

WAVERLEY BOROUGH COUNCIL

EXECUTIVE – 1 SEPTEMBER 2015

Title:

IMPROVING ENERGY EFFICIENCY

**[Portfolio Holder: Cllr Simon Thornton]
[Wards Affected: All]**

Summary and purpose:

It is a mandatory requirement for Local Authorities to report the greenhouse gas emissions (GHG) produced from their operational activities across their estates. This report presents Waverley's annual GHG emissions during the financial year 2014/15 and compares it to emissions during the baseline year 2008/09.

The current reporting year concludes the period of the Carbon Management Plan 2010-2015 and from the new financial year, Waverley's progress on GHG reductions will be supported and monitored by the newly adopted Energy Efficiency Plan 2015-2020.

How this report relates to the Council's Corporate Priorities:

Waverley is committed to the protection and enhancement of the environment within its core values. This report details one aspect of our environmental impact, energy consumption and the associated GHG emissions.

The report provides estimates for Waverley's GHG emissions for the year 2014/15, its historical GHG emissions to 2008-09 and progress made towards reducing these emissions.

Financial Implications:

No direct finance implication identified. Improved efficiency should lead to control of energy costs in an environment of increasing energy prices. All improvement schemes are considered separately on their own financial and sustainability merits.

Overall the cost avoidance as a result of implementing the efficiency projects has been estimated to be of the region of £800,000 during the period 2009-2015.

Energy Efficiency Savings contribute to better financial management and contributes towards balancing the Waverley's budgets.

Legal Implications:

There are no legal implications associated with this report

Introduction

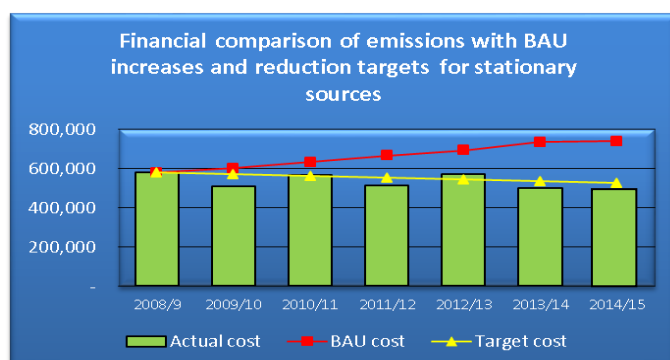
1. The Government requires Local Authorities to report on their carbon dioxide emissions that result from their operations. As of July 2011 this requirement has slightly changed to take into account other greenhouse gasses such as methane (CH₄) and nitrous oxide (N₂O), and has slightly moved the focus from just carbon dioxide (CO₂) to report on greenhouse gas emissions. The greenhouse gas (GHG) emissions resulting from Waverley Borough Councils operations for the year 2014-2015 are presented in detail in ANNEXE 1 (GHG emissions annual report 2014/15). Waverley is required to publish this report on the website as well as email it to the Department for Climate Change.
2. In line with government requirement for reporting GHG's and the need to reduce energy costs, Waverley embarked on a Carbon Management Programme in 2009 which concluded with the adoption of the Carbon Management Plan (CMP) 2010-2015. The plan aimed to reduce carbon emissions by 25% by 2015 and predicted very significant potential cost avoidance.
3. This CMP has now come to the end of its life and a progress update is outlined within this report. The recently adopted Energy Efficiency Plan 2015-2020 will supersede the CMP.
4. To calculate Waverley's GHG emissions an 'Operational control' approach has been adopted and used to define the organisations boundaries and reportable sources of GHG emissions. This includes our direct and indirect emissions arising from the buildings and vehicles owned or managed by the council, including emissions from running outsourced services.

GHG emissions: Results for 2014-15 and five year progress

5. At the end of the five year CMP period, Waverley has managed to reduce carbon emissions by a total 8.5% against 2008 levels. During this time, a number of our services have been significantly enhanced, reaching more people than before, but have still managed to maintain energy expenditure below 2008/09 levels. The Council is generating 4.5% of the total energy demand from renewable and low carbon sources.

6. Financial value: Cost avoided

At the end of 2014/15 it is estimated that the financial



cost avoidance from reduced energy bills since 2008/09 is approximately £800,000, when comparing to a Business as Usual scenario (BAU) of increasing energy costs and natural growth. By adopting a carbon management plan we have managed to maintain energy expenditure below 2008 levels.

Report Summary

7. The 8.5% reduction represents the absolute decrease of GHG emissions, which includes growth and expansion of services. This figure does not take into consideration other circumstances beyond our control such as weather and changes in the carbon intensity of fuels that result in fluctuation of the conversion factors. In order to make better justice of our efforts to be more energy efficient we need to consider a number of factors.

- Natural growth in population and social housing means that Waverley services now reach approximately 3,400 more people than in 2008/09.
- The electricity conversion factors for 2014/15 revealed that the carbon intensity for this fuel type has increased by 11% since the baseline year.
- Enhanced services: This year 3,783 tonnes of green waste was collected from approximately 10,000 households currently registered to the scheme.
- The emissions deriving from contractor travel have increased by approximately 13% since 2008/09.

8. Celebrating success

A number of energy efficiency projects have contributed to this reduction. And as a result Waverley has maintained energy expenditure to almost 2008/09 levels. It is estimated that approximately £800,000 in energy cost has been avoided as a result of efficiency.

Even though overall GHG reduction appears to be modest, when looking closer at the “intensity” of the emissions, it becomes clearer that Waverley’s operations have become more efficient. Some of the achievements are as follow:

- Thin clients and server virtualisation of our IT systems
- LED lighting retrofit in car parks
- LED lighting retrofit in the offices and leisure centres
- Renewable technologies: Solar PV systems in 3 out of 5 leisure centres, and the main council offices
- Biomass boiler at Godalming leisure centre
- More efficient gas boilers
- Server optimisation and more efficient computers

- Voltage optimisation system at the main council offices
 - Cleaner transport options for the waste and recycling contract including the trial of biodiesel fuel on refuse vehicles
 - Waste and recycling route optimisation
 - Office maximisation programme
9. At the main council offices at the Burys alone, GHG emissions have been reduced by 28% over a 5 year period. This equates to an annual cost avoidance of approximately £17,000.
10. Another successful project is the LED lighting retrofit project in car parks, which achieved a 30% reduction in energy and 45% reduction in electricity cost. This was a combination of more efficient lighting, control systems and renegotiation of the electricity tariffs.
11. In 2014/15 the absolute GHG emissions associated with the energy demand of all five of Waverley's leisure centres reduced by 17% over 2008/09 levels. This has been achieved despite the fact that the overall footfall from all five sites increased by 33% during the same period. The GHG emissions per visitor from all leisure centres have reduced by an average of 32% since 2008/09.

Conclusion

12. Monitoring and reducing GHG emissions is not only about satisfying government requirements but also about becoming more energy efficient in the way we operate services. Balancing emission reductions and natural growth is a challenge; however it is possible to deliver those services and maintaining energy expenditure to its minimum.
13. This report is an opportunity to look back at what has been achieved and celebrate the successful projects. The aspirational GHG target set out in the CMP might not have been achieved in absolute terms however it has focused the organisation in identifying energy efficiency opportunities and implementing invest to save projects.
14. The Energy Efficiency Plan adopted by the Council in July sets an aspirational target of 3% reduction based on past achievements however it will be reviewed annually in order for it to remain realistic.

Recommendation

It is recommended that the Executive approve this report for publication and submission to the Department for Energy and Climate Change.

Background Papers

There are no background papers (as defined by Section 100D(5) of the Local Government Act 1972) relating to this report.

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