, the level of actual improvement that is achieved for the citizens of Caerphilly.
- 1.2 At the beginning of 2015/16, it was recommended that the Improvement Objective: **Carbon Management: Reducing our carbon footprint** due to energy usage in our non-domestic buildings and street lighting, would be reported to this committee for regular performance monitoring.
- 1.3 This report highlights key progress for the period April 2015 to March 2016.

2. SUMMARY

- 2.1 In line with the Carbon Reduction Strategy the Improvement Objective focuses on 4 priorities to reduce emissions:
 - Good Housekeeping (10% reduction)
 - Invest to Save (20% reduction)
 - Design and Asset Management (10% reduction)
 - Renewable technology (5% reduction)
- 2.2 The actions outlined in this covering report provide a snapshot of what progress has been made as at the year-end of 2015/16. All actions have been progressed well, with some challenges and constraints (see comments on Appendix 1).
- 2.3 Through the various actions outlined we are clearly seeing a positive improvement in awareness raising activities, as a result of targeting key individuals such as head teachers, caretakers and building managers.
- 2.4 From the progress recorded to date, it is evident that the key actions taken are having a positive impact on our carbon management.
- 2.5 CCBC can demonstrate that energy, carbon and cost savings have been achieved during the lifespan of the Improvement Objective, particularly from the 'Invest to Save Scheme'.

2.6 Implementation, delivery and impact of the objective priorities for 2015/16 are deemed to be successful.

3. LINKS TO STRATEGY

3.1 The local Government Measure 2009 requires each authority to publish priorities for improvement called Improvement Objectives.

3.2 Carbon Reduction Strategy 2009.

3.3 Future Generations Goal - **A prosperous Wales** (*an innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change).*)

4. THE REPORT

4.1 The Improvement Objective has provided opportunities to:

- Drive down carbon emissions and water conservation in our non domestic buildings
- Drive down utility service costs and carbon tax, whilst also protecting against future utility price increases
- Improve working/teaching environments e.g. improve lighting levels or reduce overheating
- Help maintain legislative requirements

4.2 Public awareness of climate change and the link to carbon footprint is high and Caerphilly Borough citizens expect the Authority to take reasonable steps to reduce the energy consumed in its buildings.

4.3 Caerphilly CBC along with all other organisations is under increasing pressure from UK wide legislation aimed at improving energy efficiency. E.g. Provision of Display Energy Certificates, Energy Performance Certificates and compliance with the Carbon Reduction Commitment Scheme (CRCS), which is a carbon tax that costs CCBC circa £440k per annum.

4.4 The authority agreed a 45% Carbon Reduction Strategy in 2009.

Good Housekeeping

4.5 All our actions were delivered and well received by relevant participants with positive feedback on their effectiveness and impacts, with only one exception; we were unable to deliver fully the 're-issue of energy benchmark information to building managers' due to billing issues experienced during the year with British Gas.

4.6 We developed and established a 'standardised CRC presentation/training information pack' for use/delivery to school cluster groups, with comprehensive site specific information such as energy benchmarks and individual carbon tax costs. This was tailored to each school that participated in each cluster. In total, staff in 31 school were trained and all felt they were better placed to make improvements back in their schools. Accessing the cluster groups has been challenging but this action will remain in 16/17. We achieved the target we set.

4.7 Awareness of energy and water conservation has been raised. 38 individual activities have been logged where advice has been given, for example, a case study was developed for presentation at School Budget Forum where it was reported that Ysgol Penalltau had made a 15% reduction on gas consumption with the assistance of the Energy Team. We also re-issued all energy audits to building managers which contained a lot of positive advice. We even assisted Sight Cymru an external organisation that turned to CCBC for advice in relation to Welsh Water. We achieved the target we set.

- 4.8 We are able to demonstrate that improvements have been made in good housekeeping in our non-domestic buildings. We have trained and advised and empowered key staff to make practical improvements to energy consumption in their building.

Progress has been made but there is more to do. This must remain an ongoing activity as it is all too easy for bad habits to return.

- 4.9 There are no red status actions, one amber and 5 green.

Asset Management

- 4.10 It has been reported that the closure of Pontllanfraith House will result in a carbon saving of 409 tonnes per year. Currently both Gas and Electricity supplies are connected but consumption is now minimal.

- 4.11 Caerphilly Old Library, Risca Cash Office, Infoquest Youth Building and Newbridge Public Toilets have been disposed of in 15/16.

- 4.12 There are no red status actions, one amber and 2 green.

Invest-To-Save

- 4.13 Technologies being considered. We have reviewed many projects in 15/16, not all of which have been viable from a payback rate perspective. We have implemented the following:

Location	Technology	Cost	Payback Rate	Lifetime Carbon Saving
YG Cwm Rhymni	Energy efficient computer monitors	£8,749	5 years	57 Tonnes
Heolddu Leisure Centre	Replacement pool cover at	£4,754	5 years	50 Tonnes
Heolddu leisure Centre	New pool pumps	£5,373	2 years	164 Tonnes
St Cenydd Comprehensive	LED lighting	£14,500	5 years	290 Tonnes
Tyr Y Berth Garage Depot	LED lighting	£17,413	6 years	303 Tonnes
Brodawel Home For The Elderly	New Boilers	£12,600	7 years	253 Tonnes
Brodawel Home For The Elderly	Building Energy Management System	£3,020	5 years	49 Tonnes
Risca family Centre	Building Energy Management System	£2,005	7 years	15 Tonnes

- Tended lighting at Abercarn Primary. Possible implementation in 16/17.
- Identified significant lighting improvement at Newbridge Swimming Pool. Possible Implementation in 16/17.

- 4.14 Street Lighting report that 8,142 lamps have been replaced for more energy efficient formats called Light Emitting Diodes during 15/16. Since the start of the replacement programme 9,198 lamps have been changed. Further improvements have been identified to replace a further 1,250 lamps, in 16/17.

- 4.15 Promoting understanding on water conservation has proven challenging due to workload prioritisation and due to the limited information available from Welsh Water. Welsh Water has pledged to provide detailed site information which will allow benchmarking data to be established and distributed in future years. This is a significant step forward by Welsh Water.
- 4.16 As well as investing in Building Energy Management Systems (BEMS) we have also provided training on them. The technology allows building managers to refine their heating times and temperatures, which prevents overheating. The technology has embedded fail safe features. The BEMS system installed for Risca Family centre also brought improvements in safety as previously the control for staff was turning the boiler on and off in the plant room.
- 4.17 There are many opportunities for further lighting improvements. We are reviewing internal lighting and controls for TY Penallta and considering trials. This would potentially provide significant cost and carbon savings. Energy efficient lighting will remain a key focus in 16/17.
- 4.18 There are no red status actions, 2 amber and 3 green.

Renewable Technology

- 4.19 Internal Promotion. We outlined to the Carbon Group in Quarter 1 that the seven medium sized PV arrays that we claim Feed In Tariff payments on all over performed in the previous year against anticipated generation levels. The best performing building was Trinity Fields which generated 28% more power than was anticipated. This increased revenue and importantly carbon savings.
- 4.20 We surveyed 9 Homes For The Elderly buildings to review their potential for PV installations. Based on the payback rates Brodawel and Myn Y Mynydd were successfully installed in December 15 and Ty Clyd, TY Iscoed and Beatrice Webb were installed in Q4. The largest arrays were up to 50kWp in size. The total value of the schemes funded was circa £260k.
- 4.21 In 15/16 we were asked by Corporate Finance to review additional properties which included Newbridge leisure centre, Tredomen House and Tir Y Berth Depot amongst others. Funding may be made available through the Invest To Save scheme in 16/17.
- 4.22 Consideration is being given to future building developments. It has been established that Islwyn West Comprehensive School will require a PV scheme covering approximately 450m² which would result in approximately 264 PV panels being installed saving approximately 26 tonnes of carbon per year.
- 4.23 There are no red status actions, with 2 green.

5. EQUALITIES IMPLICATIONS

- 5.1 There are no equalities implications to this report that have not been considered or would adversely affect any individual or group who fall under one of the protected characteristics or wider issues as shown in the Council's Strategic Equality Plan.

6. FINANCIAL IMPLICATIONS

- 6.1 There are no financial implications other than to note that for each unit of energy conserved, gas or electricity, there are direct financial savings recorded on the utility bills and annually on the carbon tax bill.

7. PERSONNEL IMPLICATIONS

- 7.1 There are no personnel implications from this report.

8. CONSULTATIONS

8.1 Comments received have been incorporated into this report.

9. RECOMMENDATIONS

9.1 The Scrutiny Committee consider the content of the report and note the progress made in meeting the actions set out in the action plan.

9.2 The Committee discuss and reach agreement on the officer judgement of 'successful' delivery of this objective.

9.3 Endorse the continuation of the objective into 16/17.

10. REASONS FOR THE RECOMMENDATIONS

10.1 That the Council undertakes effective scrutiny for setting and monitoring of performance improvement.

10.2 To inform members of progress made in meeting the improvement objective and the impact on our organisation and staff.

11. STATUTORY POWER

11.1 Local Government Measure 2009.

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Appendices:

Appendix 1 Carbon Management: Reduce our carbon footprint