

## Appendix 1: Assessment of existing (local) carbon offset initiatives

### 1 Carbon Neutral Newcastle

Contact: Adrian McGlauchlan

The scheme has been running for 4-5 years and was set up by Newcastle City Council with the Carbon Neutral Company<sup>1</sup> and a range of supporting organisations. The scheme is part of a drive within the North East region for carbon neutrality. 'Carbon Neutral North East' was set up as a parent scheme to push forward activities regionally.

The scheme has a dedicated website with individual branding (distinct from the Council) and offers information and advice to business and individuals on how to cut their carbon footprint.

The scheme was established to fund local carbon reduction and fuel poverty initiatives with a large proportion of funds (approx 90%) going towards the Newcastle 'Warmzones' project<sup>2</sup>. In addition, some community based renewable energy schemes have also been supported.

The Council have adopted the carbon offsetting principles of the Carbon Neutral Company as set out in their 'Carbon Neutral Protocol'<sup>3</sup>. This follows relatively simple overarching guidelines that projects must:

- Be additional to a 'business as usual' situation (i.e. would not happen without support)
- Deliver benefits to the city and the North East, including social improvement, providing employment and helping the local economy
- Use technologies in the project that promote a more sustainable future

The scheme is in the process of closing down its current activities due to changes in policy related to the generation of its 'carbon credits'. The scheme has been using credits obtained from utility companies under their Energy Efficiency Commitment (EEC). EEC is being replaced by the Carbon Emission Reduction Target (CERT) which will use carbon as the key measurement in place of kWh energy savings. This means that carbon credits can no longer be obtained without double counting against CERT targets.

The Council wish to continue its activities in this area and are currently investigating how they will take the scheme forward.

<sup>1</sup> <http://www.carbonneutral.com/> The Carbon Neutral Company, formerly Future Forests provide voluntary carbon offset services and carbon management services to businesses and individuals.

<sup>2</sup> <http://www.carbonneutralnewcastle.com/projects/warmzone.php>

<sup>3</sup> <http://www.carbonneutral.com/pages/cnprotocol.asp>

## 2 Milton Keynes Carbon Offset Fund

Contact: Martin Davies

The Milton Keynes Carbon Offset Fund has been in development since 2004 when a feasibility study was carried out by National Energy Foundation (NEF). The principal objective of the fund was to enable Zero Carbon Housing in new development by offsetting the difference between target emissions reductions and actual emissions reductions, through 'off site' carbon reduction projects. This would be achieved through setting a 'tariff' on carbon reductions which would be implemented through section 106 agreements.

Initially, the fund would have inputs from the developer's tariff and have a range of outputs. The Council have stated that in time they will explore the potential to receive inputs from a wider range of source including the private sector.

The outputs considered included energy efficiency measures in housing, renewable energy in housing and community buildings/council property and tree planting schemes.

The feasibility study carried out by NEF identified a set price for the tariff of £200 per tonne of CO<sub>2</sub> which is index linked to take account of inflation and changes within the property market.

The council has started to receive income to the fund but has not implemented any projects as yet. Milton Keynes Energy Agency will manage the fund and according to the Council no specific priorities have been established for how the fund will select projects or deliver carbon savings (e.g. a scheme protocol or projects policy). The Council intend to make best use of the funds and will consider using funds to match other existing or planned income/finance streams e.g. CERT and Council energy efficiency/renewable energy grants.

## 3 Greater Manchester Carbon Reduction Fund

Contact: Simon Robinson (Manchester Knowledge Capital/Manchester Is My Planet)

The North West Regional Development Agency with Manchester Knowledge Capital is in the process of developing a carbon offset programme as part of wider action on climate change within the region. Manchester Knowledge Capital are in the process of assessing an initial scoping exercise and developing a business plan for the programme.

The offsetting programme is put forward as an action point within NWRDA's Climate Change Strategy<sup>4</sup>. How the programme will operate and what it will provide funding for has not been finalised.

Initial ideas included developing a lottery style programme, offering prizes which would help individuals to save carbon (e.g. hybrid vehicles), where a board of trustees would receive applications from carbon reduction projects within the region and allocate funding. The potential outputs being considered range from small grants and community projects to larger, more strategic initiatives.

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<sup>4</sup> <http://www.nwda.co.uk/publications/business/rising-to-the-challenge---a-cl.aspx>

There has been interest from the private sector to support such a fund for the region and section 106 'tariffs' are also being considered. It is likely that the fund will have a similarly varied range of inputs as the RBBC fund proposes.

#### 4 Manchester City Carbon Offset

Contact: Ben Cosgrove (Manchester Green City Team)

The Manchester City 'Offset fund' is currently in development stages and there is not a great deal of information about how they intend to develop it or what it will look like. The initiative forms part of their 17 'principals of tackling climate change in Manchester'<sup>5</sup> a recently released strategy for action on climate change mitigation and adaptation in the City.

The Council have pledged £1 million to go towards a carbon innovation grant and the carbon offset scheme which it is calling on the private sector to match.

While there is not a great deal known about how the offset scheme would operate, the Council have made a major public commitment and see the offset scheme as a viable mechanisms, within a portfolio of actions and initiatives, to address climate change for the City.

#### 5 Birmingham Carbon Offset

Contact: Keith Budden (Birmingham Strategic Partnership)

Phil Beardmore (Birmingham Sustainable Energy Partnership)

The Birmingham Carbon Offset fund is still in development stages and is being pioneered by Birmingham Sustainable Energy Partnership (BSEP) and the Local Authority. The BSEP work closely with the Council on their Climate Change Strategy and have produced an initial scoping paper on the potential for such a fund. The paper raises questions on how the fund might operate, what sorts of project it might support and what standards it would operate to.

The overarching conclusion from the report is that further investigation is required into the market for such a fund within Birmingham and that a pilot (with quick win potential) should be set up, with an existing charitable trust responsible for delivering funding to a project.

The paper produced by BSEP suggests that an independent board of trustees should have responsibility for overseeing the fund but that it should remain flexible in order to support a range of projects and suit the requirements of different funders.

BSP and BSEP are in discussions with the Airport in to the potential of setting up a tariff or offset product attached to passenger flights. This is still in very early stages of development and more is being done on what the charge would be set at and how it would be administered i.e. an 'opt out' or 'opt in' charge at a flat rate or based on the carbon impact of specific flights.

Outputs from the fund would be local and may include solar water heating schemes for fuel poor households, renewable energy and energy efficiency grants for faith based organisations and as a boost to existing grant programmes offered by the Council or Warmfront.

<sup>5</sup> [http://www.manchester.gov.uk/downloads/8a\\_Climate\\_change\\_1\\_.pdf](http://www.manchester.gov.uk/downloads/8a_Climate_change_1_.pdf)

## 6 Eastleigh Borough Council “CarbonFree”<sup>6</sup>

Contact: Beverly Draig (Sustainability Policy Coordinator)

Judith Beard (Sustainability Policy Coordinator)

The Eastleigh ‘CarbonFree’ initiative is part of the Councils wider objective to be carbon neutral by 2012. A fund was established in February 2008 with £50,000 of council funds. The initiative will be promoted to residents and businesses locally and the first tranche of funding will be used to insulate homes which do not currently qualify for funding assistance.

The ‘fund’ and all associated activities are managed in house, with sustainability officers taking a lead on engagement and operations and partnerships within the council to draw in further funding.

At present the service is being promoted to residents and an online registration form allows residents to submit the amount of CO<sub>2</sub> they would like to offset to the Council. This is then assessed and a proposal is sent back to the applicant, including costs and information on fund ‘outputs’. At present a set price is provided per tonne of CO<sub>2</sub> of £10. The price will be reviewed on an annual basis and is currently based upon the cost of carrying out insulation measures to save 1 tonne of CO<sub>2</sub> (based on lifetime savings). The Council intend to maximise savings from domestic energy efficiency measures before considering higher cost renewable energy projects. The fund will be fed both by residents wishing to offset an amount of CO<sub>2</sub> and the Councils’ own CO<sub>2</sub> balance by 2012 (if it has not achieved carbon neutrality by this date through other measures).

The Council are currently developing a marketing plan to engage residents and local businesses. The approach taken is to encourage residents and businesses to reduce their emissions as far as possible before considering offsetting. Their website currently provides advice and assistance on calculating carbon footprints and ways to reduce emissions cost effectively.

The Council are currently investigating the possibility of setting an energy/carbon planning policy and as part of this will consider the potential for a section 106 tariff on developments which cannot meet the policy. Funds from this would feed into the “CarbonFree” fund.

## 7 Other funds reviewed

As part of the study ecsc identified a number of other funds for review including the ‘Nottingham Carbon Trust’, the Corsham Town Council Carbon offset initiative and Hull City Council carbon offset initiative. For each of these either no further information could be found relating to the schemes or they were found to be less relevant to RBBCs plans. It may be worth monitoring progress with the participating local authorities over time.

In addition, ecsc carried out a brief review of (national) carbon offset services available on line. ecsc reviewed the websites of 5 carbon offset services, choosing to investigate two in further detail.

<sup>6</sup> <http://www.eastleigh.gov.uk/ebc-3834>

These were the Carbon Neutral Company and Climate Care. Both are established 'voluntary offset' providers and an RBBC scheme would be in direct competition with them if it were to launch its own carbon offset service for local businesses.

Both schemes are engaged in international projects and have developed their own codes of practice or standards for selecting projects and verifying CO2 savings. The current price per tonne of CO2 between the two services varies between £7 and £10 per tonne of CO2.

Both projects offer examples of how a voluntary carbon offset service could develop its principles and standards governing how the service is run and how CO2 savings are generated.

### **The Carbon Neutral Company**

Where business offsets are concerned The Carbon Neutral Company has developed a process of engagement with businesses which could inform a RBBC carbon offset service.

From interviews with local businesses it has become clear that for a business to engage in offsetting as part of a wider drive to reduce its environmental impact, the right drivers must be in place and the company must fully buy into the concept of becoming "carbon neutral". This is echoed by the approach taken by Eastleigh Borough Council above, who have put in place a range of advice for individuals and businesses to reduce their emissions prior to offsetting. The process below outlines a potential approach to this<sup>7</sup> used by the Carbon Neutral Company in developing offset programmes with businesses.

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<sup>7</sup> <http://www.carbonneutral.com/pages/cnprotocol.asp>

## The CarbonNeutral approach to gaining buy-in for offset initiatives

### *Leadership*

- Who is going to act as the leader of the Initiative?
- Which parts of the organization are involved?
- What are the roles and responsibilities?

### *Objectives*

- What are the organization's objectives in undertaking a CarbonNeutral Initiative?
- How will success be measured?

### *Quantification*

- Which activities of the organization are going to be assessed?
- What systems for monitoring and reporting are going to be developed?

### *Reducing*

- At what speed will the organization reduce its carbon footprint?
- Does it plan to achieve net zero status immediately or over time?
- How will it prioritise action to achieve its target reductions?
- Which sources of GHG emissions are going to be the focus of emission reduction efforts?
- What sorts of technologies or practices will be used?
- Who will be involved?

### *Offsetting*

- Which emissions are going to be offset?
- What types of offset instruments or projects are preferred?

### *Communication*

- Who are the main targets of communication?
- What are the main messages?
- What channels of communication will be used?

## Appendix 2: Community Projects Summary (Outputs)

A number of potential projects within the borough were assessed for CO<sub>2</sub> emissions reduction potential, costs and added value. As part of this work 39 schools were contacted and 42 community projects/buildings were identified. Of these, 16 potential projects were assessed for suitability as community CO<sub>2</sub> reduction projects.

The tables below outline 5 projects chosen as examples for available community 'Outputs' for the RBBC fund. The examples below have been developed to offer a taster of projects available within the Borough which meet the criteria set out in the checklist Appendix 5.

The data below provides an example of potential outputs and further analysis would be required for each project at implementation. Savings and costs are estimated and exclude any management fees. Installers should be consulted for more detailed costs and product specification.

**Assessment methodologies:** Energy use data from utility records has been used to calculate baselines and Defra Reporting Guidelines emission factors have been used for CO<sub>2</sub> conversions. To calculate CO<sub>2</sub> savings from installation of measures, ecsc's C-Plan software was used (which calculates conservative savings based on benchmarks (CIBSE), manufacturers performance data and site specific data e.g. aspect, resource, insulation levels, boiler efficiencies). The costs shown have been calculated using installer and manufacturer data and national benchmarks and averages (BRE, EST, GLA).

1. The Beacon School	
<b>Project:</b> Biomass boiler (providing 50% of demand), solar PV (grid tied). Biomass will replace 2 old inefficient boilers in the main boiler room. The Solar PV will be installed on the roof of the 6th form building and the science block.	500 kW boiler 17kW 135m <sup>2</sup> PV 20 kW 160m <sup>2</sup> PV
Baseline scenario (kWh from Gas and Electricity)	1,858,392
Baseline scenario (tCO <sub>2</sub> )	536
Avg CO <sub>2</sub> saving p/yr (kg)	141,215
Avg CO <sub>2</sub> Lifetime (tonnes)	3,530
Estimated Cost (capital)	£321,250
<b>£/t CO<sub>2</sub> (annual)</b>	<b>£2,275</b>
<b>£/t CO<sub>2</sub> (lifetime)</b>	<b>£91</b>
Revised including existing additional funding	
Potential Additional Funding	£160,625
<b>Revised £/tCO<sub>2</sub> (lifetime)</b>	<b>£45</b>
<b>Revised £/tCO<sub>2</sub> (annual)</b>	<b>£1,137</b>

**Note:** The RBBC fund may not wish to pay the full balance of capital cost and instead request a contribution from the school. The boilers would need replacing at some point in the future and the school would be expected to pay. The fund could bring forward (and increase) CO<sub>2</sub> savings by providing funds for a % of the capital costs.

2. The Warwick School	
<b>Project:</b> Solar PV (grid tied) mounted on the roof of the south building, adjacent to the nature reserve area. The system will provide a large proportion of the requirements of this (stand alone) building.	9kW 75 m <sup>2</sup>
Baseline scenario (kWh)	471,214
Baseline scenario (tCO <sub>2</sub> )	246
Avg CO <sub>2</sub> saving p/yr (kg)	4,213
Avg CO <sub>2</sub> Lifetime (tonnes)	105
Avg Cost (capital)	£56,250
<b>£/t CO<sub>2</sub> (annual)</b>	<b>£13,352</b>
<b>£/t CO<sub>2</sub> (lifetime)</b>	<b>£534</b>
Revised including existing additional funding	
Potential Additional Funding	£28,125
<b>Revised £/tCO<sub>2</sub> (lifetime)</b>	<b>£267</b>
<b>Revised £/tCO<sub>2</sub> (annual)</b>	<b>6,676</b>



3. Furzfield Primary School	
<b>Project:</b> Biomass boiler (to provide 100% of space and water heating demand) and Solar PV on 2 south facing roofs (housing the majority of classrooms). The V will be highly visible in the school but hidden from neighbours.	320/500kW boiler 7kW 52m <sup>2</sup> PV 7kW 52m <sup>2</sup> PV
Baseline scenario (kWh)	459,613
Baseline scenario (tCO <sub>2</sub> )	129
Avg CO <sub>2</sub> saving p/yr (kg)	75384
Avg CO <sub>2</sub> Lifetime (tonnes)	1,884.6
Avg Cost (capital)	£176,500
<b>£/t CO<sub>2</sub> (annual)</b>	<b>£2,341</b>
<b>£/t CO<sub>2</sub> (lifetime)</b>	<b>£94</b>

Revised including existing additional funding	
Potential Additional Funding	£88,250
<b>Revised £/tCO<sub>2</sub> (lifetime)</b>	<b>£47</b>
<b>Revised £/tCO<sub>2</sub> (annual)</b>	<b>£1,171</b>

4. Wray Common Primary School	
<b>Project:</b> Solar thermal to provide most of the heating requirements of the pool. This can be integrated into existing plans to construct a new surround for the pool.	20 x evacuated tube panels
Baseline scenario (kWh)	47,156
Baseline scenario (tCO <sub>2</sub> )	25
Avg CO <sub>2</sub> saving p/yr (kg)	17,383
Avg CO <sub>2</sub> Lifetime (tonnes)	435
Avg Cost (capital)	£40,000
<b>£/t CO<sub>2</sub> (annual)</b>	<b>£2,301</b>
<b>£/t CO<sub>2</sub> (lifetime)</b>	<b>£92</b>

Revised including existing additional funding	
Potential Additional Funding	£20,000
<b>Revised £/tCO<sub>2</sub> (lifetime)</b>	<b>£46</b>
<b>Revised £/tCO<sub>2</sub> (annual)</b>	<b>£1,151</b>

5. Reigate Methodist Church	
<b>Project:</b> Solar PV will be mounted on 2 south facing roofs of the new community centre extension planned for the Church. The system will be grid tied and display centres will be placed prominently within the centre facilities.	9kW 70m <sup>2</sup> PV 6kW 50m <sup>2</sup> PV
Avg CO <sup>2</sup> saving p/yr (kg)	6,700
Avg CO <sup>2</sup> Lifetime (tonnes)	168
Avg Cost (capital)	£90,000
<b>£/t CO<sup>2</sup> (annual)</b>	<b>£13,433</b>
<b>£/t CO<sup>2</sup> (lifetime)</b>	<b>£537</b>

Revised including existing additional funding	
Potential Additional Funding	£45,000.00
<b>Revised £/tCO<sup>2</sup> (lifetime)</b>	<b>£269</b>
<b>Revised £/tCO<sup>2</sup> (annual)</b>	<b>£6,716</b>

## Appendix 3: Housing Projects Summary (Outputs)

To assess potential domestic CO<sub>2</sub> emissions reduction projects a review of Home Energy Conservation Data was carried out. The filtered data set comprised of insulation, heating and household information (e.g. built form and date) for over 20,000 properties within the Borough.

Due to the limitations of the data set, a full range of CO<sub>2</sub> reduction measures could not be assessed however those detailed below represent the most viable options for householders in the borough to make cost effective CO<sub>2</sub> savings. The data for Solar Water Heating systems is only an estimate and a more detailed assessment of types of heating system and orientation of properties could be carried out to identify a more robust portfolio of properties to which this technology could be installed.

### 1. Lower cost measures

Cavity Wall Insulation	
<b>Criteria:</b> unfilled cavity, det or semi det, pre 1980 build, owner or private rent	
Households matching criteria	3,919
Avg CO <sub>2</sub> p/yr (kg)	711
Avg CO <sub>2</sub> lifetime (tonnes)	28
Avg Cost (-20% discount)	400
£/t CO <sub>2</sub> (annual)	£563
£/t CO <sub>2</sub> (lifetime)	£14
Potential Project CO <sub>2</sub> tonnes	111,300

Low Energy Lighting (CFLs)	
<b>Criteria:</b> those answering 'some' or less CFLs installed	
Households matching criteria	20,873
Avg CO <sub>2</sub> p/yr (kg)	14
Avg CO <sub>2</sub> Lifetime (tonnes)	0
Avg cost	1
£/t CO <sub>2</sub> (annual)	80
£/t CO <sub>2</sub> (Lifetime)	5
Potential project t CO <sub>2</sub>	12,524

Loft Insulation Full	
<b>Criteria:</b> unfilled loft, pre 1980 build, owner or private rent, no flats	
Households matching criteria	1,834
Avg CO <sub>2</sub> p/yr (kg)	1,323
Avg CO <sub>2</sub> Lifetime (tonnes)	40
Avg Cost (-20% discount)	£400
£/t CO <sub>2</sub> (annual)	£302
£/t CO <sub>2</sub> (lifetime)	£10
Potential Project t CO <sub>2</sub>	72,810

**Note:** Data used is from 2005/6 HEC returns and should only be taken as a guide to the potential state of the housing stock in Reigate and Banstead.

Savings have been calculated using energy saving trust data for average UK domestic energy efficiency and renewable energy measures. The figures are conservative and relate to the 'NET' CO<sub>2</sub> savings accrued annually and throughout the lifetime of a measures.

## 2. Higher cost measures

The measures outlined below are viable for Reigate and Banstead and could actually be considered more 'additional' in output terms than the lower costs measures detailed above. It is likely that to deliver these measures cost effectively they should be delivered at a time when complimentary work is being carried out to properties e.g. solid wall insulation should only be done internally when internal decoration is taking place (to reduce costs and disruption). Solar water heating is most cost effective when installed alongside a new boiler or heating system or when plumbing work or roofing work is being carried out in a property.

Loft Insulation Full	
<b>Criteria:</b> unfilled loft, pre 1980 build, owner or private rent, no flats	
Households matching criteria	1,834
Avg CO <sup>2</sup> p/yr (kg)	1,323
Avg CO <sup>2</sup> Lifetime (tonnes)	40
Avg Cost (-20% discount)	£400
£/t CO <sup>2</sup> (annual)	£302
£/t CO <sup>2</sup> (lifetime)	£10
Potential Project t CO <sup>2</sup>	72,810

Solid Wall Insulation (Internal)	
<b>Criteria:</b> Det or semi det, pre 1980, owner, Must be doing work to property	
Households matching criteria	7,105
Avg CO <sup>2</sup> p/yr (kg)	1,500
Avg CO <sup>2</sup> Lifetime (tonnes)	45
Avg Cost	£5,000
£/t CO <sup>2</sup> (annual)	£3,333
£/t CO <sup>2</sup> (lifetime)	£111
Potential Project t CO <sup>2</sup>	319,725

Solar Water Heating	
<b>Criteria:</b> Det or semi det, owner, 3+beds, 3+occupants, Pitched roof, Non listed/consrv area, system boilers,, boiler 15yrs+	
Households matching criteria	1237
Avg CO <sup>2</sup> p/yr (kg)	367
Avg CO <sup>2</sup> Lifetime (tonnes)	7.3
Avg Cost (-20% discount)	3200
£/t CO <sup>2</sup> (annual)	8767
£/t CO <sup>2</sup> (Lifetime)	438
Potential project t CO <sup>2</sup>	9,030

**Note:** It is likely that cost savings can be made by establishing one point of contact for surveys, installers and follow up advice and monitoring. Economies of scale will reduce cost as will combining groups of works together.

Depending on how the council wish to structure the offset fund there may also be opportunity for match funding from external sources e.g. CERT, Low Carbon Buildings Programme etc... This would still qualify under the checklist used as the fund would trigger CO<sub>2</sub> savings which otherwise would not have happened

### 3. Project Example Summary

Redhill Housing Project	
Homes	100
Cavity wall, Loft insulation CFL saving	
tonnes CO2 P/yr	2.076
CO2 lifetime tonnes	68.70
Cobined cost	803
Project CO2 saving p/yr	207.6
Project CO2 saving lifetime	6870
£/tCO2 p/yr	386.801541
£/tCO2 lifetime	11.6885007

## Appendix 4: Assessment of Additionality and Added Value

As part of the assessment process projects were assessed for their relative additonality and the added value that they achieve beyond CO<sub>2</sub> Saving. The checklist provided in Appendix 5 provides an overview of what might constitute 'added value' and what might make a project 'additional' to "business as usual scenarios". The following assessment was carried out for each project in order to identify which, if any, offer greater additionality and added value.

The following criteria was used to assess each project

### Added value:

1. The project will raise awareness of environmental sustainability
2. The project will have economic benefits for recipients and/or the wider community
3. The project will contribute to improved health and well being of recipients and/or the wider community
4. The project will contribute towards local regeneration and have a positive impact on future residents
5. The project will contribute to education concerning climate change/environmental issues and methods of improving performance

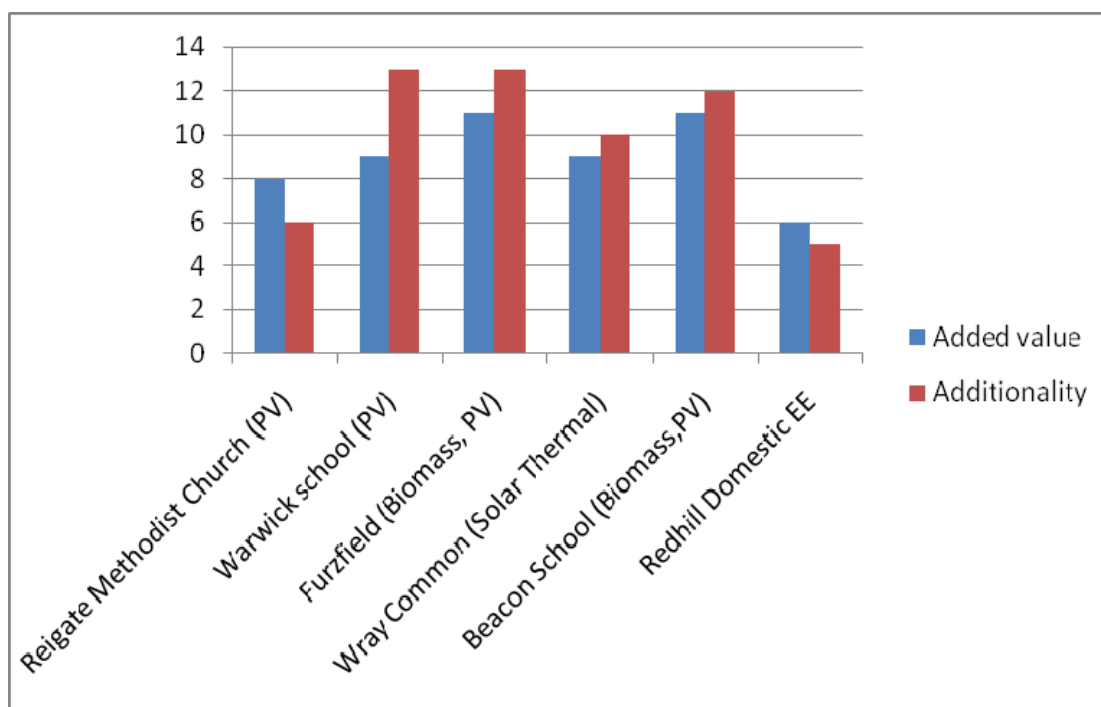
### Additionality:

6. The project goes against local, regional or national trends or the activity proposed by the project is not currently being taken up on a large scale
7. The project is not required as part of any existing regulation or the output of the project is not required by any existing regulation
8. The project activity is not currently incentivised or it is not incentivised to a sufficient level to allow the project to go ahead un supported
9. The regulatory environment (in relation to the project activity) is not in the process of changing or is unlikely to change in the near future
10. The project has financial barriers, sufficient to stop the project going ahead without support

The above criteria were assigned scores and weighted, with a stronger weighting being placed on criteria 1, 2 5, 7 and 10. Each criteria could receive either 1 or 0.5 against it.

The following chart outlines the results of the assessment.

### Added value and Additionality: RBBC Potential CO<sub>2</sub> reduction projects



#### Added Value Assessment

	Weighting	Beacon School (Biomass,PV)	Warwick school (PV)	Wray Common (Solar Thermal)	Furzfield (Biomass, PV)	Reigate Methodist Church (PV)	Redhill Domestic EE
Awareness	2	2	2	2	2	2	1
Economic	1	1		1	1		0.5
Health & wellbeing	1						1
Regeneration	1	0.5	0.5	0.5	0.5	1	1
Education	2	2	2	1	2	1	
<b>Total</b>		<b>11</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>8</b>	<b>7</b>

#### Additionality Assessment

	Weighting	Beacon School (Biomass,PV)	Warwick school (PV)	Wray Common (Solar Thermal)	Furzfield (Biomass, PV)	Reigate Methodist Church (PV)	Redhill Domestic EE
Against trends	1	1	1	0.5	1	1	
No regulation	2	2	2	2	2	0.5	1
No incentives	1	0.5	0.5	0.5	0.5	0.5	0.5
no Changing regulatory environment	1	1	1	1	1		
Financial barriers	2	1.5	2	1	2	1	1
<b>Total</b>		<b>12</b>	<b>13</b>	<b>10</b>	<b>13</b>	<b>6</b>	<b>5</b>

## Appendix 5: Business interview responses

Interviews were carried out in person and over the phone with 14 businesses of which 6 did not wish to continue beyond the telephone interview but were keen to be informed of updates if and when the fund would be operational. The following 7 businesses have been interviewed and responses are collated below.

1. Canon
2. Esure
3. Legal and General
4. Pfizer
5. Total Gas and Power
6. Toyota
7. Osborne
8. Black and Veatch

## Interview responses

**Company name:** Canon

**Attendees:** Chloe Eagers (Canon Environment Specialist)  
Isabella Villeneuve (Head of Facilities)

## Organisation Information

- | 1. | Number of employees  | Site:   | 650 | Borough: | UK: |
|----|--|---|-----|----------|-----|
| 2. | Type of Business   | Electronics, office equipment and photo specialists (design, manufacture and sales) |     |          |     |
| 3. | Is there an existing environment programme/policy/strategy? What does it cover?  |   |     |          |     |
|    | <ul style="list-style-type: none"> <li>They have a separate sustainability strategy and report from CSR and this is reported on annually. The environmental work of the company is driven from Japan (Global HQ) with a strong focus on minimising environmental impact of products and services through innovation.</li> <li>ISO14001 accredited since 2004 (2006 in UK), with a consolidated group certificate for operations.</li> <li>Current building was built to high environmental standards (BREEAM Excellent) but is now difficult to improve on.</li> </ul> |   |     |          |     |
| 4. | Are energy consumption and carbon emissions monitored? To what extent?   |   |     |          |     |
|    | <ul style="list-style-type: none"> <li>Through their ISO14001 management system they collect data on energy use in offices, sites and logistics and staff business travel. This is reported annually. They have a desire to go beyond their current, direct CO2 emissions, identifying impact of staff travel to work etc...</li> </ul>  |   |     |          |     |



- They would welcome assistance on preferred methodologies for calculating baseline emissions scenarios.
5. Have any actions been implemented to improve environmental performance?
- As part of the building development they had Solar PV designed on to the building. This is monitored and recently new displays were installed so that all staff can see what is being produced.
  - A lighting efficiency programme has been developed, replacing in-efficient lights with more efficient alternatives when viable, installation of sensors in specific areas.
  - Have investigated on site water harvesting, grey water recycling, on site renewable energy technologies (wind turbines). This has not been progressed any further. There is a perception that they would not be able to gain planning permission and that costs may be too great. This is something they are interested in though.
  - They are currently trying to develop an on site waste and recycling programme but feel that there is a lack of local facilities (e.g. from the Council) to make this possible/viable.
6. Are there plans for any expansion/building/major refurbishment within the Borough?
- They may develop further office facilities on the Reigate site. This would be built to high environmental standards.
7. Is there a current community programme in place? What are the companies priorities in this area?
- There is a community strategy and department. They are actively engaged with the local community e.g. Work with Gatton Park
8. Is the company currently offsetting CO2 in any way? If so, how?
- No
9. Has the Company ever considered offsetting CO2 from any of its operations?
- Offsetting has been identified by the company as counter to the businesses objectives (environmental leadership). All major decisions are made through Japan and Europe offices and they see Offsetting as an admission of failure to improve their operations and reduce their CO2 impact themselves.

#### **The RBBC Local carbon reduction Fund**

1. Would the company consider supporting a local carbon reduction fund?
- From an environmental perspective this would be difficult to sign off. However, the company has not set a goal to become carbon neutral or 'zero carbon' and have not begun to assess their impact within indirect and shared emissions portfolios. This stance may change as they work through there direct emissions reductions.

- They would have to have done everything they could within existing operations and capacity.
- 2. What are company procedures/priorities in allocating funds to environmental and community projects?  
  
N/A
- 3. What level of funding might the Company be prepared to allocate now and in the future?  
  
N/A
- 4. What would the company require of such a fund/service if it were to provide support in cash or time?
  - Advice and assistance on how the company could achieve best practice prior to offsetting. Assistance in identifying suitable carbon footprinting methodologies/approaches.
  - A clear picture of benefit to the company i.e. not a way out of a problem but a way towards environmental leadership.

**Response to follow up questions:**

As we discussed at the meeting, Canon has a strong commitment to the environment and to minimising our impact on it. At some point, once we have minimised this as much as possible, we will look to offset the remaining emissions - I imagine this would be a company wide scheme managed from Japan.

With this in mind, and considering the information you have provided about the scheme, I do not think that we will be able to be involved. Whilst I believe the scheme has very good points, I believe that the approach is the wrong way round - the scheme should be looking at helping businesses to reduce their environmental impact and carbon footprint; a carbon fund could be an off-shoot or product of this initial plan, not the driver.

Canon would very much like to be involved in any schemes or initiatives that are set up to discuss the lack of environmental impact reduction methods available to Reigate & Banstead businesses.

**Company name:** Esure

**Attendees:** Adrian Webb (Head of Communications)

### Organisation Information

10. Number of employees                      Site: 500+    Borough:                      UK:
11. Type of Business              Car insurance (internet based) sales, marketing and admin, customer services
12. Is there an existing environment programme/policy/strategy? What does it cover?
- Overarching commitment in place and 3 year programme of improvement – “How low can you go?” approach.
  - Worked with Carbon Trust and GAP at start of 1<sup>st</sup> year of programme to assess baselines etc... and to develop initiatives going forward.
13. Are energy consumption and carbon emissions monitored? To what extent?
- Energy, waste, water are monitored regularly and reported on (i.e. targets for improvement in place which are monitored and reported back).
  - Carbon footprint has been calculated covering office operations and travel for work. This may be developed to look at staff travel to work.
14. Have any actions been implemented to improve environmental performance?
- Energy audits and waste audits have been carried out. Carbon Trust and GAP have been engaged. GAP carried out a year long programme of assessment and behaviour change within the main offices (this may be rolled out to other offices elsewhere).
  - There has been a strong focus on changing habits and putting technical solutions in place or incentives/regulation where possible to drive reductions in waste and energy use. Staff engagement on issues is very important for long term performance on energy, water and waste. There may be an opportunity to engage with staff on CO2 footprinting/offsetting over time. Actions include IT energy management (automatic shut downs), double sided printing only at communal printers, flat screen instead of handouts during large meetings.
  - Are considering linking staff bonus (currently 5% of salary) to the companies continued environmental performance i.e. 1% of the total 5% is payable only if the company hits reasonable targets (which staff have control over e.g. PC use etc...
  - Full separation of waste is done on site through provision of labelled bins and appropriate items are sent for recycling.
15. Are there plans for any expansion/building/major refurbishment within the Borough?

No

16. Is there a current community programme in place? What are the companies priorities in this area?

- Yes. The company supports a range of small scale projects and local companies (local marketing however is not a major priority for the company as they are a national service provider and predominantly internet based).
- Local support goes to The Childrens Trust, Gatton park, Citizens Advice Bureau and some schools.
- Company priority is safe driving for young people which is delivered through a "Safe drive / Stay alive" campaign which offers training and advice to young people in schools.

17. Is the company currently offsetting CO2 in any way? If so, how?

NO

18. Has the Company ever considered offsetting CO2 from any of its operations?

- The company has committed to a 3 year programme of action to reduce their environmental impact (across identified issues) and is not intending to be carbon neutral until this is completed.

#### **The RBBC Local carbon reduction Fund**

5. Would the company consider supporting a local carbon reduction fund?

- This may be a possibility once the three year programme has been completed and hard to reach CO2 savings are identified (indirect CO2 emissions). Until they have reduced through on site means as far as possible this is not a viable option.
- However, community support may be a route through which some funding could be diverted to projects.
- The company is not bought into the idea of off site renewables yet either. The allocation of resource for any environmental initiative would have to be clearly visible and attributable to the site and operations.

6. What are company procedures/priorities in allocating funds to environmental and community projects?

Adhoc

7. What level of funding might the Company be prepared to allocate now and in the future?

NA at this point

8. What would the company require of such a fund/service if it were to provide support in cash or time?

- They have considered renewables but feel that there are too many obstacles (planning and regulation is one of the perceived risks and barriers as they have had troubles with other, marketing related activities locally).
- There would have to be a tie in to staff in some way as this is a major priority for the company – a function or set up that linked to staff activities.

**Company name:** Legal and General

**Attendees:** Ivan Swepson (Environment Committee Chair)  
Paul Mills (Head of Environment Programmes and Facilities)

### Organisation Information

19. Number of employees Site: 2000+ Borough: UK:

20. Type of Business Financial and Insurance advisors/investors

21. Is there an existing environment programme/policy/strategy? What does it cover?

- ISO 14001 accredited with mature EMS and environment programme in place, capturing data and monitoring performance.
- Taking a systematic approach to working through improvements as and where they can.
- In 2008 the company is pushing for best practice across all operations (e.g. efficiencies etc...)
- Annual CSR report includes environment, to which data is fed in and successes reported.

22. Are energy consumption and carbon emissions monitored? To what extent?

- Energy is monitored through the EMS
- Business miles on contracts are monitored and carbon impact is identified. Targets are in place to reduce these (i.e. tonnes of CO2 per contract/type of contract) over time and these are reported against in the annual CSR report.

23. Have any actions been implemented to improve environmental performance?

- A range of initiatives have been implemented from technical measures within heating and cooling set up to local waste and recycling drives, where staff are encouraged and assisted to recycle all waste.

24. Are there plans for any expansion/building/major refurbishment within the Borough?

- A major refurbishment of the site buildings is still in project development stages, with work planned over the next two years (starting 2009). This will cover the remaining 20 years of their current lease.
- There has been interest in installing some renewable technologies on site but payback would have to be within the 20 year lease period.

25. Is there a current community programme in place? What are the company's priorities in this area?

- Yes – The CSR, environment and community teams have been merged together under one banner called "Making a difference". This involves partnerships with community groups, providing in kind support, funding and time and expertise to a range of community projects/groups.

- Facilities team has provided technical support and expertise to local groups/schools to help with energy issues (this is something that could be rolled out further).
- Financial support has been given to local and national charities and to schools wishing to carryout local projects e.g. wildlife ponds etc...
- There is a priority to identify ways to quantify the benefits of these and any future initiatives.

26. Is the company currently offsetting CO2 in any way? If so, how?

No.

27. Has the Company ever considered offsetting CO2 from any of its operations?

- NO. The company has decided that it will not have an objective to become CO2 neutral or Zero carbon and that it will focus on improving its operations and services as far as possible to reduce associated CO2 emissions. Offsetting has therefore not been thought about. However on site renewable energy have been considered.

#### **The RBBC Local carbon reduction Fund**

9. Would the company consider supporting a local carbon reduction fund?

10. What are company procedures/priorities in allocating funds to environmental and community projects?

- Current appraisal of “Making a difference” programme will outline these procedures.

11. What level of funding might the Company be prepared to allocate now and in the future?

NA

12. What would the company require of such a fund/service if it were to provide support in cash or time?

- Measurable results and outputs which can be reported on. These should focus on both environmental and economic and skills based outputs.
- More information for staff on environmental issues within the borough and what they can do, presentations and training sessions.

**Company name:** Pfizer

**Attendees:** Stephen Carter (Head of Facilities)

### Organisation Information

28. Number of employees Site: 500+ Borough: UK:

29. Type of Business Pharmaceuticals ( on site deal with sales and marketing)

30. Is there an existing environment programme/policy/strategy? What does it cover?

Yes. Overarching environment policy and strategy. The strategy covers waste and energy and transport (for work and to and from work). There approach is to try and reduce use wherever possible although no set targets are in place.

31. Are energy consumption and carbon emissions monitored? To what extent?

Yes, regularly. They are in the process of developing their own CO2 calculator for their operations which can be used by relevant staff.

32. Have any actions been implemented to improve environmental performance?

Yes. A range of actions have been implemented to save energy from plant use on site, to ease congestion locally and reduce travel to work emissions by offering coach services from local train stations and to reduce waste and increase recycling from on site generated waste.

33. Are there plans for any expansion/building/major refurbishment within the Borough?

NO. On site renewables have been considered for some time though nothing has gotten past the feasibility assessment phase.

34. Is there a current community programme in place? What are the companies priorities in this area?

Yes. Priorities are centred on health and social improvement.

35. Is the company currently offsetting CO2 in any way? If so, how?

Offsetting has taken place on a case by case basis for unavoidable emission from air travel or for company events (where delegates have had to travel to the event).

36. Has the Company ever considered offsetting CO2 from any of its operations?



Individual members of staff have considered it but the company has not taken a stance on offsetting.

### **The RBBC Local carbon reduction Fund**

13. Would the company consider supporting a local carbon reduction fund?

It is difficult to justify this type of activity within the current company setting. Environmental objectives (and therefore funding) are tied closely to financial planning of the company which is on a 10 year basis. All activities which incur cost are required to have a payback of 10 or less years.

The company therefore is not far enough along on their climate change work to consider offsetting.

14. What are company procedures/priorities in allocating funds to environmental and community projects?

Ad-hoc community funding provided to projects which align closely either with local needs or the companies priorities as listed above.

15. What level of funding might the Company be prepared to allocate now and in the future?

NA

16. What would the company require of such a fund/service if it were to provide support in cash or time?

NA

**Company name:** Total Gas and Power

**Attendees:** Marion Driscoll (Facilities Manager)  
Karla (IT Manager responsible for ISO 14001 implementation)

### Organisation Information

37. Number of employees                      Site: 240      Borough:                      UK: 380+
38. Type of Business      Sales and Customer services (Supplying power to business customers)
39. Is there an existing environment programme/policy/strategy? What does it cover?
- ISO 14001 is currently being implemented by IT and facilities team. From this will come env. Statements and some form of strategy.
  - This will cover a full range of on site env. issues from energy use to waste management (all office based operations).
40. Are energy consumption and carbon emissions monitored? To what extent?
- Energy is monitored on site through meter readings (since Sept 2007).
  - No energy management software or monitoring is taking place at present. Carbon emissions from site not known.
  - Travel survey carried out for staff travel for work. Carbon calculator (? Carbon Trust?) used to calculate emissions from car, rail and air (breakdown provided). Figure submitted to SMT who feel action (of some kind) should be taken.
41. Have any actions been implemented to improve environmental performance?
- ISO14001 application, from this will come an action plan
  - Some sustainable sourcing of stationary
  - Recycling office waste
42. Are there plans for any expansion/building/major refurbishment within the Borough?
- No – Plan to stay in current offices for some time into the future (Long lease offices)
43. Is there a current community programme in place? What are the companies priorities in this area?
- No defined community programme. The company gives to nominated local and national charities.

- Green Schools Awards have been running for a number of years. This is a sole sponsorship venture for the company, involving schools from around the UK. The programme could tie into this stream of activity on a local basis.
- The company generally wants to be involved with community initiatives which have meaningful and 'tangible' results
- They feel that there is a lack of information locally on potential community initiatives for the company to be involved with and would welcome more regular communication in this area.

44. Is the company currently offsetting CO2 in any way? If so, how?

- NO

45. Has the Company ever considered offsetting CO2 from any of its operations?

- SMT have considered offsetting (potentially for travel emissions as it is not felt that these can easily be reduced.
- Have investigated Carbon Credits and what could be done within their business e.g. power supply etc...
- Have considered idea of offering carbon credits to staff, backed by incentives of some kind.

### **The RBBC Local carbon reduction Fund**

17. Would the company consider supporting a local carbon reduction fund?

- Yes, through both offsetting of activities and community involvement/engagement initiatives.

18. What are company procedures/priorities in allocating funds to environmental and community projects?

- No established procedures and no existing community or giving strategy is in place.

19. What level of funding might the Company be prepared to allocate now and in the future?

- Unknown

20. What would the company require of such a fund/service if it were to provide support in cash or time?

- Publicity and sponsorship package opportunities
- Credibility of the fund and transparency of how it operates, what it achieves and the carbon saved as a result of donations/inputs.
- More regular information regarding what the council is doing/offering, what community projects are going on or could be generated.
- Forum for businesses to discuss sustainability issues together, going beyond Easit to put emphasis on either networking and regular information flow (between businesses) or stronger actions within a partnership arrangement.

**Company name:** Toyota

**Attendees:** Tom Denton (Manager Environment and CSR)  
Robin Giles (General Manager Environment and CSR strategy)

### Organisation Information

46. Number of employees Site: 450 Borough: 450 UK: 5,000+ through franchise network

47. Type of Business Sales and Marketing arm of Toyota (management of all franchises)

48. Is there an existing environment programme/policy/strategy? What does it cover?

- Yes – ISO 14001 accredited with mature EMS implemented linked up to quality and health and safety management system. Sorely
- Environmental leadership is the current focus of the company, moving from compliance only to best practice and beyond.
- Manufacturing/design side of business has led the way in this area, with significant achievements in more sustainable automobile production and design (Zero waste to landfill successfully implemented and significant reductions in energy consumption). They want to take this into the sales and marketing side of the business now.
- Annual EU sustainability report produced, which UK operation feeds into.

49. Are energy consumption and carbon emissions monitored? To what extent?

- Currently engaged with Carbon Neutral Company to carry out full carbon foot printing of company operations (UK sales and marketing only). This will create actions to take forward.
- Have carried out monitoring to identify areas of high usage.

50. Have any actions been implemented to improve environmental performance?

- Waste and recycling initiatives in place to hit targets on reduction
- Some improvements already identified e.g. use of software to better manage servers used on site. They are able to move from using 200 servers to just 20 which will save in excess of 200tC per/yr (£50,000).
- Action across the franchise network is planned to provide advice and support to prospective and existing franchises on building, refurbishing and managing car lots and showrooms. BREEAM is being used across the franchise network.
- Aspirations for carbon neutrality on site, with some consideration to on site renewable energy etc... Or off site, within another existing site e.g. Bristol based wind turbines at Toyota site.

51. Are there plans for any expansion/building/major refurbishment within the Borough?

- Would like to build a flagship showroom in the Borough or in Epsom to showcase sustainable building (mimicking showrooms developed in Malmö, Sweden and La Rochelle, France). These will include a range of sustainability measures and aim to be carbon 'negative' through use of renewable energy and ground source heat.
- Aspirations for carbon neutrality at site.

52. Is there a current community programme in place? What are the company's priorities in this area?

- Yes – Work with nominated national and local charities. Current charity supported throughout company is the Children's Trust. They have hospital HQ within the borough and carry out a range of initiatives with them. This is a large building and could be a potential project. This may be a way that Toyota could engage with the fund as an 'inputter'.
- There is no defined programme, rather the company operates a 'giving' facility for resource and capital funding.
- Staff engagement programme is planned for April 2008 once the company has defined what it is doing / actions it will take forward as a result of above initiatives. This will involve advising staff on what they can do at work and in their own lives, with respect to travel, energy etc...

53. Is the company currently offsetting CO2 in any way? If so, how?

No

54. Has the Company ever considered offsetting CO2 from any of its operations?

Yes – it is not looked on favourably though as it is seen as an admission of 'failure' to improve own operations as a first point of call.

#### **The RBBC Local carbon reduction Fund**

21. Would the company consider supporting a local carbon reduction fund?

- They may consider supporting the fund from a charitable point of view. Where environmental impact and carbon offsetting are concerned they would have to be at a point where they could do nothing more within their own operations before engaging with the fund.
- Alternatively, there may be opportunity for engagement if the action was tied to improvements within their own operations e.g. joint Toyota community renewable energy initiative.
- The Company want to be seen as an environmental leader and good corporate citizen. This means doing what they can before considering 'offsetting'.

22. What are company procedures/priorities in allocating funds to environmental and community projects?

Unknown

23. What level of funding might the Company be prepared to allocate now and in the future?

Unknown

24. What would the company require of such a fund/service if it were to provide support in cash or time?

- Robust, verifiable carbon emissions reductions.
- Marketing potential through sponsorship packages etc...
- How could the council help Toyota to achieve its objective e.g. flagship showroom, carbon neutrality on site operations.
- Language used must be far removed from carbon offsetting and fund/scheme would have to clearly deliver on environmental leadership goals and through their involvement, show Toyota as working hard on there environmental improvement, going beyond compliance to be innovative with positive contributions to environment.
- Link with relevant local partnerships e.g. children's trust.

**Company name:** Osborne

**Attendees:** Caroline Oldroyd (Environment Manager)

### Organisation Information

55. Number of employees Site: Borough: UK:

56. Type of Business Construction (Housing specialists)

57. Is there an existing environment programme/policy/strategy? What does it cover?

Yes. ISO 14001 EMS backed by environment, sustainability and CSR policy (statements) with active targets for improving performance.

Key issues at present are waste from sites and energy use/emissions from office operations and business travel.

As a designer and builder, the company has pushed sustainable design e.g. partnering with Raven on first UK code for sustainable homes level 5 properties.

58. Are energy consumption and carbon emissions monitored? To what extent?

Yes. All office (manages sites) are monitored and CO2 has been quantified for offices and business travel.

59. Have any actions been implemented to improve environmental performance?

As part of ISO 14001 energy and waste (at offices) are monitored and some reduction measures have taken place.

60. Are there plans for any expansion/building/major refurbishment within the Borough?

No

61. Is there a current community programme in place? What are the companies priorities in this area?

Unknown

62. Is the company currently offsetting CO2 in any way? If so, how?

The company has quantified it's emissions from office energy use and business travel and converted this to cash funding for a "Osborne carbon offset fund". The fund is flexible and the company take suggestions from staff on how it should be used.

The majority of funding to date has been in-kind provision of services or for training courses for staff e.g. in sustainable design.

63. Has the Company ever considered offsetting CO2 from any of its operations?

As above



**The RBBC Local carbon reduction Fund**

25. Would the company consider supporting a local carbon reduction fund?

The current offset fund could feed into the Reigate fund and support local projects.

26. What are company procedures/priorities in allocating funds to environmental and community projects?

The Carbon Offset fund allocates funding in response to suggestions from staff. The initiative is new and so is currently operating in a flexible way.

Community funding procedures unknown.

27. What level of funding might the Company be prepared to allocate now and in the future?

Unknown at this stage. Over time the Osborne CO offset fund will be kept topped up and as the company moves towards quantifying “harder to reach” emissions, there may be more funding available.

28. What would the company require of such a fund/service if it were to provide support in cash or time?

Awaiting response.

**Company name:** Black and Veatch

**Attendees:** Alistair McMahon

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**Organisation Information**

64. Number of employees Site: 100+ Borough: UK:

65. Type of Business Engineering / Renewable energy Consultants

66. Is there an existing environment programme/policy/strategy? What does it cover?

No. This has recently been raised as an issue and initial internal discussions have been held to identify a way forward for the company.

67. Are energy consumption and carbon emissions monitored? To what extent?

At present this is not done centrally and reported on. Facilities may have records. The company has developed CO2 foot printing methodology for use in the water industry, which they are adapting to use on their own operations.

68. Have any actions been implemented to improve environmental performance?

Not exclusively (e.g. they may have taken measures internally to improve heating and cooling which have reduced consumption but there have been no targets set as yet).

Following baseline assessments, targets will be set during 2008 for improvement.

69. Are there plans for any expansion/building/major refurbishment within the Borough?

None as yet, although they have considered renewables for their own site in the past.

70. Is there a current community programme in place? What are the companies priorities in this area?

Yes. A committee identifies local projects to which it will contribute funding to.

71. Is the company currently offsetting CO2 in any way? If so, how?

No.

72. Has the Company ever considered offsetting CO2 from any of its operations?

No. However, once they have developed a commitment and an understanding of their own footprint they may consider offsetting or off site generation as a means of offsetting.

**The RBBC Local carbon reduction Fund**

29. Would the company consider supporting a local carbon reduction fund?

Yes. The company could support the fund as a local community project.

The company could provide in kind funding to the fund through provision of consultancy services to specify output projects.

Once the company has identified its CO2 footprint and prioritised its emissions portfolio they may consider paying into the fund to offset these locally. This however would not be considered for some time.

30. What are company procedures/priorities in allocating funds to environmental and community projects?

Committee decides on which projects to fund. Senior management would make decisions on a case by case basis for pro-bono projects.

31. What level of funding might the Company be prepared to allocate now and in the future?

NA

32. What would the company require of such a fund/service if it were to provide support in cash or time?

Support on planning regulations locally.

Marketing potential.

Links to new business and partnership with the Council on borough regeneration/CHP/Biomass projects.

## Appendix 6: RBBC Project Principles and Standards Checklist

The following criteria have been developed to form a checklist against which projects have been assessed for the RBBC Fund. Projects should be able to demonstrate most of the following criteria.

### 1. Baseline scenario

Sufficient data must be available (covering a period of at least 1 year) to establish a baseline scenario i.e. what would CO2 emissions from the project be without assistance

Only 'direct' emissions should be counted within the baseline, from operations which require fossil fuel for 'business as usual' activities e.g. space and water heating

Only emissions which can be monitored regularly should be counted within the baseline

### 2. Emission reduction

Only 'direct' emissions reductions (which can be monitored) should be counted e.g. from reduction in fossil fuel use related to 'business as usual' activities (as above).

Emission factors from the Defra Carbon Offset Code of Practice should be used

Only emissions reductions which are 'robust' and proven should be considered e.g. (feasible) renewable energy technologies or proven energy efficiency for which there are nationally recognised standards and savings.

### 3. Monitoring

Projects should have the ability to be monitored over their lifetime

### 4. Location

Only projects within the boundaries of Reigate and Banstead Borough Council should be funded or projects in which the recipients are 'residents' or 'Constituents' of the council, to which the Council has obligations.

### 5. Added value

Projects should achieve demonstrable added value beyond emissions reductions e.g. in education, awareness, social improvement, regeneration, poverty alleviation, job creation

### 6. Additionality

Projects should not be mandated by any enforced law, statute or other regulatory framework.

The Project faces financial, organisational, cultural or social barriers that can be overcome by support from the fund.

The Project type should not be common practice in the local area/nationally, compared with projects that have received no funding.

## 7. Commitment

Project recipients should be (demonstrably) willing to commit to reducing energy use and maximizing emissions reductions

Project recipients must have the means either to contribute towards the project implementation (either financial or resource contribution) or to the long term upkeep, monitoring and transparency of the project.

# Solar for Reigate Community

## Summary

<b>Project Type</b>	Community Renewable Energy
<b>Location</b>	Reigate Town Centre, Surrey
<b>Status</b>	Proposed
<b>Project portfolio</b>	2008/09
<b>Emission reduction</b>	6.8 tonnes of CO <sub>2</sub> p/yr or 170 tonnes of CO <sub>2</sub> life time
<b>Cost</b>	£269/ tCO <sub>2</sub> per year or £6,716/ tCO <sub>2</sub> lifetime saving
<b>Added Value</b>	Regeneration, Community awareness, Education, Costs

## Background

Reigate Methodist Church has been at the heart of the local community since the 18th Century. It prides itself on changing to meet the needs of local people and to assist the community in any way that it can, providing services and meeting venues for over 1000 members of the local community.

The Church building itself has been extended over the years to accommodate the growing needs of the community and after the second world war Rank Hall was built as a local community centre. The hall however and the other facilities are in desperate need of refurbishment and more space is needed to accommodate the growing needs of local groups.

There are around 33 community groups which use the premises including children's and uniformed groups, support groups for the elderly and drop-in services, arts and theatre groups and a community cafe.

There are now grand designs in place to refurbish the church and to build a new community centre facility. Energy demand will be much higher for the new facility and the church hope to reduce their CO<sub>2</sub> emissions as far as possible.



Reigate Methodist Church

The vision is to develop an accessible and flexible community centre that will provide safe and modern environment to serve the many and varied needs of Reigate.

The church have a commitment to minimise environmental impact of their refurbishment as far as possible and have established a green team to drive the agenda forward.



## Added Value

While the church has grand plans, it is still fund raising to obtain the necessary budget to set these plans into action. A total of £1.7m is required to carry out the refurbishment and new build and the church has only raised about half of the funds.

The support of the fund will allow the inclusion of solar panels without jeopardising the rest of the works planned.

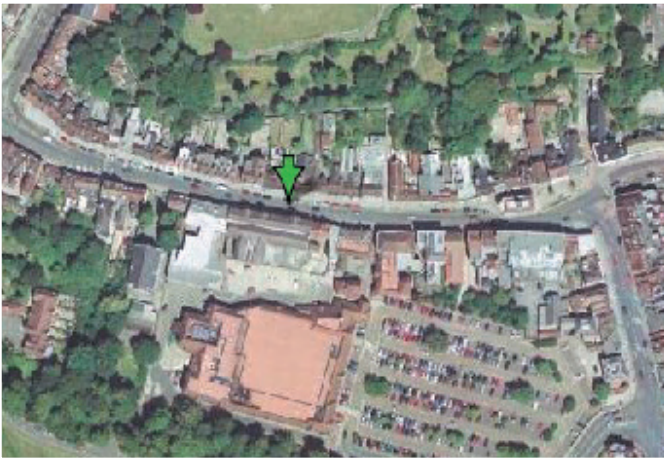
Solar panels will also be highly visible by the visiting community and a display system will ensure that all who use the on site facilities will be able to monitor what the panels are doing and will be provided with information and advice about why this is important.

The Solar panels will help to reduce utility costs for the Church , leaving more money to pay for services and new resources.

As the church strives to keep up with the needs of a growing community, they realise that climate change and environmental issues must be taken into consideration. The inclusion of renewable energy in the new community centre will ensure these messages are heard for years to come.



Solar Pannels being installed



Reigate High Street, Methodist Church

## The Project

The church have already included high levels of energy efficiency and insulation within the new buildings being proposed but would very much like to include a renewable source of energy on site.

The project will install a 15 kW Solar Photovoltaic array on two new south facing roofs of the new hall. The new roofs are perfect for solar power generation as they face south and are un-shaded by trees and buildings.

The Solar panels will generate a minimum of 13,000 kWh per year and save an estimated 7 tonnes of CO<sub>2</sub> per year.

The solar array will be complemented by a new energy efficient gas boiler system and energy efficiency lighting and appliance throughout the new buildings.

The Church is committed to improving the environmental performance of its facilities and to ensuring that any new facilities are built to the highest standards.

Without the support of the fund the inclusion of solar panels would not be required by any planning or other government legislation.

# 100 Energy Efficient Homes

## Summary

<b>Project Type</b>	Domestic energy efficiency
<b>Location</b>	Redhill, Surrey
<b>Status</b>	Proposed
<b>Project portfolio</b>	2008/09
<b>Emission reduction</b>	207 tCO <sub>2</sub> per annum / 6,870 tCO <sub>2</sub> lifetime saving
<b>Cost</b>	£380/tCO <sub>2</sub> per year or £11/tCO <sub>2</sub> lifetime saving
<b>Added Value</b>	Regeneration, Community awareness, Cost savings

## Background

Redhill and the surrounding area comprises of a mixed community ranging from local businesses, to high earning professionals to low income households. There are pockets of housing which are of a poor standard of repair and or poor thermal efficiency.

Homes which are poorly insulated cause tenants to be at greater risk of rising fuel prices and can effect the health of occupants, through condensation and mould and through prolonged exposure to cold weather.

Alongside these issues, Redhill is home to an exciting regeneration project which hopes to grow the local economy and improve local services for all who live, work and visit the area.

In areas of regeneration, existing properties often get overlooked and it is important that with new development existing standards should be improved as well.

Domestic properties account for almost a third of the UK's CO<sub>2</sub> emissions and old, thermally inefficient homes have a significant impact not only through CO<sub>2</sub> emissions but also on those that live in them.



Abstract House

The Council has identified homes from across the borough which are currently energy in-efficient and which could have simple cost effective improvements to improve their efficiency. These include:

- Loft insulation
- Cavity wall insulation
- Low energy light bulbs
- Solar water heating systems



## Added Value

Improving the insulation of these homes will help occupiers to stay warm and healthy in their homes and help to reduce the risk posed by increasing energy prices.

The average household will save between £200 - £300 per year on their utility bills as a result of installing these measures.

The improvement of these homes will help to ensure that those residents within the regeneration area are able to stay in their homes and will safeguard these homes for future generations of Redhill residents.

Each household will receive advice and support on saving energy and water in their homes and savings made will be monitored over time.

These households will act as promotional points within Redhill to encourage others to take action by becoming more energy efficient.



Loft insulation being installed



Redhill Town Centre

## The Project

The council have identified a group of 100 properties in Redhill which require energy efficiency improvements.

Each home will have the following measures installed to reduce the use of natural gas (for heating and hot water) and electricity (for lighting):

- Cavity wall insulation
- Loft insulation
- 3 x low energy lights

All properties currently have old inefficient gas boilers and installing better insulation will reduce their energy demand significantly.

Installing the above measures is expected to save in excess of 207 tonnes of CO<sub>2</sub> per year and over 6,800 tonnes of CO<sub>2</sub> over their lifetime. The saving will come from reducing the amount of natural gas required to heat the 100 properties to a sufficient level.

Each householder will be provided with advice on how to save energy in their homes and the results will be monitored over time.

Jesse Putzel  
ECSC  
Unit 327  
30 Great Guildford Street  
London  
SE10HS

21<sup>st</sup> April 2008

**Providing biomass heat project support to schools in Reigate & Banstead Borough Council**

Dear Jesse

Further to our meeting on 4th April 2008, we are pleased to provide our fee proposal and scope of works for providing project support to schools considering biomass heating installations within Reigate & Banstead borough.

**Scope of work**

B&V can provide project support for biomass heating installations, helping schools in Reigate & Banstead borough progress projects from inception to pre-feasibility to installation. The services provided are a combination of technical advice and project management, with B&V in effect taking the role of a project champion.

The tasks set out below are based on previous experience of working with schools on biomass heat projects.

**1. Site visit and data collection (0.25 days per school)**

B&V will visit each school in order to assess the following important elements.

- Site access for fuel deliveries
- Current plant location and state of heat distribution
- Suitability of existing plant room for biomass boilers and space for fuel storage
- Heating controls
- Data collection – utility bills
- Maintenance programme
- Current problems with heating system

**2. Feasibility assessment (4 days per school)**

Following the site visit B&V will prepare a feasibility report which will assess the suitability of each school for biomass heating. The report will contain the following

- Heat load profile
- Current fuel expenditure
- Appropriate boiler sizing strategy and recommended boiler size and configuration
- Boiler house requirements (size, location)
- Wood fuel requirement and potential suppliers (B&V will contact potential fuel

suppliers for quotes and delivery methods)

- Appropriate fuel store capacity
- Review of fuel delivery vehicle access
- Health & safety considerations
- Review of suitable heating controls
- Planning & environmental requirements/constraints
- Outline economic review
- Guideline maintenance requirements of wood fuel fired boilers
- Carbon savings and environmental benefits

### **3. Request for Proposals and installer selection (1.5 days)**

Following the preparation of a feasibility report B&V will prepare Request for Proposals to go to potential installers of biomass plant. B&V will work with the schools and Reigate & Banstead Borough Council to select a preferred installer.

### **4. Ad hoc support (2 days)**

B&V will offer support to complete the following tasks during the project process:

- Assistance with preparation of planning application (if required)
- Assistance with preparation of fuel supply contract
- Assistance with completion of grant applications
- Advice on preparation of educational materials for students

## **Fees**

This fee proposal is based on a time-charge arrangement with ceiling cost. The anticipated number of days is detailed by task and illustrated in the table below. Time charges will be invoiced on a monthly basis; this fee proposal is valid for 30 days.

Based on current rates, the ceiling cost for providing project champion support to each school is £4,000 + VAT.

Staff day rates:

- Renewable Energy Engineer £337
- Senior Renewable Energy Engineer £413
- Technical Director £788

<b>Activity</b>	<b>Days</b>
1. Site visit and data collection	0.25
2. Feasibility assessment	4.5
3. RFP and installer selection	1.5
4. Ad hoc support	2
5. Project management (QA and administration)	0.25
<b>TOTAL</b>	<b>8.5</b>

## **Staff biographies and experience**

*Alastair McMahon AIEMA* - Alastair joined Black & Veatch in March 2007, and has 5 years experience in the sustainable energy sector. Alastair has managed a range of sustainable energy projects for national and local government, schools, industry and communities. He has extensive experience in completing technical renewable energy, energy efficiency, sustainability and carbon management studies, and sustainability statements and energy strategy appraisals for architects, developers and local authorities. Alastair has particular experience in the field of low carbon buildings and planning, he is currently working on the preparation of an energy strategy for a masterplanning project in the South West and is advising three Building Schools for the Future projects on their planned biomass heating installations as part of the Regen SW Bioheat project.

*Ben Sang* - Ben joined Black & Veatch in October 2006 as a Renewable Energy Engineer. Ben has worked in the renewable energy field for 4 years. He has been involved in delivering a number of different projects including the Community Renewable Initiative (a DTI funded program) and working with a range of clients including schools, businesses, community groups, local authorities and developers. With a key role to deliver renewable energy projects, Ben has developed significant experience across a range of different types and scales of renewable energy technologies including large-scale wind power, small to medium scale biomass heating, solar PV, ground source heat pumps, and low head hydro power. This work has included site assessments, developing capital funding packages, and project development. Ben is currently working on a number of biomass heating projects for both public and private sector clients as part of the SW Bioheat project.

*Patrick Pica* - Patrick joined Black & Veatch in April 2008. He has 14 years diverse experience in energy management and procurement, contract and construction management, process engineering, and implementing environmental management systems (including EMAS and ISO14001). A qualified construction project manager, Patrick holds a first degree in Environmental Sciences and a Master of Science degree in Facilities Management. Passionate about sustainable development, Patrick has particular experience of designing and project managing the installation of biomass fired district heating schemes, and has conducted extensive research on the biomass sector. In his previous role with the Environment Agency, Patrick was responsible for project managing the agency's first biomass heat installation.

Do not hesitate to contact me if you have any questions. I look forward to discussing the project further with you soon

Yours sincerely

Alastair McMahon  
Senior Consultant - Sustainability

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