

**Decision Maker:**      **Environment PDS Committee**

**Date:**                      **17 April 2012**

**Decision Type:**      Non-Urgent                      Non-Executive                      Non-Key

**Title:**                      **ENVIRONMENT DEVELOPMENT ANNUAL REVIEW: 2011/12**

**Contact Officer:**      Alastair Baillie, Environmental Development Manager  
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**Chief Officer:**              Nigel Davies, Director of Environmental Services

**Ward:**                      N/A

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1.    Reason for report

- 1.1   This annual report informs Environment PDS Committee about progress made on environmental development during 2011/12, reflecting the continuing emphasis on integrating environmental management with the Council's efficiency agenda.
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**2.    RECOMMENDATIONS**

- 2.1   That Environment PDS Committee comments on the environmental development activities set out in this annual review.

### Corporate Policy

1. Policy Status: Existing policy.
  2. BBB Priority: Quality Environment.
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### Financial

1. Cost of proposal: N/A
  2. Ongoing costs: N/A.
  3. Budget head/performance centre: Environment Development
  4. Total current budget for this head: £500k Carbon Management Fund and £27.5k Project Budget
  5. Source of funding: Revenue Budget 2011/12 and Capital Programme for Carbon Management Fund (£250k)
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### Staff

1. Number of staff (current and additional): 3.5 FTE
  2. If from existing staff resources, number of staff hours: N/A
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### Legal

1. Legal Requirement: Non-statutory - Government guidance.
  2. Call-in: Call-in is not applicable.
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### Customer Impact

1. Estimated number of users/beneficiaries (current and projected): Borough-wide
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### Ward Councillor Views

1. Have Ward Councillors been asked for comments? N/A.
2. Summary of Ward Councillors comments: N/A

### 3. COMMENTARY

- 3.1 An environmental 'terms of reference' report (ELS 05366) was presented to Environment PDS in November 2005. Having considered the report, Members recommended that environmental development opportunities should be reviewed and that officers should report their findings. These findings were reported in March 2006 (ELS 06115) and Members recommended developing certain priority projects and also requested that an annual report be submitted.
- 3.2 Officers now report annually, allowing Members the opportunity to scrutinise progress over the year and to make an input into environmental policy and practice.
- 3.3 This report informs Environment PDS about progress made on environmental development during 2011/12, in support of the Council's 'Quality Environment' and 'Excellent Council' aims.
- 3.4 The report divides into internal and external environmental initiatives:
- Internal Council initiatives relate to how the Council operates: e.g. Carbon Management Programme and the Environmental Champions' Network (3.11 – 3.18);
  - External borough initiatives concern working with residents and businesses: e.g. Bromley's Environment Awards and Waste Minimisation campaigns (3.19 – 3.29).
- 3.5 This report should answer to what extent we are becoming more environmentally sustainable. This can be a difficult question to answer. One way of simplifying matters is to use a common measure for environmental sustainability, such as carbon dioxide (CO<sub>2</sub>) emissions. We use this measure because not only can it be used to assess the environmental impact of energy and fuel use for statutory reporting, but it can also be used to measure the impact of other natural resource use such as water consumption and waste production.
- 3.6 In line with government best practice, the Council reported on these environmental impacts as part of its 2010/11 [Annual Report & Statement of Accounts](#).
- 3.7 Using carbon dioxide emissions as an environmental yardstick, it is possible to demonstrate progress on environmental sustainability as the:
- Council's direct carbon footprint has reduced by 14.0% since 2006/07 (to 32,645t CO<sub>2</sub>);
  - Borough's carbon emissions have fallen from 5.2 t/capita (2005) to 4.5t per capita (2009).
- 3.8 Highlights of this 2011/12 environmental development report include:
- successfully reporting our Carbon Reduction Commitment Footprint and Annual Reports
  - decreasing operational carbon emissions by 14.0% (2010/11 compared with 2006/07)
  - avoiding £220k of revenue spend through Carbon Management Programme activity at the Civic Centre and on Street Lighting
  - delivering innovative energy efficiency projects through the Carbon Management Fund
  - developing the Environmental Champions Network, to further green the workplace
  - celebrating residents' achievements at Bromley's Environment Awards (BEAs) 2011 and preparing for BEAs 2012
  - contributing to the Bromley Sustainable Schools Forum
  - working with partner organisations in Bromley's Environment Partnership
  - avoiding some 55,000 tonnes of waste and £3m unnecessary revenue costs through waste minimisation activity since 1995
- 3.9 This report does not seek to record all Environmental Development team activity (as much work involves working with and advising teams across all the Council departments, schools and residents) but rather concentrates on projects and programmes led by the department.

## **Internal Council Initiatives**

3.10 **Summary:** The Council has significant environmental impacts in terms of its natural resource use, greenhouse gas emissions and waste production. By becoming more environmentally efficient we will also become more financially sustainable as an organisation, so there is a clear and beneficial link. Also, we need to be seen to be taking action as an organisation if we are to seek to persuade residents to be more environmental, say in terms of recycling or home energy efficiency. Over the past year, internal Council initiatives have included:

- Environmental Champions' Network (3.11)
- Sustainability Tracking (3.12)
- Carbon Reduction Commitment (3.13)
- Carbon Management Programme (3.14)
- Council Carbon Reduction (3.15)
- Energy Surveys and Heat Mapping (3.16-17)
- Carbon Management Fund (3.18)

3.11 **Environmental Champions:** Staff engagement on environmental issues is important and many organisations now have 'green teams'. Bromley's Environmental Champions' Network was launched by the Chief Executive and Mayor in October 2008 and has continued to develop during 2011/12. The Champions' role is to encourage officers from all departments to become more environmental in their office work – the intention being to reduce direct environmental impacts, revenue costs, and use of natural resources. It is estimated that an effective network can save 10% of an organisation's electricity consumption. The network of some 70 Champions met on five occasions to discuss environmental themes such as energy efficiency, waste reduction, water conservation, sustainable procurement and smarter travel. There is a dedicated team site which includes a handbook, discussion forum, meeting notes, presentations and a monthly e-newsletter. As a result of Champions' actions, Team Oyster Cards are now used across the Council which helps to encourage use of public transport and reduces administrative burden and cost. The Champions' network was also involved in ensuring more than 1,700 items unwanted furniture from North Block refurbishment project were reused or recycled and helped to save energy over the Christmas holidays (7.28% reduction compared with previous year) through its switch-off campaign.

3.12 **Sustainability Tracking:** Developments in sustainability policy, practice and funding continue to be tracked, recorded and distributed to help service managers to act in a timely manner on new issues which may affect future service provision and Bromley's environment. Some key environmental policy initiatives during 2011/12 included:

- [4<sup>th</sup> Carbon Budget \(DECC / CCC\)](#)
- [Natural Environment White Paper \(Defra\)](#)
- [State of the Environment Report for London \(GLA/EA\)](#)
- [Biodiversity 2020: A strategy for England's wildlife and ecosystem services \(DEFRA\)](#)
- [Committee on Climate Change: 3<sup>rd</sup> Annual Report \(CCC\)](#)
- [UK Renewable Energy Roadmap \(DECC\)](#)
- [Draft National Policy Planning Framework \(DCLG\)](#)
- [Public Sector Annual Reports: Sustainability Reporting Guidance 2011-12 Reporting \(HMT\)](#)
- [Biodiversity 2020: A strategy for England's wildlife and ecosystem services \(DEFRA\)](#)
- [Delivering London's Energy Future: the Mayor's climate change mitigation and energy strategy](#)
- [Managing risks and increasing resilience: the Mayor's climate change adaptation strategy \(MoL\)](#)
- [Renewable Heat Incentive \(RHI\) Scheme \(DECC\)](#)
- [Mayor's Waste Management Strategies \(MoL\)](#)
- [Water White Paper \(DEFRA\)](#)
- [The Climate Change Risk Assessment UK Government Report \(DEFRA\)](#)
- [Red Tape Challenge - Environment Theme Proposals \(DEFRA\)](#)

3.13 **Carbon Reduction Commitment (CRC) Scheme:** The latest information about the CRC scheme was reported to the Executive on 7 March 2012 ([ES12005](#) item 6). That report set out the Council's 2010/11 emissions (Table 1) and made a four year forecast of the Council's CRC emissions (which may vary due to factors such as weather and building use etc).

**Table 1: Forecast LB Bromley CRC Emissions**

| Tonnes CO <sub>2</sub>                                       | 2011/12            | 2012/13             | 2013/14             | 2014/15             | 2015/16             |
|--|--------------------|---------------------|---------------------|---------------------|---------------------|
| <b>Operational Property</b>                                  | 7,730t<br>(28.34%) | 7,576t<br>(27.53%)  | 7,424t<br>(26.74%)  | 7,276t<br>(20.51%)  | 7,130t<br>(19.95%)  |
| <b>Maintained Schools</b>                                    | 9,639t<br>(35.33%) | 9,831t<br>(35.73%)  | 10,028t<br>(36.12%) | 10,229t<br>(28.83%) | 10,433t<br>(29.19%) |
| <b>Academy Schools</b>                                       | 9,910t<br>(36.33%) | 10,108t<br>(36.74%) | 10,311t<br>(37.14%) | 10,517t<br>(29.64%) | 10,727t<br>(30.01%) |
| <b>Unmetered Consumption*<br/>(Street Lighting and CCTV)</b> | -                  | -                   | -                   | 7,457t*<br>(21.02%) | 7,457t*<br>(20.86%) |
| <b>Total Carbon Emissions</b>                                | <b>27,279t</b>     | <b>27,515t</b>      | <b>27,763t</b>      | <b>35,479t</b>      | <b>35,747t</b>      |

\*LBB Unmetered Supply (Street Lighting and CCTV) emissions are not included until 2014/15

Executive report ES12005 forecast the estimated cost of purchasing CRC allowances (Table 2), which could amount to ~£1m in 2015/16 (and impose a cumulative cost of ~£3m by 2015/16).

**Table 2: Forecast LB Bromley CRC Costs**

|   | 2011/12  | 2012/13  | 2013/14  | 2014/15  | 2015/16    |
|---|----------|----------|----------|----------|------------|
| <b>Operational Property Cost</b>                            | £92,765  | £121,213 | £148,486 | £174,620 | £199,648   |
| <b>Maintained Schools Cost</b>                              | £115,664 | £157,303 | £200,562 | £245,488 | £292,130   |
| <b>Academies Schools Cost</b>                               | £118,923 | £161,735 | £206,213 | £252,405 | £300,362   |
| <b>Unmetered Consumption<br/>(Street Lighting and CCTV)</b> | -        | -        | -        | £178,989 | £208,823   |
| <b>Cost of total carbon emissions</b>                       | £327,352 | £440,251 | £555,261 | £851,502 | £1,000,963 |
| <b>Total Carbon Emissions (tCO<sub>2</sub>)</b>             | 27,279t  | 27,515t  | 27,763t  | 35,479t  | 35,747t    |
| <b>Total Carbon (post 10% de minimis)*</b>                  | 24,511t  | 24,764t  | 24,987t  | 35,479t  | 35,747     |
| <b>Total Cost (post 10% de minimis)</b>                     | £294,617 | £396,227 | £499,735 | £851,502 | £1,000,963 |
| <b>Predicted Uplift Costs (applied to estimated data)</b>   | £2,946   | £3,566   | £3,998   | £5,961   | £6,006     |

\* Participants are allowed to exclude 10% of emissions under a de minimis rule

The position regarding academy schools is currently under government review and there is no indication of the government's preference for the treatment of such schools under the scheme. The cost of all schools allowances in Bromley would be met from the Dedicated Schools Grant.

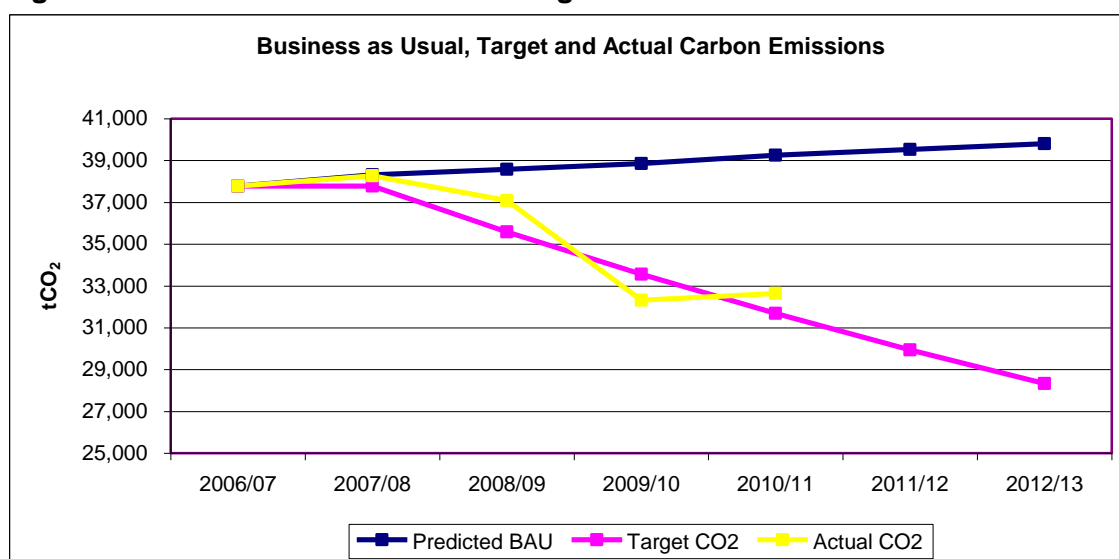
The Chancellor in his budget statement (21 March 2012) stated that he intends to replace the CRC with a new environmental tax if the current scheme cannot be significantly simplified in the next six months. A [consultation](#) was issued on 27 March 2012, which may result in significant changes. For the time being, however, the Council must still submit an annual report and purchase sufficient carbon allowances to cover its emissions (for 2011/12) in July 2012.

3.14 **Carbon Management Programme (CMP):** The CMP, which has operated since 2007/08, is the Council's energy demand management programme. It is designed to control costs by setting a target to reduce energy use and hence carbon emissions by 25% over five years. The CMP Annual Progress Report 2010/11 was presented to the Executive on 7 March 2012 ([ES 12007](#) Item 5) and is summarised below.

The CMP's scope is broader than that of the Carbon Reduction Commitment. In addition to covering Council buildings and street lighting-related emissions, it also covers Mytime buildings, commuting, fleet and business travel, water consumption and waste production.

Under the CMP, the Council set a commitment to reduce emissions by 25% by 2012/13 against a 2006/07 baseline. Figure 1 (below) plots: 'business as usual' (blue line), the Council's 25% reduction target (magenta line) and actual progress to date (yellow line).

**Figure 1: Annual Carbon Reduction Progress**



In 2010/11, the Council's aim was to be 15 percentage points towards our 25% target. In reality we achieved a 14 percentage point reduction (5,135t) and need to make a further reduction of 11 percentage points (4,310t) over the next two years to achieve our final 25% target.

Table 3 shows progress since the base year (2006/07) by sector. No sectors consume more than they did in 2006/07 and some sectors have made significant progress in reducing consumption and emissions including Bromley Mytime and Buildings in general.

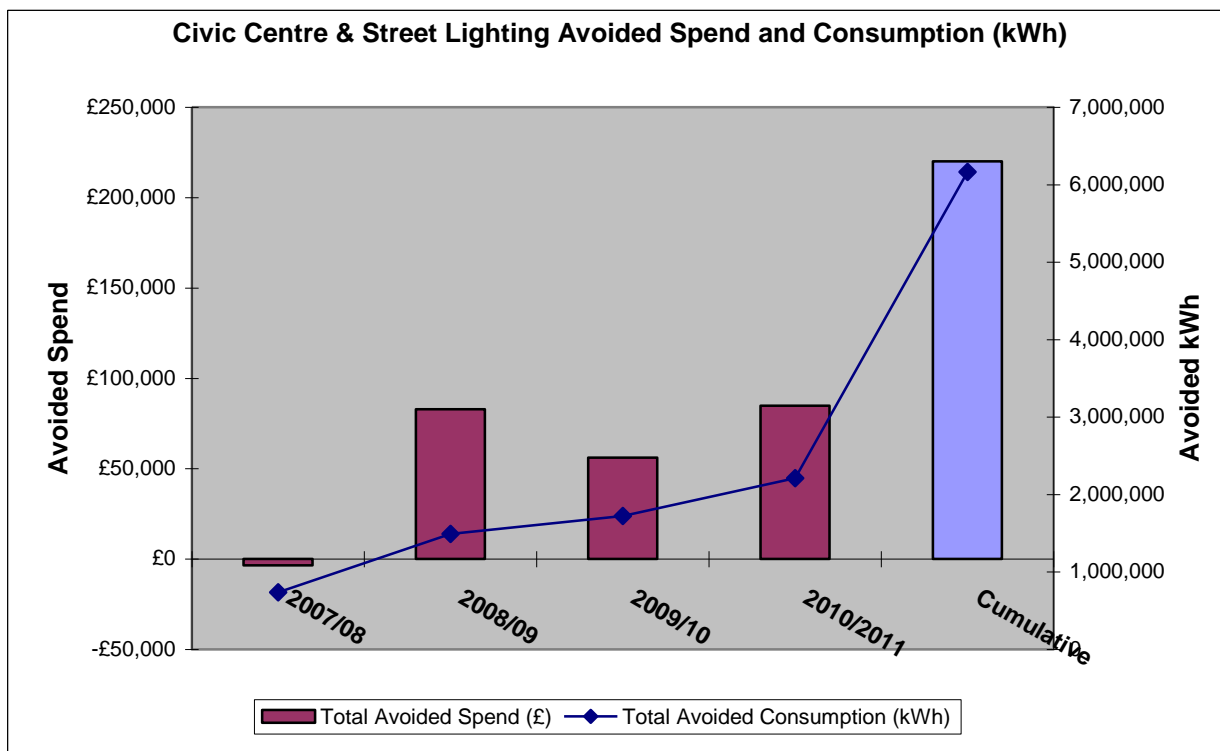
**Table 3: CMP Progress against Baseline**

| Sector (2010/11 sectoral %) | 2006/07 (tCO <sub>2</sub> e) | 2010/11 (tCO <sub>2</sub> e) | Tonnage Change | % Change    |
|-----------------------------|------------------------------|------------------------------|----------------|-------------|
| Buildings                   | 28,610                       | 23,648                       | -4,962         | -17%        |
| (Buildings – Council) (16%) | 5,688                        | 5,150                        | -538           | -9%         |
| (Buildings – Schools) (44%) | 17,216                       | 14,487                       | -2,729         | -16%        |
| (Buildings – Mytime) (12%)  | 5,706                        | 4,011                        | -1,695         | -30%        |
| Fleet/Business Travel (3%)  | 1,001                        | 991                          | -10            | -1%         |
| Street Lighting (18%)       | 5,791                        | 5,769                        | -22            | 0%          |
| Waste/ Water (0.1%)         | 104                          | 48                           | -56            | -54%        |
| Commuting (6.9%)            | 2,274                        | 2,189                        | -85            | -4%         |
| <b>TOTAL</b>                | <b>37,780</b>                | <b>32,645</b>                | <b>-5,135</b>  | <b>-14%</b> |

There are a range of projects that will enable further emissions reductions and assist the Council in achieving its 25% reduction target. Some of these projects will be funded by the Carbon Management Fund (see section 3.18) and others by Property or Highways' budgets.

Since the start of the CMP (2006/07), the Council has avoided more than 6 million kWh of consumption and thereby avoided more than £220k unnecessary revenue spend (Civic Centre and street lighting only – see Figure 2). This is the difference between what the Council would have consumed under the business-as-usual scenario and what was actually consumed, and then applying the annual average energy price to that consumption.

**Figure 2: CMP Avoided Consumption (kWh) and Spend**



**3.15 Council Carbon Reduction:** In 2011, the former National Indicator 185 was replaced by the Single Set indicator 'Sharing Information on greenhouse gas emissions from Local Authority own estate and operations'. It remains a mandatory reporting requirement to publish this dataset online, with DECC linking to it on their own [website](#).

LB Bromley's 2009/10 & 2010/11 data was published on the [Council's website](#) in July 2011 and further data will be reported on an annual basis.

The scope of the new requirement is slightly different from the NI185 and in order to avoid duplication and unnecessary work, officers have aligned it with the Council's Carbon Management Programme data so:

- It has the same organisational scope as the Carbon Management Programme
- 2008/2009 remains the baseline year but the original NI185 baseline data is replaced with the Carbon Management Programme 2008/09 carbon footprint figure
- The 4% per annum reduction target is retained

Table 4 sets out the Council's own targets and progress against baseline. This is shown in both tonnes of CO<sub>2</sub> as well as annual and cumulative percentages.



**Table 4: Progress Year-on-Year and Against Baseline**

| Year    | Reduction target (p.a.) | Reduction achieved | Reduction target tCO <sub>2</sub> e | Achieved tCO <sub>2</sub> e | Cumulative achieved (target) |
|---------|-------------------------|--------------------|-------------------------------------|-----------------------------|------------------------------|
| 2008/09 | 4%                      | n/a                | 37,087 (baseline)                   |                             | -                            |
| 2009/10 | 4%                      | 12.9%              | 35,604                              | 32,314                      | 12.9% (4%)                   |
| 2010/11 | 4%                      | -1%                | 34,120                              | 32,645                      | 11.9% (8%)                   |
| 2011/12 | 4%                      | -                  | 32,637                              | -                           | - (12%)                      |
| 2012/13 | 4%                      | -                  | 31,153                              | -                           | - (16%)                      |
| 2013/14 | 4%                      | -                  | 29,670                              | -                           | - (20%)                      |

As Table 4 shows, in 2009/10 the Council achieved a 12.9% reduction against a 4% target but in 2010/11 emissions increased year-on-year by 1% (largely due to a very cold winter). However, overall, LB Bromley is ahead of target as a cumulative reduction of 11.9% has been achieved, compared with the 8% target.

- 3.16 **Energy Surveys:** Consultants completed a detailed survey of the aging Walnuts' District Heating System. Opportunities were identified (Table 5) ranging from minor works to a complete system overhaul and even a gas-fired Combined Heat and Power Plant to generate electricity and provide local heating. Discussions are now planned between LB Bromley and the heat users (e.g. Bromley Mytime and Orpington College) concerning possible future options.

**Table 5: Estimated Cost, Annual Avoided Spend and Carbon Saving**

| Technology           | Cost            | Avoided Spend   | Carbon Saving               |                          |
|----------------------|-----------------|-----------------|-----------------------------|--------------------------|
| VSD installation     | £8,219          | £2,090          | 13 t/CO <sub>2</sub>        |                          |
| Run around coils     | £43,836         | £6,375          | 73 t/CO <sub>2</sub>        |                          |
| Control improvements | £56,164         | £23,434         | 142 t/CO <sub>2</sub>       |                          |
| CHP Installation     | £299,658        | £59,837         | 296 t/CO <sub>2</sub>       |                          |
| Boiler Improvements  | £427,397        | £53,109         | 159 t/CO <sub>2</sub>       |                          |
| Pool covers          | £31,507         | £19,233         | 36 t/CO <sub>2</sub>        |                          |
| <b>Total</b>         | <b>£866,781</b> | <b>£164,078</b> | <b>719 t/CO<sub>2</sub></b> | <b>Payback 5.3 years</b> |

A general energy survey has also been undertaken of the Central Library site to see what opportunities exist for reducing consumption and costs associated with lighting and heating.

- 3.17 **London Heat Mapping:** In January 2012, the Council worked with the GLA to develop a heat map of the borough. A heat map identifies areas of heat load (demand) and supply and allows a more joined-up approach to sharing heating systems. This heat map is part of the London-wide initiative known as Decentralised Energy and Energy Masterplanning (DEMaP) which is designed to show major energy consumers, fuel consumption, energy supply plants and CO<sub>2</sub> emissions throughout London. This information will be represented on an interactive map which will allow users to identify opportunities for decentralised energy projects. Officers worked with the GLA to populate the heat map for Bromley. This involved collating data on buildings with high heat loads and consumption derived from the Council's NI185 records, planning information and information about the Walnuts District Heating System. In addition to CO<sub>2</sub> emissions data and primary energy consumption, officers also provided information about ownership, typology, heating supply and fuel source of the buildings. This was provided to ARUP who are using GIS software to produce the heat maps. Current analysis shows there is potential for a decentralised energy cluster in Bromley Town Centre. On completion, the [London Heat Map](#) will provide an interactive tool allowing users to identify opportunities for decentralised energy projects both in London and the borough. This map will be updated as more information becomes available.



3.18 **Carbon Management Fund (CMF):** The Council's £500k ring-fenced Carbon Management Fund has been financing invest-to-save energy efficiency projects since 2008 and is providing increasing protection for energy budgets: also see IE&E Sub-committee 18 January 2012 report [ES12006](#). Table 6 shows the CMF's investment costs, and annual avoided carbon and spend.

**Table 6: Carbon Management Fund: Project Summary**

| Completed Projects   | Investment Cost | Projected Annual Avoided Spend | Projected Annual Carbon Saving | CRC Cost at £16/t |
|--|-----------------|--------------------------------|--------------------------------|-------------------|
| Street-signage: conversion from 24hr to dusk-to-dawn switching (#1)    | £43,482         | £18,360                        | 124t                           | £1,984            |
| <b>Current Projects</b>  |                 |                                |                                |                   |
| Voltage Optimisation: Civic Centre electricity supply                  | £89,827         | £30,703                        | 141t                           | £2,256            |
| Street-signage: conversion from 24hr to dusk-to-dawn switching (#2)    | £49,385         | £14,434                        | 95t                            | £1,520            |
| Central Island Columns: conversion from 24hr to dusk-to-dawn switching | £17,920         | £7,197                         | 47t                            | £752              |
| Street Lighting: Fit electronic gear to MI26 Lanterns                  | £93,436         | £20,784                        | 87t                            | £1,392            |
| <b>Planned Projects</b>  |                 |                                |                                |                   |
| Crossing Bollards: conversion from 24hr to dusk-to-dawn                | £19,928         | £11,631                        | 53t                            | £848              |
| Server Room: Evaporative Cooling                                       | £35,000         | £21,192                        | 142t                           | £2,272            |
| North Block: Lighting  | £83,920         | £17,000                        | 77t                            | £1,232            |
| Street Lighting: SON Lamp Replacement and Dimming                      | £242,400        | £51,960                        | 218t                           | 3,488             |

In 2012/13, CMF projects are forecast to save 766t of carbon, avoid £12k CRC allowance costs and avoid £69k energy budget spend. Avoided costs will total ~£600k by 2017/18 (Table 7).

**Table 7: Carbon Management Fund: Projected Avoided Spend**

| PROJECT   | 2011/12<br>£  | 2012/13<br>£  | 2013/14<br>£   | 2014/15<br>£   | 2015/16<br>£   | 2016/17<br>£   | 2017/18<br>£   |
|---|---------------|---------------|----------------|----------------|----------------|----------------|----------------|
| <b>Completed Projects</b>   |               |               |                |                |                |                |                |
| Street-signage: conversion from 24hr to dusk-to-dawn switching (p1) | 13,770        | 18,360        | 18,360         | 18,360         | 18,360         | 18,360         | 18,360         |
| <b>Current Projects</b>   |               |               |                |                |                |                |                |
| Voltage Optimisation (Civic Centre)                                 | 6,415         | 30,703        | 30,703         | 30,703         | 30,703         | 30,703         | 30,703         |
| Street-signage: conversion from 24hr to dusk-to-dawn switching (p2) | 0             | 0             | 0              | 13,162         | 14,434         | 14,434         | 14,434         |
| Central Island Columns  | 0             | 0             | 4,870          | 7,197          | 7,197          | 7,197          | 7,197          |
| Street Lighting: Fit electronic gear to MI26 Lanterns               | 0             | 0             | 0              | 0              | 0              | 17,412         | 20,784         |
| <b>Planned Projects</b>   |               |               |                |                |                |                |                |
| Crossing Bollards: conversion from 24hr to dusk-to-dawn switching   | 0             | 0             | 4,303          | 11,631         | 11,631         | 11,631         | 11,631         |
| Server Room: Evaporative Cooling (savings are 75% annual savings)   | 0             | 0             | 0              | 12,682         | 15,894         | 15,894         | 15,894         |
| North Block: Lighting   | 0             | 0             | 0              | 0              | 0              | 1,080          | 17,000         |
| <b>Total Avoided Spend</b>  | <b>20,185</b> | <b>49,063</b> | <b>58,236</b>  | <b>93,735</b>  | <b>98,219</b>  | <b>116,711</b> | <b>136,003</b> |
| <b>Total Cumulative Avoided Spend</b>                               | <b>20,185</b> | <b>69,248</b> | <b>127,484</b> | <b>221,219</b> | <b>319,438</b> | <b>436,149</b> | <b>572,152</b> |

Completed project savings are based on actual savings and current and planned project figures are based on projected savings.

## **External Borough Initiatives**

3.19 **Summary:** While the Council's environmental impacts are significant, they are much smaller than those of the borough as a whole. For instance, while the Council emits about 32,000t of CO<sub>2</sub> a year, the borough emits about 1.4 million tonnes CO<sub>2</sub> each year (housing, transport and commercial emissions). This isn't surprising because Bromley is London's largest borough by area, with more than 300,000 residents and 130,000 properties. This section deals with borough-wide environment development initiatives, which include:

- Bromley's Environment Awards (3.20)
- Bromley Sustainable Schools Forum (3.22)
- Bromley Environment Partnership (3.23)
- Waste Minimisation Campaigns (3.23 – 3.26)
- Borough Carbon Reduction (3.27)
- Policy Support (3.28)
- Climate Change Adaptation / Resilience (3.29)

3.20 **Bromley's Environment Awards (BEAs):** The Council cannot deliver a 'quality environment' across the whole borough on its own but this is eminently possible with the help of residents and community groups. Naturally the Council wishes to celebrate what people are doing to keep Bromley 'clean and green' and BEAs has been rewarding the best environmental initiatives undertaken by residents, groups, schools and businesses since 1990. Indeed more than 400 awards have been made, over more than 20 years, to say 'thank you' to those who help to care for our shared environment.

The [2011 awards ceremony](#) was held on 15 July 2011 with some 28 award winners and one hundred guests. The event was hosted by the Mayor, Cllr David McBride and Tom Hart Dyke from Lullingstone Castle World Garden as the special guest speaker. Environment Portfolio holder Colin Smith gave the vote of thanks, and winning entries were displayed in the Civic Centre main reception and also posted on the public website (see Appendix 1).

GlaxoSmithKline has now ceased its 13-year sponsorship of the awards as they have moved out of borough. However £6,000 of sponsorship (in cash and in kind) has been secured for the 2012 awards (to be held 13 July 2012) from Coolings Nurseries Ltd and the *News Shopper*.

3.21 **Bromley Sustainable Schools Forum (BSSF):** Bromley has almost 100 Maintained schools and Academies and there are approximately 50,000 children of school age in Bromley so it makes sense to engage with schools if we want Bromley to be more environmentally sustainable. Schools present a valuable opportunity, not only in relation to reducing their direct environmental impacts but also in their ability to influence environmental action at home. The BSSF was launched in summer 2009 and officers continued to engage with schools through initiatives such as Bromley's Environment Awards, which has a specific category for Education, and a regular e-newsletter which disseminates relevant environmental information.

3.22 **Bromley Environment Partnership:** The PDS Committee's response to the 2009/10 Sustainability Review (6 April 2010: Minute 110) noted that 'it was important for the Council to show itself to be a community leader and to work with other public bodies on these issues'. Taking this lead, officers have met with managers from other large Bromley organisations to agree what action can be taken forward to reduce environmental impacts or improve environmental quality. The Partnership was formed in June 2010 and founder representatives include The Glades, The PRUH, RBS Insurance, Bromley College, Affinity Sutton, the Fire Brigade and Police. New members include Thackray Williams and Judge Priestley. Most work is undertaken bilaterally between partners who see a common benefit in working together, such as The Glades sponsorship of the [Penge Green Gym](#) as part of its corporate responsibility role.

**3.23 Waste Minimisation:** While recycling materials and reducing waste arisings is generally environmentally beneficial, it is much better not to create the waste in the first place. In short, if we become more environmentally efficient we should also become more financially efficient.

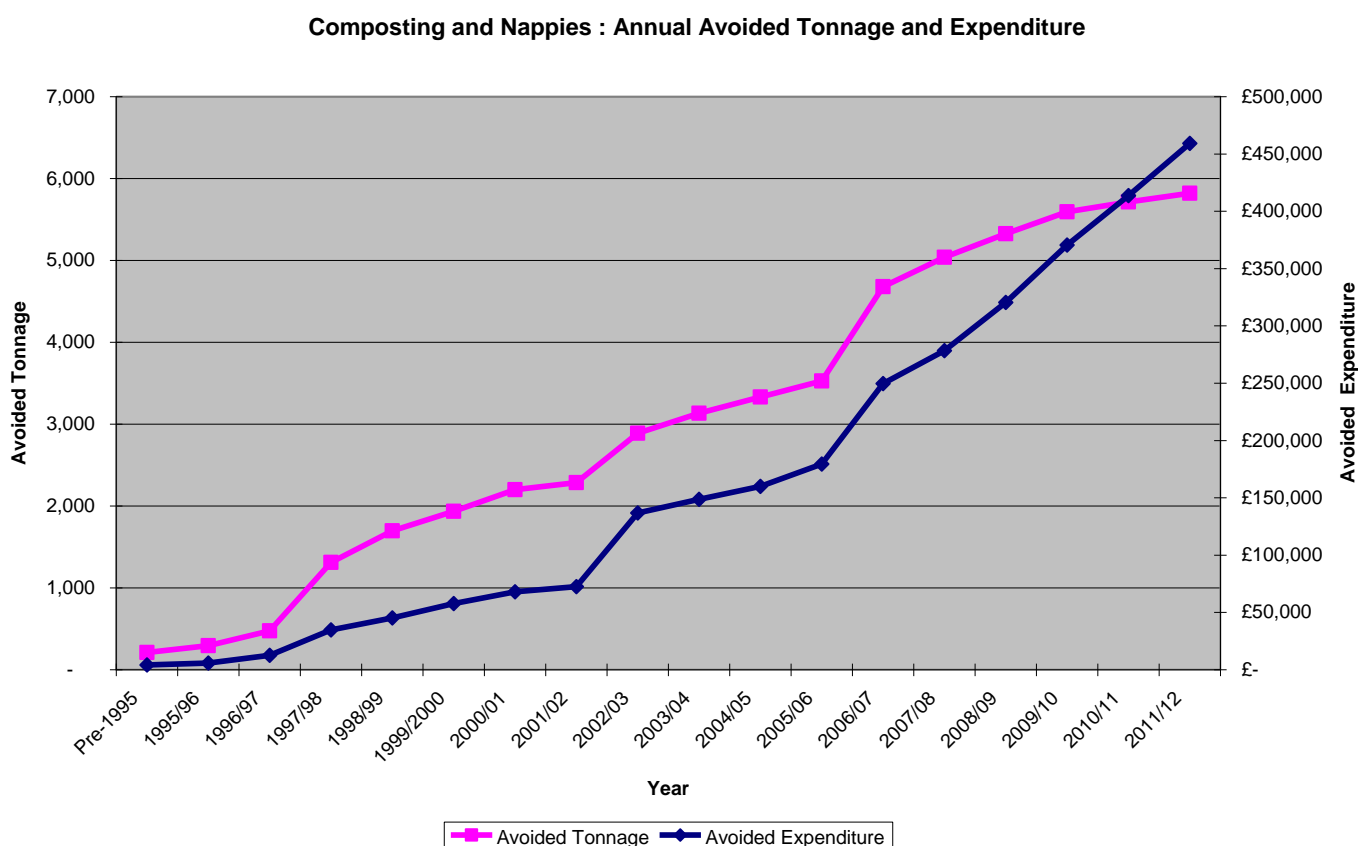
Three long-established campaigns, Home Composting (HC), Real Nappies (RN) and Junk Mail, are operated by the Environment Development team to reduce the environmental impact of the borough's waste arisings and reduce cost pressures on the Waste Service. Table 8 shows that in 2011/12 alone, waste minimisation activity diverted 5,819t of waste and avoided £459,138 of unnecessary revenue spend. And some 55kt of waste and almost £3m of spend have been avoided since records began in 1995.

**Table 8: Waste Minimisation Avoided Tonnage and Expenditure**

|                     | Composting Avoided Tonnage | Real Nappy Avoided Tonnage | Composting Avoided Spend | Real Nappy Avoided Spend | HC & RN Avoided Tonnage | HC & RN Avoided Spend |
|---------------------|----------------------------|----------------------------|--------------------------|--------------------------|-------------------------|-----------------------|
| <b>2011/12</b>      | 5,605t                     | 214t                       | £438,619                 | £20,518                  | <b>5,819t</b>           | <b>£459,138</b>       |
| <b>1995 to date</b> | 52,834t                    | 2,610t                     | £2,874,618               | £141,863                 | 55,444t                 | £3,016,481            |

Annual data for the avoided tonnage and savings attributable to this action is shown in Figure 3.

**Figure 3: Waste Minimisation: Annual Avoided Tonnage and Spend**



While past performance has benefitted both budgets and the environment, it is even more important to sustain such action to protect the Council against future cost pressures. Table 9 shows that over the next four financial years (2012/13 – 2015/16), an additional 25kt of waste is forecast to be diverted from disposal; saving the Council more than £2m in revenue spend (subject to this activity being sustained).

Furthermore, the forecast model shows that by the end of 2015/16, the Council will have diverted almost 81kt of waste since 1995 (Table 9). This activity is projected to have saved the

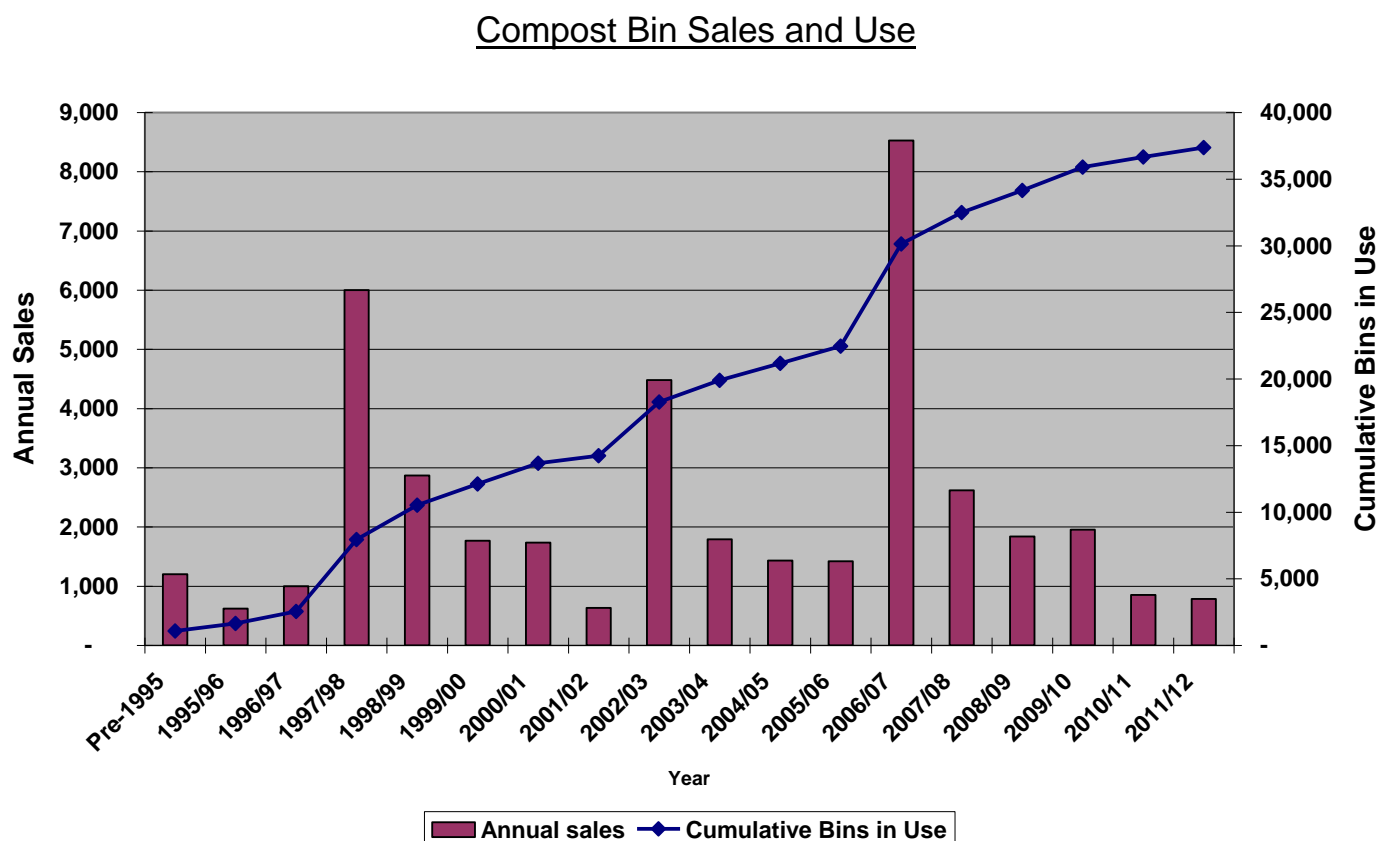
Council more than £5m since recorded waste minimisation activity started, showing the benefit of a sustained approach to tackling costs pressures and environmental impacts.

**Table 9: Waste Minimisation: Avoided Tonnage and Spend (Four-year Forecast)**

| Forecast        | Composting Avoided Tonnage | Real Nappy Avoided Tonnage | Composting Avoided Spend | Real Nappy Avoided Spend | HC & RN Avoided Tonnage | HC & RN Avoided Spend |
|-----------------|----------------------------|----------------------------|--------------------------|--------------------------|-------------------------|-----------------------|
| 2012/13 – 15/16 | 24,033t                    | 1,012t                     | £1,990,231               | £106,968                 | 25,046t                 | £2,097,199            |
| 1995 – 2015/16  | 76,867t                    | 3,622t                     | £4,864,849               | £248,832                 | 80,849t                 | £5,113,681            |

3.24 **Home Composting:** Bromley has a good track record in promoting home composting – largely through the provision of reduced price compost bins. In 2011/12, working in partnership with Straight plc (trading as [Evengreener](#)), more than 750 compost bins have been purchased by Bromley residents making more than 41,500 supplied to date (37k of which are estimated to be in active use – see Figure 4).

**Figure 4: Annual and Cumulative Compost Bin Sales & Use**



As a result of this home composting activity, 5,605t of household waste was diverted from disposal in 2011/12, avoiding almost £439k disposal costs. And since records began in 1995, home composting has diverted almost 53kt and avoided costs of around £2.8m.

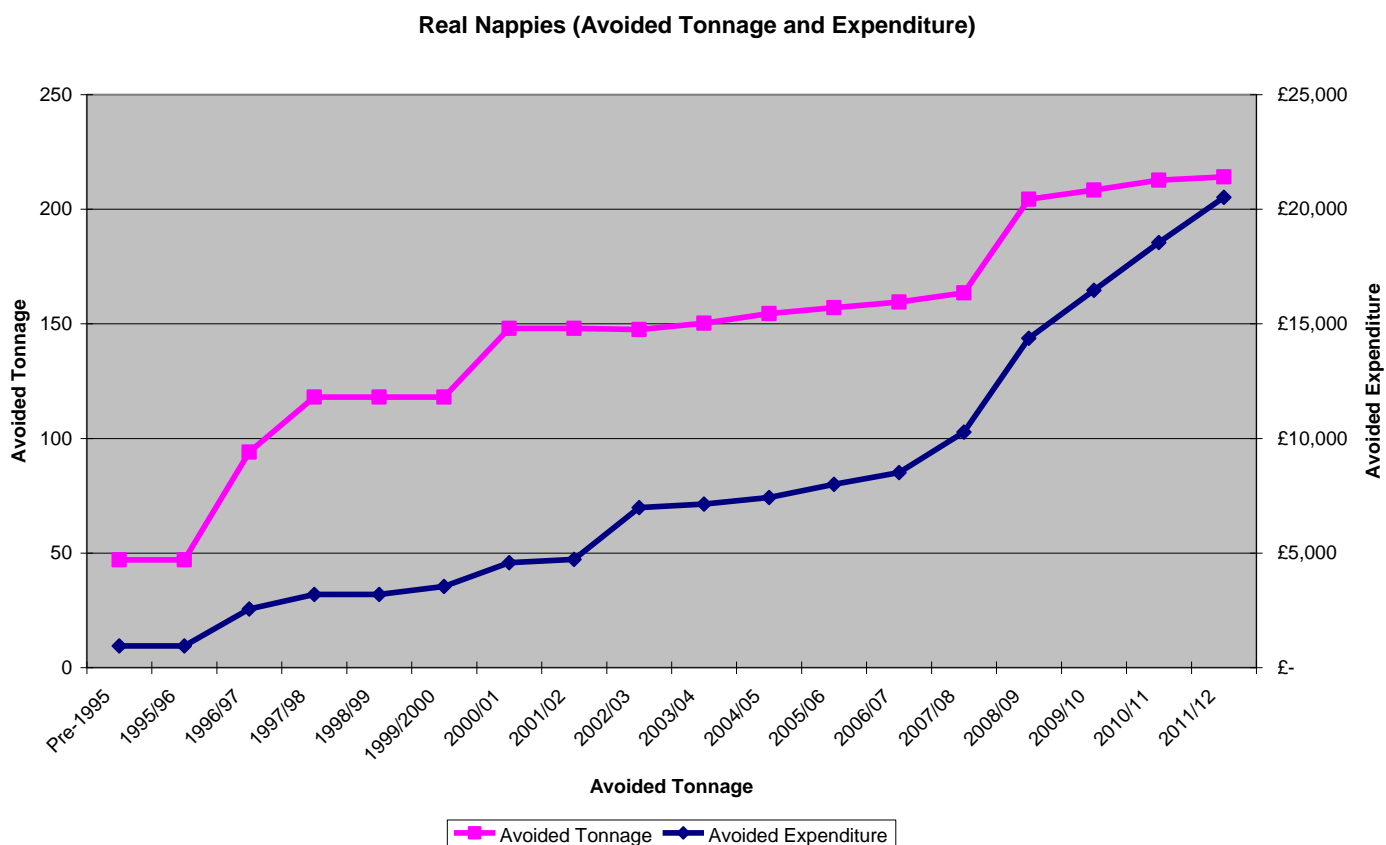
A further 24kt of waste is expected to be diverted over the next four financial years, avoiding an estimated additional £2m disposal spend.

3.25 **Real Nappies:** The Council promotes real nappy use as an alternative to disposables to minimise waste arising, environmental impacts, and costs (both to the resident and the Council). There are around 4,000 births each year in Bromley and at any point in time some 10,000 babies are using nappies – potentially resulting in 60,000 nappies being thrown away every day.

To combat this waste, during 2011/12 the Council promoted the benefits of real nappy use by providing 20 'try-before-you-buy' packs and making 62 waste diversion rewards (to end February 2012). The Council continues to work with local real nappy agents and attends the monthly Early Pregnancy Evenings at the Princess Royal University Hospital. The Council also works with midwives and health visitors to promote real nappies and held three information mornings (two at BEECHE and one at Community House) to encourage real nappy use.

This waste minimisation activity is estimated to have avoided 214t of waste in 2011/12 and saved the Council more than £20k on waste disposal costs (see Figure 5). And since this work started in 1995, the Council has avoided some 2,610t of waste and almost £142k in costs.

**Figure 5: Real Nappy Avoided Tonnage & Spend**



If this activity continues at a similar level it is forecast that around 1kt of waste could be avoided over the next four financial years, avoiding £107k in waste disposal costs.

**3.26 Junk Mail:** Acting in response to residents' concerns about the amount of unsolicited post and leaflet drops received, the Council continues to campaign on junk mail (2011/12 was the fifth year of this campaign). Untargeted mailings cause annoyance and generate waste and cost. Requests for the Council's junk mail opt-out packs have now totalled more than 5,000 but it is not possible to reliably calculate the diversionary impact of this work. A new responsibility agreement between the government and the direct marketing sector means that a simpler on-line method of opting-out of such unwanted mailings is expected shortly.

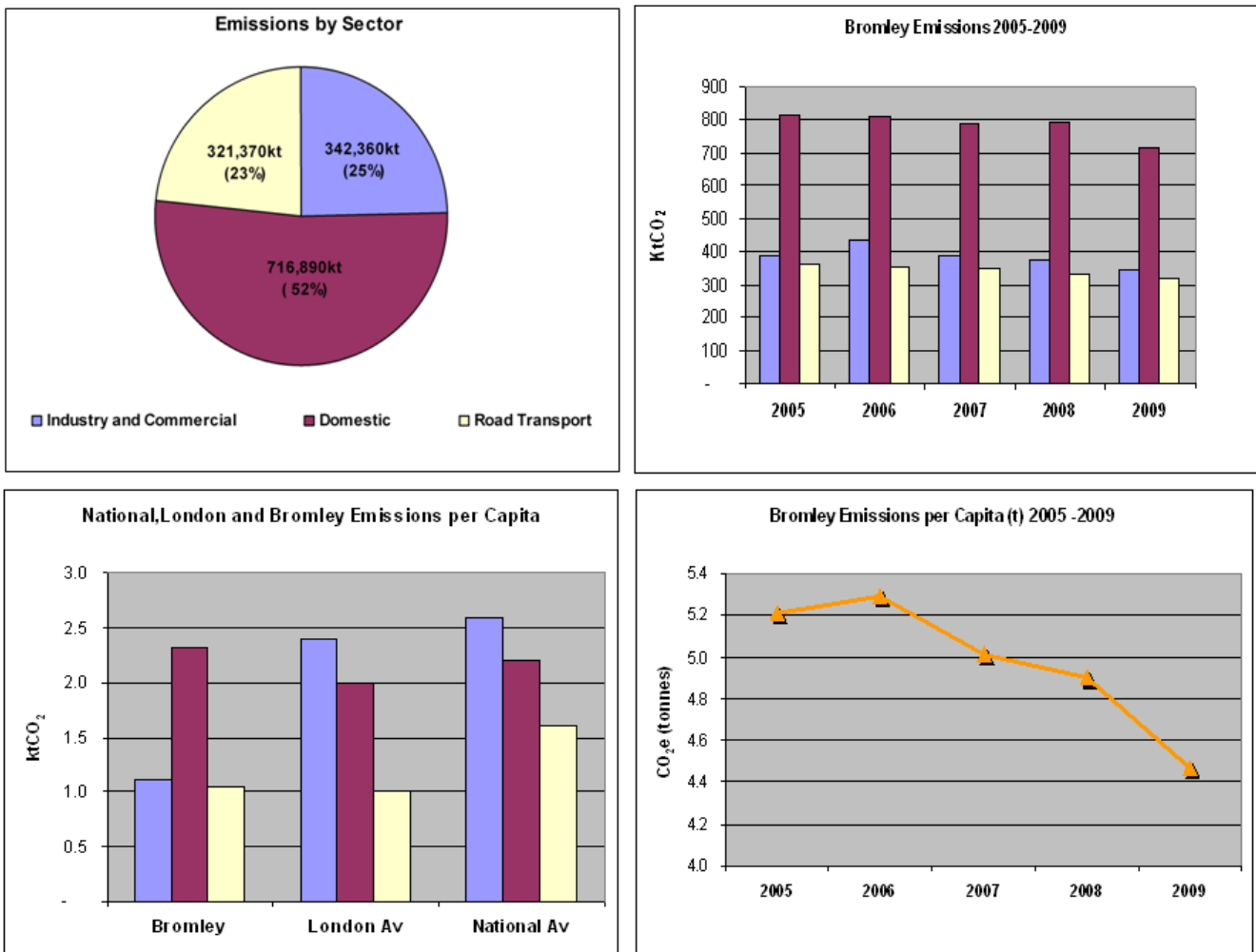
**3.27 Borough Carbon Reduction:** NI 186, which measured per capita reduction in CO<sub>2</sub> emissions across the borough, is now referred to as '*Carbon Dioxide emissions within the scope of influence of Local Authorities*'. In 2011, DECC released the figures for 2009. The data set includes emissions in Local Authorities' influence such as Industrial and Commercial, Domestic and Road Transport emissions. In 2009, Bromley as a borough emitted a total of 1.4Mt CO<sub>2</sub>

comprising: domestic emissions at 717kt (52%); road transport emissions at 321kt (23%); and commercial emissions at 342kt (25%) – see Figure 6.

Bromley’s CO<sub>2</sub> emissions profile shows a marked variance with London and national averages;

- Industry and commerce emissions were 1.1t per capita in 2009, much lower than the London and national average of 2.4t and 2.6t respectively.
- Domestic emissions were 2.3t per capita, above the London and national average of 2.2t and 2.0t respectively. In fact, Bromley has the highest domestic emissions of all the London boroughs.
- Transport emissions were 1t per capita and ranked 13<sup>th</sup> out of all the London boroughs. This is a marked improvement from 2005 when Bromley had the fifth highest transport emissions per capita in London.

**Figure 6: Progress on Borough-wide Carbon Reduction**



Overall, the analysis is promising and indicates that per capita emissions have fallen by 9% between 2008 and 2009 and by 14% fall since 2005. However, although the emissions continue to fall, the borough still faces fundamental infrastructure (e.g. hard-to-treat housing) challenges to making further improvements.

For information, the [AEA Microgen Index](#) reports that 0.22% (0.349 MWe) of UK micro-generation (small-scale solar PV and CHP) are installed in LB Bromley.

**3.28 Policy Support:** Support has been provided to officers in a number of areas including:

- Bromley’s Local Implementation Plan: Officers provided advice on the Strategic Environmental Assessment for the recently published (January 2012) transport strategy. A



particular focus was our changing climate; both mitigating the impact from Bromley's transport and improving the resilience of infrastructure against changes already under way.

- Bromley North Village: Officers were asked to prepare a paper on Sustainability Best Practice Opportunities for this project. The subsequent briefing paper included options to improve design standards for buildings, biodiversity and energy conservation.
- Core Strategy: Bromley's Core Strategy will be the overarching document within Bromley's new planning framework. Officers contributed specialist guidance to sections on mitigation and adaptation, energy efficiency, decentralised energy and renewable energy.

3.29 **Climate Change Adaptation / Resilience:** NI 188 was originally designed to measure progress in addressing risks associated with our changing climate and embed the management of climate risk across all council services and plans. Councils were required to report on their level of preparedness through a process indicator at the end of each financial year up to 2010/11. However this requirement ceased as a result of the National Indicator set review.

Despite this, the costs and risks (e.g. floods and heat waves) associated with our changing climate mean that adaptation remains a national priority. In January 2012, the government published the [UK Climate Change Risk Assessment](#) which identifies five priority areas for action in managing climate risks. This will inform the proposed the proposed [National Adaption Plan](#): the government sees a major role for local authorities at the forefront of such action. In addition, the Mayor of London has issued an [Adaptation Strategy](#) which will also influence environmental resilience action in Bromley.

At a local level, Bromley needs to ensure that its service provision is suitably adapted to deal with the consequences our changing climate. Under the former reporting regime, the Council had achieved level 1 (assessing local vulnerabilities) and had embarked on achieving the level 2 target (a comprehensive risk assessment of the resilience of our service provision). Officers are continuing to work on this risk assessment and will use the results to formalise an adaptation strategy by end of 2012/13.

#### 4. POLICY IMPLICATIONS

- 4.1 Environmental sustainability generally contributes to the Council's Building a Better Bromley 2020 Vision, especially the Quality Environment and Excellent Council priorities. The Quality Environment section states that 'we are ... determined to work together in reducing energy consumption' and 'reducing energy use' is also identified as an issue to be tackled and how we will judge success. One of the Council's Building a Better Bromley priorities for 2012/13 is to "Improve Energy Efficiency in the Borough".
- 4.2 It is also Council policy to reduce its own operational carbon emissions by 25% over five years (Carbon Management Programme) and the Council has a statutory duty to comply with the Carbon Reduction Commitment Scheme.



## 5. FINANCIAL IMPLICATIONS

- 5.1 In 2008/09, the Council established an invest-to-save Carbon Management Fund (section 3.18) to help achieve the Carbon Management Programme's 25% carbon reduction target. The Fund which was approved by the Executive (ED 08067) is scrutinised by IE&E Sub-committee (IE&E Sub-committee report: 18 January 2012 [ES 12007](#)) and is summarised in Table 10.

**Table 10: Carbon Management Fund: Financial Summary**

| <b>Carbon Management Fund</b>                    | <b>£'000</b> |
|--|--------------|
| Funding Received to date as at 31.3.2011         |              |
| LBB Capital Programme                            | 250          |
| Four Instalments received from Salix             | 250          |
| Total funding received to date                   | 500          |
| Less expenditure to 31.03.11                     | (279)        |
| Add back loan repayments to 31.03.11             | 110          |
| <b>Balance as at 31.03.11</b>                    | <b>331</b>   |
| Less actual spend 2011/12 as at 31.12.11         | (15)         |
| Less commitments as at 31.12.11                  | (55)         |
| Add back loan repayments 2011/12                 | 59           |
| <b>Latest uncommitted balance as at 31.12.11</b> | <b>320</b>   |

- 5.2 GlaxoSmithKline provided £2,500 sponsorship towards the cost of Bromley's Environment Awards 2011 (see section 3.20).
- 5.3 The £27,510 sustainability project budget was spent on delivering certain projects in this report.
- 5.4 The cost of purchasing CRC allowances for 2011/12 is currently estimated to be £297,563k (see Section 3.13, table 2 and Executive Report [ES12005 agenda item 6](#) for more detail).

|  |   |
|--|---|
| <b>Non-Applicable Sections:</b>                    | <ul style="list-style-type: none"> <li>• Legal Implications,</li> <li>• Personnel Implications</li> </ul>   |
| Background Documents: (Access via Contact Officer) | <ul style="list-style-type: none"> <li>• Sustainable Development Review: Terms of Reference (Environment Policy Development &amp; Scrutiny Report ELS 05366 - agenda item 7)</li> <li>• Sustainable Development Review (Environment PDS and Portfolio Holder ELS 06115 - agenda item 6)</li> <li>• Sustainable Development Review Update 2007 (Environment &amp; Leisure PDS Report ELS 07048 - agenda item 5)</li> <li>• Sustainability Annual Report (Environment &amp; Leisure PDS Committee Report ELS 08032 - agenda item 12)</li> <li>• Sustainability Annual Report March 2009 (Environment PDS Report <a href="#">ES 09043</a> - agenda item 6)</li> <li>• Sustainability Annual Review 2009/10 (Environment PDS Report <a href="#">ES10045</a> - agenda item 8)</li> <li>• Environmental Sustainability Annual Review 2010/11 (Environment PDS Report: <a href="#">ES11027</a> - agenda item 10)</li> <li>• Carbon Management Programme Report 2010/11 (Executive Report 7 March 2012: <a href="#">ES 12007</a> - agenda item 5)</li> <li>• Carbon Management Fund: Progress Report 2010/11 (IE&amp;E Sub-committee Report 18 January 2012: <a href="#">ES12006</a> - agenda item 7)</li> <li>• Carbon Reduction Commitment Scheme 2010/11 Annual Report (Executive Report 7 March 2012: <a href="#">ES12005</a> - agenda item 6)</li> </ul> |