

**Decision Maker:**      **Executive**

**Date:**                      **1 February 2012**

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

**Title:**                      **CARBON REDUCTION COMMITMENT (CRC) SCHEME:  
2010/11 ANNUAL REPORT**

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**Chief Officer:**              Nigel Davies: Director of Environmental Services  
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**Ward:**                      All

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1.    Reason for report

- 1.1    The Executive received a report (ES09101) on the then proposed Carbon Reduction Commitment scheme at its 9 December 2009 meeting. The report identified significant future financial liabilities. The Executive endorsed the report's recommendations and requested annual progress reports be submitted to ensure it was kept informed about this corporate risk.
- 1.2    The Executive received the first annual update report on 12 January 2011 (ES10189) and resolved that the Council should continue to act to reduce energy use and carbon emissions. It further resolved that representations be made to the Secretaries of State for Education and Energy and Climate Change to exclude academy schools from council responsibilities.
- 1.3    This second annual update report alerts the Executive to a forecast liability of £3m from 2011/12 to 2015/16 and continuing uncertainty regarding the mechanics of the scheme's operation.

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2.    **RECOMMENDATIONS**

- That the Executive:
- 2.1    Endorses the need for sustained action to reduce energy use and carbon emissions and to continue to improve data management to mitigate financial liabilities under the scheme;
  - 2.2    Receives a further annual report setting out 2011/12 scheme compliance, costs and emissions together with four year forecast of the Council's financial liabilities.

### Corporate Policy

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

1. Cost of proposal: Estimated cost £299k (2011/12)
  2. Ongoing costs: Recurring cost. Rising to £401k (2012/13); £524k (2013/14); £877k (2014/15); and £1,027k (2015/16)
  3. Budget head/performance centre: Central Contingency; Dedicated Schools Grant
  4. Total current budget for this head: £386k (£186k Central Contingency + £200k DSG)
  5. Source of funding: Cental Contingency; Dedicated Schools Grant
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### Staff

1. Number of staff (current and additional): 2 fte
  2. If from existing staff resources, number of staff hours:
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### Legal

1. Legal Requirement: Statutory requirement.
  2. Call-in: Call-in is applicable
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### Customer Impact

1. Estimated number of users/beneficiaries (current and projected): N/A
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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

#### Background

- 3.1 The Carbon Reduction Commitment scheme remains fundamental to Central Government's strategy for delivering the carbon budget targets set out in the Climate Change Act 2008. The CRC is a mandatory scheme covering organisations which use more than 6,000MWh of electricity annually. In practice, participants have to record and report on their carbon emissions (from 2010/11) and then purchase sufficient allowances to cover their emissions (from 2011/12).
- 3.2 The scheme is aimed at medium-sized, non-energy intensive, public and private sector organisations. [2,762](#) organisations (including all London boroughs) are currently registered with the Environment Agency and 2,102 organisations have submitted Annual and Footprint reports.
- 3.3 The scheme was first reported to the Executive in December 2009 (ES09101) and reports are now provided annually (ES10189: January 2011) forecasting our emissions and liabilities.
- 3.4 Because the Council already has an active Carbon Management Programme (Executive report ES12007: January 2012) LB Bromley was in a good position to comply with this statutory duty - although considerable amounts of work were necessary to comply with this rather complicated scheme. The measures in the Carbon Management Programme are not only helping to reduce energy consumption and control costs but will also help to limit our future CRC tax liabilities. Our forecast of the carbon emissions on which our CRC tax will be based is set out below.

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

<b>Tonnes CO<sub>2</sub></b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
Operational Property	7,730t (28%)	7,576t (28%)	7,424t (27%)	7,276t (21%)	7,130t (20%)
Maintained Schools	9,639t (35%)	9,831t (36%)	10,028t (36%)	10,229t (29%)	10,433t (29%)
Academy Schools	9,910t (36%)	10,108t (37%)	10,311t (37%)	10,517t (30%)	10,727t (30%)
Unmetered Consumption (Street Lighting and CCTV)	-	-	-	7,457t (21%)	7,457t (21%)
<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>

*Carbon dioxide emissions may be termed 'carbon,' 'emissions' or 'CO<sub>2</sub>' for brevity and expressed in tonnes (t)  
Bromley has excluded unmetered consumption from the first phase (this appears in Phase 2 commencing 2014/15)*

- 3.5 The scheme requires carbon data to be accurately recorded and reported or civil penalties may apply. In addition, carbon allowances have to be purchased retrospectively to cover carbon emissions from Council operational property, schools and street lighting. Our current forecast for 2011/12 is that Bromley will report 27,279t.
- 3.6 Schools comprise the largest single element of the Council's carbon. The Council is required to administer the scheme and to purchase allowances on behalf of both maintained and academy schools – though this is currently subject to consultation and may change.
- 3.7 The CRC has already been changed from a 'cap and trade' scheme, to what is effectively a tax: while it is not expected to be abolished, further changes to simplify the scheme are expected.
- 3.8 The scheme is regulated by the Environment Agency and an annual subsistence fee of £1,200 is payable. In July 2011, LB Bromley submitted its first annual (2010/11) data:
- The Footprint Report (our baseline for the first phase) which shows that LB Bromley's Total Footprint Emissions were 35,448t and Regulated Emissions were 31,922t

- The Annual Footprint Report for 2010/11 reports 32,378t (31,922t Regulated Emissions plus an uplift). This annual footprint report data will be used in future years to calculate our CRC tax.
- 3.9 61,168,143t were reported by all participants in England and Wales to the Environment Agency for 2010/11. If allowances had to be purchased for 2010/11, this would have raised £734m for HM Treasury. The average cost per participant would have been £349k. Local Authorities constitute ~11% (£85 million) of the £734m cost. Birmingham is expected to be the largest local authority contributor (~£1.2m) and 50 local authorities may expect to pay more than £500k p.a.
- 3.10 LB Bromley's liabilities are significant at some £3m over a five year period. This is dependent to a large extent on the treatment of schools and this has recently been the subject of consultation.

## **Scheme Changes**

- 3.11 The following sets out key recent scheme changes (see Appendix for scheme information).

### **October 2010**

- Comprehensive Spending Review announces money raised from the sale of allowances would be retained by the Government rather than recycled back to CRC participants.
- As a consequence, the Performance League Table becomes essentially a reputational tool.
- First sale of allowances to cover 2011/12 emissions changed from 2011 to 2012.

### **November 2010**

- Government consulted on minor changes to the CRC Energy Efficiency Scheme Order 2010. The main effect was to put back deadlines to allow a more detailed review CRC simplification.

### **January 2011**

- Government issued five discussion papers (not formal consultation) setting out simplification options.

### **April 2011**

- November 2010 consultation resulted in the CRC Scheme (Amendment) Order 2011

### **June 2011**

The government announced key proposals on the future of the CRC from Phase 2:

- CRC will not be extension to Climate Change Levy but a separate scheme
- Sites covered by Climate Change Agreements and EU Emissions Trading Scheme to be excluded.
- Allowances will not be auctioned in Phase 2. Instead there will be two fixed-price sales each year (a cheaper forecast/forward sale and a more expensive retrospective sale).
- In Phase 1 allowance purchases will be retrospective only.
- Performance League Tables will be retained but may be altered.
- Rules on organisational structures will be simplified: Parent organisations will have the option to disaggregate to better match their "natural business units."
- Trusts: compliance responsibility allocated to the entity with commercial interest in the property.
- The Landlord and Tenant rule remains unchanged with Landlords keeping responsibility for supplies of energy to their tenants (Joint responsibility rules were explored).
- Simplification of the qualification rules: Only electricity measured by settled half hourly meters will count towards an organisation qualifying for the scheme.
- The number of fuels will be reduced from 29 to four: We will only report on electricity, gas, kerosene and diesel (and only if the latter two are used for heating). Off-road vehicles will be exempt.
- The 90% *de minimis* rule and Footprint Reports will be scrapped. Participants will be required to report on 100% of their supplies of electricity, gas, kerosene and diesel. Therefore, Footprint Reports and the Residual Measurement List will not be needed.
- Evidence Pack requirements will be reviewed at the end of the first auditing cycle (late 2011 / early 2012) to ascertain whether the administrative burden on participants can be reduced.
- Records of energy use will only need to be retained for six years, instead of 12 years.

### **August 2011**

- Review of Academies' participation in the CRC Energy Efficiency Scheme.

### **February to April 2012**

- Government to consult on draft legislation to give effect to the changes it announced in June 2011.

### September 2012

- Government to publish responses to the consultation on draft legislation
- Environment Agency to publish updated guidance on qualification, registration, supply and organisational rules to reflect the changes made to the CRC.

### December 2012

- The Environment Agency to publish remaining guidance on the revised CRC.

### April 2013

- Amended CRC legislation (for Phase 2) will come into force.

## Scheme Timetable

3.12 The following timetable sets out the key dates for qualification, registration, reporting, allowance purchasing and league table publication.

**Table 2: Timeline**

Qualification period for first phase opened	January 2008
Qualification period for first phase ended	December 2008
Registration for the first phase: 1 April 2010 - 30 September 2010	April-Sept 2010
Submit annual report for 2010/11	July 2011
Submit footprint report for 2010/11	July 2011
Publication of the first CRC performance league table	November 2011
Qualification period for the second phase of the CRC begins	April 2012
First retrospective sale of CRC allowances for 2011/12 emissions	June 2012
Submit annual report for 2011/12	July 2012
Purchase allowances for 2011/12	July 2012
Updated guidance qualification, registration, supply and organisational rules	September 2012
Publication of the second CRC performance league table	October 2012
Qualification period for the second phase of the CRC ends	March 2013
Registration for the second phase of the scheme – 1 April - 30 September 2013	April-Sept 2013
Second sale of CRC allowances for retrospective 2012/13 emissions	June 2013
Submit annual report for 2012/13	July 2013
Purchase allowances for 2012/13	July 2013

## Environment Agency Reporting 2010/11

3.13 In July 2011, LB Bromley reported its 2010/11 carbon emissions on schedule to the Environment Agency (for information, late reporting may be subject to civil penalties). Two reports were required for 2010/11 (thereafter only annual reports are required for the 1<sup>st</sup> phase):

- Footprint Report: which defines our baseline for the entire first phase
- Annual Footprint Report: which is used in future years to calculate our liabilities etc.

3.14 It should be noted that the carbon factors and scope used to define our CRC footprint differ from those used for the Carbon Management Programme, so direct comparisons are not possible.

### 2010/11 Footprint Report

3.15 In 2010/11 LB Bromley, as an organisation, emitted 35,664t. This comprised:

- Core sources (emissions associated with larger electricity and gas meters): 28,319t
- Opted-in residual emissions (smaller sources to achieve 90% of TFE): 3,603t
- Core plus Opted-in residual sources are our Regulated Emissions: 31,922t
- Opted-out residual emissions (the remainder of our smaller sources): 3,526t:
- Regulated plus Opted-out residual emissions are our Total Footprint Emissions: 35,448t
- Excluded emissions (CCTV): 216t make our Organisational Emissions: 35,664t

## 2010/11 Footprint Report

Emissions	tCO <sub>2</sub>
Organisational Emissions <sup>1</sup>	35,664
Total Footprint Emissions <sup>2</sup> (TFE)	35,448
Regulated CRC Emissions <sup>3</sup>	31,922
Core Emissions <sup>4</sup>	28,319
Opted-in Residual Emissions <sup>5</sup>	3,603
De-minimised Residual Emissions <sup>6</sup>	3,526
Exclusions & Exemptions <sup>7</sup>	216

<sup>1</sup> All emissions

<sup>2</sup> All emissions minus exclusions and exemptions

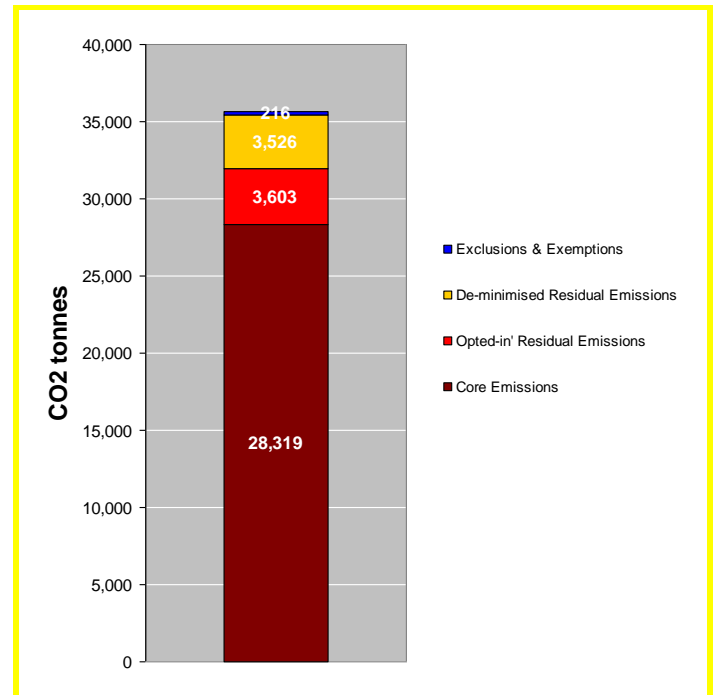
<sup>3</sup> Core & Opted-In Residual Emissions (90% of TFE)

<sup>4</sup> Large consuming meters

<sup>5</sup> Smaller sources required to achieve 90% of TFE

<sup>6</sup> Smaller sources we chose not to include

<sup>7</sup> CCTV excluded



## 2010/11 Annual Report

3.16 The Annual Report will be used in future years to calculate our CRC liabilities. LB Bromley reported 32,378t emissions for 2010/11. This is based on the Core and Opted-in residual emissions from the Footprint Report. However, the figures differ because 10% uplift is applied to estimate data.

- Core sources (28,319t) plus uplift (220t): 28,539t
- Opted-in residual emissions (3,603t) plus uplift on estimated emissions (236t): 3,839t

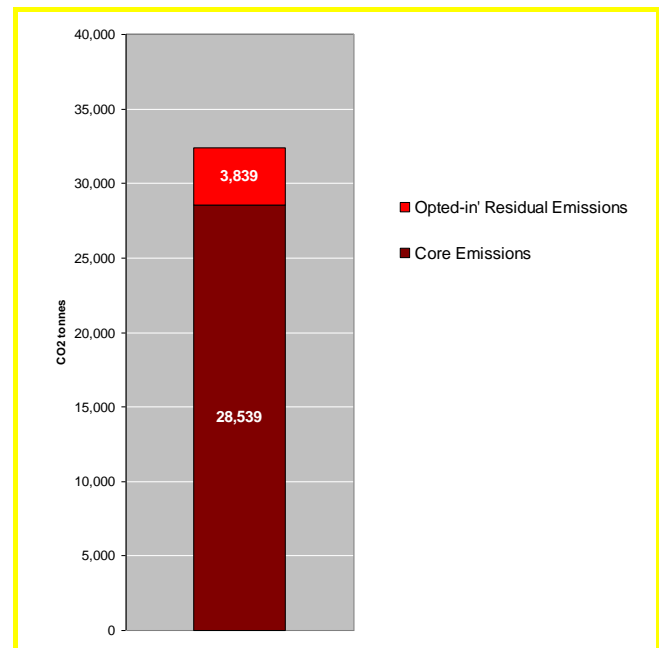
## 2010/11 Annual Report

	Emissions	Uplift	tCO <sub>2</sub>
Core Emissions <sup>1</sup>	28,319	220	28,539
Opted-in Residual <sup>2</sup>	3,603	236	3,839
Regulated Emissions <sup>3</sup>			32,378

<sup>1</sup> Large consuming meters

<sup>2</sup> Sources required to achieve 90% of Total Footprint Emissions

<sup>3</sup> Core plus opted in residual sources plus uplift



3.17 In 2010/11, LB Bromley's Footprint (defined as gas and electricity consumption only) showed that academy schools were the largest sector (28%) followed by maintained schools (27.3%), then operational property (22.9%) and unmetered consumption (21.6%).

**Table 3: Organisational carbon by sector**

<b>LBB Organisational Carbon (tCO<sub>2</sub>)</b>		<b>100.0%</b>
<b>Operational Properties</b>		<b>22.9%</b>
• Cemeteries		0.1%
• Civic Centre		6.5%
• Community & Youth Centres		3.0%
• Day Centres		1.3%
• Depots		0.4%
• Libraries		2.6%
• Other - Miscellaneous		4.0%
• Other - Car Parks		1.4%
• Other - Investment Property		0.1%
• Other - Markets		0.1%
• Other - Public Toilets		0.2%
• Parks & Pavilions		1.8%
• Town Halls		1.4%
<b>LBB Maintained Schools</b>		<b>27.3%</b>
• Primary Schools		20.4%
• Secondary Schools		4.2%
• Special Schools		2.7%
<b>Academy Schools</b>		<b>28.2%</b>
<b>Unmetered Consumption</b>		<b>21.6%</b>
• CCTV		0.6%
• Street Lighting		21.0%

## Evidence Pack

3.18 The Evidence Pack is a comprehensive collection of all our relevant information and data and is required for all scheme participants. The records have to be up-to-date, accurate and 'easy to understand', and ready for auditing from August 2011. The Council can expect to be externally audited at least once in each phase. Auditing is done on a risk basis and LB Bromley was not selected in the first cohort. The following summarises the records which have to be collated in an Evidence Pack (and must be maintained and updated going forward). LB Bromley's are held on Onebromley so they may be accessed by relevant officers and the CRC Programme Board.

Organisational structure records: such as corporate structure and officer responsibilities.

Data records, including:

- The energy supply data that we submitted
- Qualifying half-hourly meter supply during 2008 submitted as part of our registration
- Information supporting our Footprint Report (such as energy supplies to excluded sources and unconsumed supply e.g. heat sold to others from the Walnuts Boiler Plant)
- Our Source List and Residual Measurement List
- Supplier invoices and statements
- Evidence of renewable energy generation
- Records of meter readings
- Evidence to support performance metrics

Special events/change records, covering:

- 'Unusual' events (e.g. actions taken following a meter failure or a change of supplier)
- Changes to organisational structure

- Copies of any correspondence with the Environment Agency

Audit certificate: The Council is required to conduct an Internal Audit of its evidence pack and maintain the record or audit certificate

- 3.19 The Council's Internal Audit function undertook an audit of the Evidence Pack, including spot checks on data. Their subsequent report confirmed that its structure, content and data appeared robust and that there would be value in having data collated in this manner in future.
- 3.20 Subsequent actions have been taken to address the Internal Audit Report recommendations.
- 3.21 For the record, CRC experts at LASER commented favourably on the quality of the LB Bromley Evidence Pack.

### Performance League Table

- 3.22 The Performance League Table (PLT) was originally to have been used to determine participants' financial reward or liability according to league ranking. Following the 2010 Comprehensive Spending Review the government changed the scheme's rules, effectively turning the CRC into a carbon tax (for Phase 1), making all participants financial losers.
- 3.23 The PLT has lost its primary purpose but it has been retained to keep relative performance in the public eye. However, it is questionable to what extent this constitutes a useful approach or whether it is even sensible to compare organisations from different sectors. The important issue for participants isn't the PLT but to maintain a consistent focus on reducing energy consumption, as this reduces procurement costs, carbon emissions, and CRC liabilities.
- 3.24 For the record, the [2010/11 PLT data](#) was published by the Environment Agency on 8 November 2011 and LB Bromley ranked 584<sup>th</sup> of 2,102 participants and was 8<sup>th</sup> best performing of the London boroughs. Here is a link to LB Bromley's [participant summary](#).
- 3.25 The public sector (28% of scheme participants) scored slightly better than the private sector with an average rank of 812 (Early Action Metric score of 29) against the private sector's average rank of 925 (Early Action Metric score of 22). This may reflect a more proactive approach / understanding in the public sector or, perhaps, the private sector has been more focussed on emissions reduction (and less on the process of scheme compliance).
- 3.26 Under the original scheme LB Bromley would have been a net financial beneficiary, having almost achieved top quartile performance. However this is academic as rule changes mean a) allowances no longer have to be purchased for 2010/11 and b) the PLT will not be used to determine the costs: allowance costs apply from 2011/12 and are based solely on emissions.
- 3.27 The PLT is complicated with different weightings being applied to three performance metrics over the scheme's first four years, and a number of further complicated calculations being performed to determine participants' final rankings.

Performance League Table: Metric Weighting Table

	Year 1: 2010/11	Year 2: 2011/12	Year 3: 2012/13	Year 4 : 2013/14 on
Early Action Metric	100%	40%	20%	0%
Absolute Metric	0%	45%	60%	75%
Growth Metric	0%	15%	20%	25%

- 3.28 For 2010/11 data, the sole performance measure is known as the Early Action Metric (EAM), which is broadly designed to recognise proactivity. There are two EAM measures and these relate to the proportion of participants':



- emissions certified under one of the seven accredited carbon management schemes (e.g. the Carbon Trust Standard); and
- electricity and gas measured through voluntarily-installed automatic meter reading (AMR) devices, dynamic unmetered supply, and daily-read gas meters.

### **2010/11 League Table Performance**

3.29 In 2010/11, Bromley was covered by Carbon Trust Standard certification for the majority ([67.5%](#)) of its emissions and also had an AMR coverage score of [16.47%](#). These two positive measures resulted in high performance which would have been even better had Bromley:

- included dynamically procured street lighting electricity (which constitutes ‘voluntary AMR’)
- progressed with a planned AMR swap-out programme for gas and electricity meters

3.30 However with the change to a tax-based scheme, the Programme Board took the view that:

- street lighting emissions should be excluded by changing from dynamic to passive procurement to avoid costs of ~£88k per annum (in Phase 1). This was also done by the majority of London boroughs and this will have affected their table positions and costs too
- comprehensively exchanging manually-read meters for AMR devices (ahead of the government’s planned swap out) would not be cost-effective and therefore did not proceed.

3.31 A perverse outcome of the switch to a tax-based system has been for many participants to rein back on existing and planned activity designed to improve their league table position.

3.32 PLT reporting has, rather uncritically, assumed a clear correlation between league table position and effective carbon management. While this is more likely than not, it is not a perfect measure: it simply reflects proactivity as measured by voluntary AMR and external certification.

3.33 Whatever the initial intention, or public understanding, the PLT presents a potential reputational risk for those who are perceived to be underperforming and, equally, a PR opportunity for those with a high league table ranking.

### **2011/12 League Table Performance**

3.34 It is difficult to predict our future PLT position given a host of unknowns including:

- change in our absolute performance (a material factor for the first time) which may benefit from exclusion of unconsumed supply for the first phase
- the amount of voluntarily installed AMR (which is unlikely to change greatly) or third party certification we will achieve
- the fate of Academy Schools under the revised rules, which will affect LB Bromley (positively or negatively depending on the decision) far more than other councils
- and the performance of other participants, which cannot be accurately predicted at all

### **Maintained & Academy Schools**

3.35 Local authorities are currently required to purchase carbon allowances and to administer the CRC scheme on behalf of all schools in their area. Schools are widely defined and include maintained, academy, and free schools – though not private schools.

3.36 In return, schools are under a duty to provide reasonable assistance to the Council. In LB Bromley this relates to uploading monthly energy consumption data to the Laser Bureau Service portal (which also helps schools to monitor their energy consumption) and helping to source annual Energy Supplier Statements and other information relevant to the production of Bromley’s Annual Footprint Report. This process has, for the main part, worked well in 2010/11.

3.37 Where fines are payable in respect of data errors or omissions, these may be passed on by the Council to the schools in question but this has not been necessary to date as the Council has not incurred any such fines.

3.38 Table 4 sets out our current forecast for the carbon and allowance costs associated with LB Bromley schools only.

**Table 4: Schools Carbon and Costs**

	2011/12	2012/13	2013/14	2014/15	2015/16
Maintained Schools Cost	£115,664	£157,303	£200,562	£245,488	£292,130
Maintained Schools (tCO <sub>2</sub> )	9,639	9,831	10,028	10,229	10,433
Academy School Costs	£118,923	£161,735	£206,213	£252,405	£300,362
Academy Carbon (tCO <sub>2</sub> )	9,910	10,108	10,311	10,517	10,727
<b>Total Allowance Costs</b>	<b>£234,587</b>	<b>£319,038</b>	<b>£406,775</b>	<b>£497,893</b>	<b>£592,492</b>
<b>Total Carbon (tCO<sub>2</sub>)</b>	<b>19,549</b>	<b>19,939</b>	<b>20,339</b>	<b>20,746</b>	<b>21,160</b>
<b>DSG</b>	<b>£200,000*</b>	<b>£200,000</b>	<b>£200,000</b>	<b>£200,000</b>	<b>£200,000</b>
<b>Shortfall of funding from DSG</b>	<b>£34,587</b>	<b>£119,038</b>	<b>£206,775</b>	<b>£297,893</b>	<b>£392,492</b>

*The data in this table is based on a model which is more fully explained in the Finance section. The figures project 2010/11 actual data and assume a 2% p.a. increase in schools' emissions and a £4/t p.a. increase in the price of carbon allowances  
\*The contribution from the DSG has currently only been agreed with CYP for 2011/12: more is clearly required in future years, subject to the current consultation which may/may not allow different arrangements for academy schools in future*

3.39 It is odd that councils are required to administer and pay for academy schools' carbon when academies are now independent of council control. The leader of the LB Bromley wrote to the Secretaries of State for Education and Energy & Climate Change pointing out that this was an increasingly anomalous situation and asking what the government proposed to do to remedy the matter. The government responded that it was considering the matter and in August 2011 DECC issued a [consultation paper](#) titled: Review of Academies' participation in the CRC Energy Efficiency Scheme. The paper canvassed four options:

- Option 1: State-funded schools would continue to participate through their local authority. This is an unlikely outcome but a variant whereby allowance costs could be retained centrally before calculating budgets for maintained schools and academies may be a possibility, though the council would still have to administer the scheme for schools.
- Option 2: All state-funded schools individually meeting the qualifying criteria participate independently in the scheme. This would relieve the Council of its burden but as only the largest schools would qualify and there would be a loss of coverage and this is unlikely.
- Option 3: Individual participation by academies. This is attractive as the Council would be relieved of responsibility for academies but maintained schools would be penalised as they would remain in the scheme while some non-qualifying academies would become exempt.
- Option 4: Grouping academies with local authorities for qualification purposes and then disaggregating them. This places the cost and administrative burden on the academies themselves, which has clear merit and was LB Bromley's preference.

3.40 The consultation closed on 23 September 2011 but there is no indication of the government's preference. Due to the high number of converter schools in Bromley – the highest of all the London boroughs – LB Bromley may be significantly affected by the final decision.

3.41 Until formal notification is received of any rule changes, we are required by law to continue to meet the allowance and administration costs for all maintained and academy schools.

## 4. POLICY IMPLICATIONS

- 4.1 The CRC is a statutory scheme and one of two Council carbon-related programmes: the other being the Carbon Management Programme. The Carbon Management Programme (see ES12007) complements our CRC activity by taking action to reduce emissions and hence CRC allowance costs through a successful programme of energy projects.

## 5. FINANCIAL IMPLICATIONS

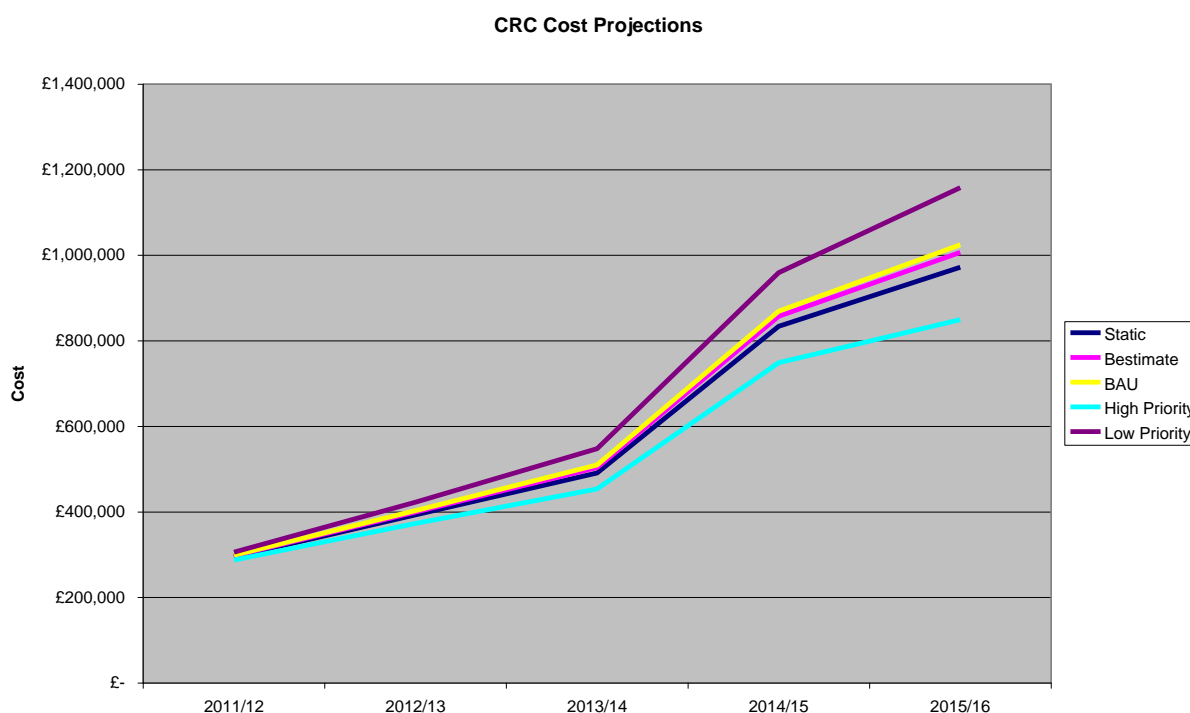
- 5.1 The potential financial impact of the CRC has been reported to the Executive since 2009 (ES10189 and ES09101) and has been factored into the 2011/12 budget and four-year forecast. While CRC costs are new and undoubtedly significant, it is important to keep matters in perspective: the financial impact of our energy use is much greater than that of the CRC. A simple way of considering the CRC is to think of it as the equivalent of a 6% tax applied to energy costs. Continuing management action to reduce energy consumption and carbon emissions is the key as this will help to reduce both energy bills and CRC liabilities. More generally, carbon costs associated with Council assets and contracts need to be continually addressed to ensure such consumption and costs are identified and allocated appropriately.

### Financial Modelling

- 5.2 The model used to calculate the Council's carbon and costs continues to develop and is becoming increasingly comprehensive and sophisticated. However, accurate forecasting is complicated due to a range of variables including; energy consumption, allowance prices, carbon factors, treatment of academies, weather, behaviour, carbon management activity, property portfolio acquisition / disposal, and changes to street lighting inventory etc.
- 5.3 To reduce this complexity, two variables have been fixed for all modelled scenarios. Officers have:
- assumed the same (increasing) carbon price
  - assumed the same (decreasing) level of uplift (a levy on estimated data)
- 5.4 DECC/Environment Agency continue to consider major changes to the scheme (e.g. treatment of academies, abolition of the *de minimis* rule and reintroduction of street lighting in phase 2) but we have anticipated these changes too and factored them into the model where possible.
- 5.5 The model is derived from data provided by the LASER Bureau Service (LBS) at an annual cost of £18,500 from 2013/14. The LBS is vital to our ability to comply with the CRC scheme as it:
- hosts LB Bromley's carbon data
  - provides a web portal to allow sites to upload their data
  - improves the accuracy of our Environment Agency reporting
  - limits the amount of estimated data for which additional allowances have to be bought
  - outputs the Footprint and Annual Reports.
- 5.6 Five scenarios have been developed to show a number of possible carbon futures based on the 2010/11 footprint data submitted to the Environment Agency. The government has announced the price of carbon for 2011/12 (£12/t) and 2012/13 (£16/t), so these are known. We have made an assumption that the price will continue to rise by £4/t p.a. thereafter because:
- this is the established trend for the scheme (2011/12 to 2012/13)
  - the Landfill Tax (a similar mechanism) is currently increasing by £8/t per annum and
  - the CRC tax raises income (~£1bn) for HM Treasury required to help balance the budget.
- 5.7 Additionally, it is reasonable to assume that the tax will increase until it reaches a level that discourages unnecessary carbon emissions (as happened with the Landfill Tax, which made recycling increasingly financially attractive compared with landfill). Therefore, an increase of £4/t.p.a. has been assumed starting at £12/t in 2011/12 and reaching £28/t by 2015/16.

- 5.8 A 10% uplift is payable on estimated data. It has been assumed that this uplift will fall by 1% per annum (in all scenarios) from 10% (2011/12) to 6% (2015/16) as the Laser Bureau Service takes increasing effect and data becomes increasingly accurate.
- 5.9 For each of the five scenarios we have varied the carbon emitted (and therefore the cost).
- Scenario 1: Best Estimate. Our forecast of what we think is most likely to happen based on a combination of trend analysis, active carbon management and our professional judgement.
  - Scenario 2: Static Growth. No increase (or reduction) in emissions (2010/11 levels)
  - Scenario 3: Business as Usual: a continuation of historic trends
  - Scenario 4: High Priority. Carbon management is afforded a high priority and is actively managed and funded to reduce emissions and liabilities
  - Scenario 5: Low Priority. Carbon management is only afforded a low priority and is not actively managed or funded, resulting in increased emissions and liabilities
- 5.10 Figure 1 illustrates the cost impact of each of the scenarios over five years. The cumulative cost impact of purchasing CRC allowances over the first five years is forecast to be £3,066k.

**Figure 1: Cost impact of five scenarios over five years**



- 5.11 Table 5 shows how the Councils carbon emissions relate to allowance costs using Scenario 1.
- Operational property emissions are forecast to reduce by 2% per annum to reflect the carbon management programme
  - Maintained schools emissions are forecast to increase by 2% per annum to reflect the fact that schools are being increasingly energy intensive (use of IT etc)
  - Unmetered consumption is forecast to remain static as lighting standards and new developments offset reduction measures
  - Combined these elements provide a total carbon and cost
  - The de minimis rule is applied to these totals which essentially means that we are allowed to reduce our emissions by 10%
  - The model assumes that Unmetered consumption returns to our footprint in 2014/15
  - The model also assumes that the de minimis rule no longer applies from 2014/15 – and that we will have to purchase allowances for 100% of our carbon

**Table 5: Detailed Carbon and Cost Forecast**

	2011/12	2012/13	2013/14	2014/15	2015/16
Operational Property Cost	£92,765	£121,213	£148,486	£174,620	£199,648
Operational Property (tCO <sub>2</sub> )	7,730t	7,576t	7,424t	7,276t	7,130t
Maintained Schools Cost	£115,664	£157,303	£200,562	£245,488	£292,130
Maintained Schools (tCO <sub>2</sub> )	9,639t	9,831t	10,028t	10,229t	10,433t
Academies Schools Cost	£118,923	£161,735	£206,213	£252,405	£300,362
Academies Schools (tCO <sub>2</sub> )	9,910t	10,108t	10,311t	10,517t	10,727t
Unmetered Consumption – Street lighting and CCTV Cost	-	-	-	£178,989	£208,823
Unmetered Consumption – Street lighting and CCTV (tCO <sub>2</sub> )	-	-	-	7,457t	7,457t
Cost of total carbon emissions	£327,352	£440,251	£555,261	£851,502	£1,000,963
Total Carbon Emissions (tCO <sub>2</sub> )	27,279t	27,515t	27,763t	35,479t	35,747t
<b>Total Carbon (post 10% de minimis)</b>	<b>24,511t</b>	<b>24,764t</b>	<b>24,987t</b>	<b>35,479t</b>	<b>35,747</b>
<b>Total Cost (post 10% de minimis)</b>	<b>£294,617</b>	<b>£396,227</b>	<b>£499,735</b>	<b>£851,502</b>	<b>£1,000,963</b>
<b>Predicted Uplift Costs</b>	<b>£2,946</b>	<b>£3,566</b>	<b>£3,998</b>	<b>£5,961</b>	<b>£6,006</b>

### Second phase costs

5.12 The arrangements for the second phase, starting in 2014/15, have yet to be finalised. It is assumed that the *de minimis* rule will be removed and that participants will be required to purchase allowances for all (rather than 90%) of their carbon and that street lighting will no longer be allowed to be excluded. It is now expected that allowances will not be auctioned in Phase 2: instead, there will be two fixed-price sales each year (a cheaper forecast/forward sale and a more expensive retrospective sale).

### Allowance Purchasing and Accrual

5.13 2011/12 allowances are purchased retrospectively in July 2012. CIPFA advises that although the cost occurs in 2012/13, an accrual needs to be made in respect of 2011/12, which is why the estimated cost is included in the 2011/12 budget. This will also apply to subsequent Phase One years but the rules are expected to change in Phase 2.

### Budgeting and Forecasting

5.14 The cost of scheme compliance is to be met from a combination of a sum held in the Central Contingency and the Dedicated Schools Grant (DSG).

5.15 The initial cost of scheme compliance (ES10189) was put at £386k to be met entirely from the Central Contingency. Subsequently, a contribution of £200k was agreed with CYP to come from the DSG and the Central Contingency provision was reduced by £200k to £186k.

5.16 The future contribution from the DSG will depend on what the government decides to do about who is responsible for meeting the cost of academy school allowances.

5.17 The forecast includes a sum to meet the initial estimated costs of the carbon scheme for future years, however this will need to be revised following latest cost projection calculations and is also dependent on whether the DSG can be used to meet the shortfall of funding needed for schools as shown in Table 4.

5.18 There is so much uncertainty (e.g. scheme changes and weather) that it is not possible to be categorical whether the financial provision made will be sufficient. However, the footprint data was based on a colder than average (more carbon intensive) winter (2010/11) and a £4/t p.a. allowance price increase has been factored into the model – which affords some protection.

### Summary of Financial Costs

5.19 The table below summarises the CRC scheme’s estimated total costs and available resources and is based on current knowledge and is exclusive of staff costs and any possible fines (which cannot be calculated in advance but can be mitigated).

**Table 6: Finance Summary**

	2011/12	2012/13	2013/14	2014/15	2015/16
	£	£	£	£	£
Carbon Allowances	294,617	396,227	499,735	851,502	1,000,963
Predicted uplift	2,946	3,566	3,998	5,961	6,006
Subsistence Fee	1,290	1,290	1,290	1,290	1,290
Cost of Laser Bureau Service	0	0	18,500	18,500	18,500
<b>Total Scheme Costs</b>	<b>298,853</b>	<b>401,083</b>	<b>523,523</b>	<b>877,253</b>	<b>1,026,759</b>
Sum held in Central Contingency	186,000	186,000	186,000	186,000	186,000
Additional resources identified in four year forecast	0	130,000	261,000	393,000	393,000
Dedicated Schools Grant *	200,000	200,000	200,000	200,000	200,000
Current Available Resources	<b>386,000</b>	<b>516,000</b>	<b>647,000</b>	<b>779,000</b>	<b>779,000</b>
<b>Variation</b>	<b>(87,147)</b>	<b>(114,917)</b>	<b>(123,477)</b>	<b>98,253</b>	<b>247,759</b>
Additional DSG required from Table 4	34,587	119,038	206,775	297,893	392,492
<b>Revised Variation</b>	<b>(121,734)</b>	<b>(233,955)</b>	<b>(330,252)</b>	<b>(199,640)</b>	<b>(144,733)</b>

\*The DSG contribution has only been agreed with CYP for 2011/12 and new funding rules may/may not apply to academy schools in future years depending on the outcome of the current consultation.

5.20 It should be noted that the costs set out in the table above:

- relate solely to the CRC scheme and are in addition to energy bills
- are being used to inform the 2012/13 budget and financial forecast
- indicate that there could be a saving in years 2011/12 to 2013/14, however further funding would be required in 2014/15 and 2015/16.
- should the increase in DSG contributions be agreed to fully meet the costs directly relating to schools, the earmarked funding included in the four year forecast could be substantially reduced.

## 6. LEGAL IMPLICATIONS

6.1 The CRC is a statutory scheme introduced under the Climate Change Act 2008 to help give effect to the government’s national carbon targets. LB Bromley is a full participant and is legally

responsible for data reporting and purchasing carbon allowances to cover its carbon emissions, including from maintained and academy schools (but not for Bromley Mytime).

- 6.2 This statutory duty is externally audited and enforced by the Environment Agency through:
- criminal penalties (imprisonment and fines) for falsification of data and non-compliance
  - civil penalties (fines) for late or inaccurate reporting
- 6.3 Further to correspondence between the Leader and the Secretaries of State for Education and Energy, the treatment of academy schools has been subject to consultation (which closed 23 September) and we await the outcome which may have a significant bearing on the Council's administration of the scheme and costs.
- 6.4 As required under the scheme's rules the Director of Environmental Services (as the nominated Senior Officer) signed-off the Evidence Pack on behalf of LB Bromley in the annual audit certificate in July 2011.

<b>Non-Applicable Sections:</b>	<ul style="list-style-type: none"><li>• Personnel Implications</li></ul>
Background Documents: (Access via Contact Officer)	<ul style="list-style-type: none"><li>• Carbon Reduction Commitment (Executive Report, ES09101, December 2009)</li><li>• Carbon Reduction Commitment Scheme 2010 Annual Report (Executive Report, ES10189, January 2011)</li></ul>