Carbon Management Programme

Carbon Management Plan 2009 - 2013




Swale Borough Council
North Kent Coast

Carbon Trust

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Foreword from Cllr Andrew Bowles, Leader, Swale Borough Council

Our Council is committed to addressing the causes and effects of climate change in our area. We signed the Nottingham Declaration in November 2007 and this carbon management plan is an important element in meeting our obligations. It will also form part of our overarching climate change strategy. This plan will form the backbone of the Council's carbon management programme for the next four years.

It explains how through investment in energy efficiency, aligning our policies and fostering a culture of carbon and energy saving we will meet our target of reducing our direct emissions by 20% by 2013. The plan will also help to reduce our energy related costs, reducing the significant financial risk of volatile energy prices and help consolidate our position as a community leader on climate change action.

We hope that by making a concerted effort to reduce emissions, replicating the best practice of others and creating best practice of our own, we will set an example for others in our community to follow, which will lead to greater reductions in emissions from our borough as a whole.

The late Cllr John Disney was the driving force behind this initiative and we are proud to do this work in his memory.

Andrew Bowles

Foreword from the Carbon Trust

Cutting carbon emissions as part of the fight against climate change should be a key priority for local authorities - it's all about getting your own house in order and leading by example. The UK government has identified the local authority sector as key to delivering carbon reduction across the UK in line with its Kyoto commitments and the Local Authority Carbon Management programme is designed in response to this. It assists councils in saving money on energy and putting it to good use in other areas, whilst making a positive contribution to the environment by lowering their carbon emissions.

Swale Borough Council was selected in 2008, amidst strong competition, to take part in this ambitious programme. Swale Borough Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Plan commits the council to a target of reducing CO_2 by 20.% by 2013 and underpins potential financial savings to the council of around £0.5 million.

There are those that can and those that do. Local authorities can contribute significantly to reducing CO_2 emissions. The Carbon Trust is very proud to support Swale Borough Council in their ongoing implementation of carbon management.

Richard Rugg
Head of Public Sector, Carbon Trust

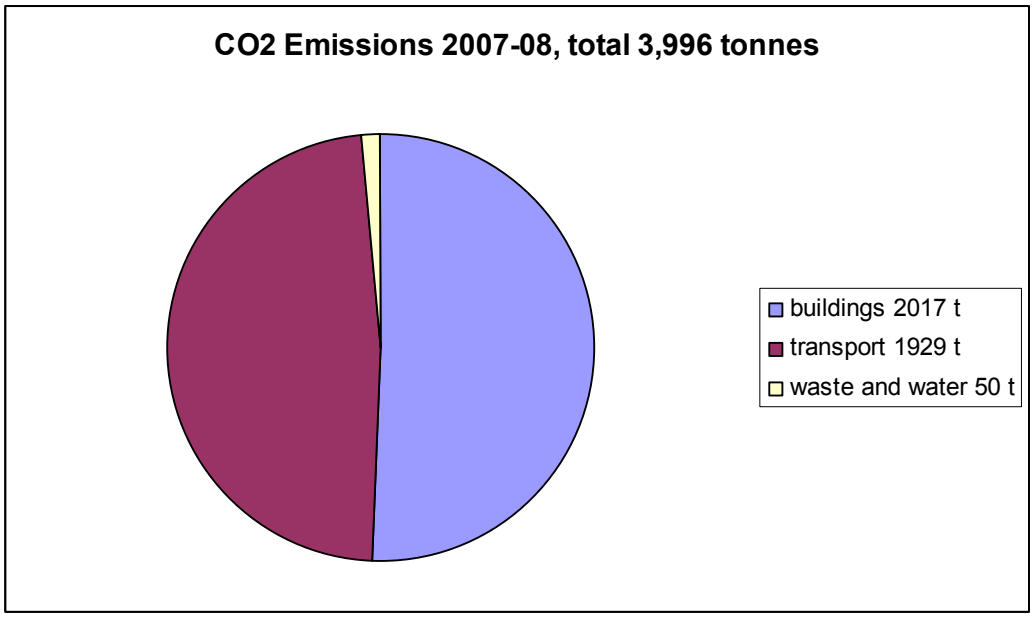
Management Summary

Swale Borough Council signed the Nottingham Declaration in November 2007 acknowledging the threat of climate change and our intention to act on it. Taking part in the Carbon Trust's Carbon Management Programme and producing this Carbon Management Plan goes some way to fulfilling our obligations under the Declaration.

Swale's Corporate Plan has four key priorities – this plan helps to address two of them, Creating a cleaner and greener Swale and Becoming a high performing organisation.

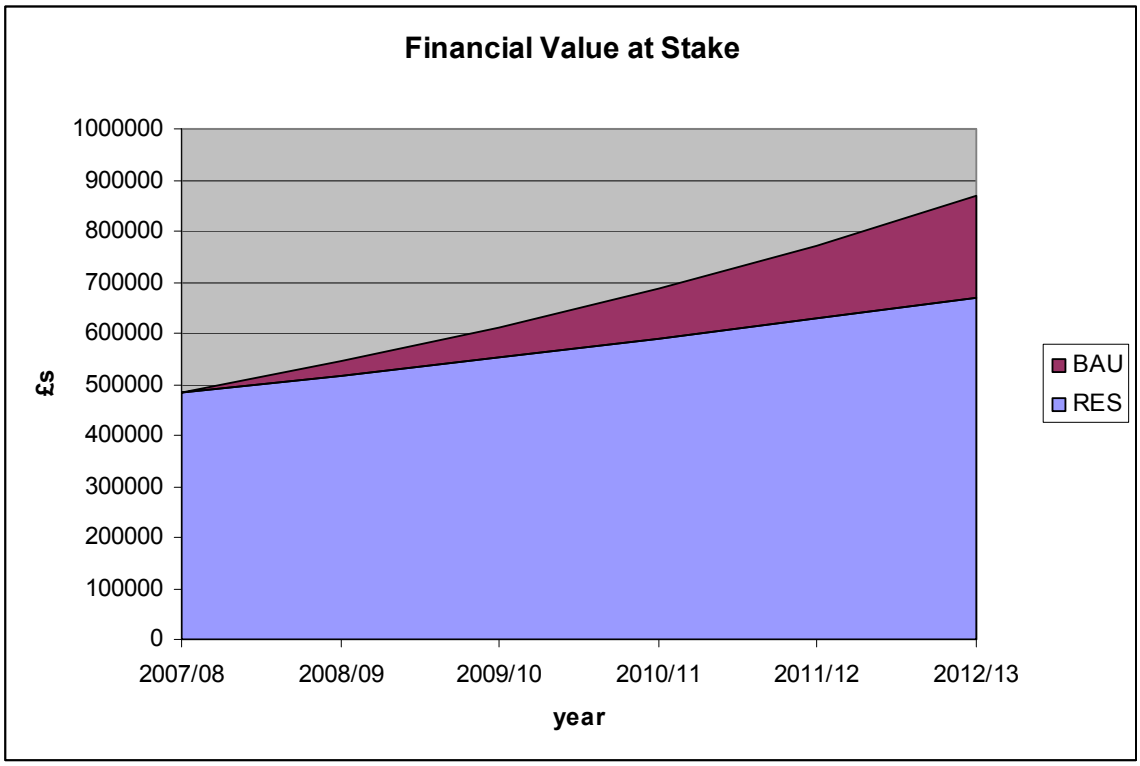
The purpose of this document is to describe in detail our plan of action of achieving a target of a 20% reduction in CO_2 emissions by 2012-13.

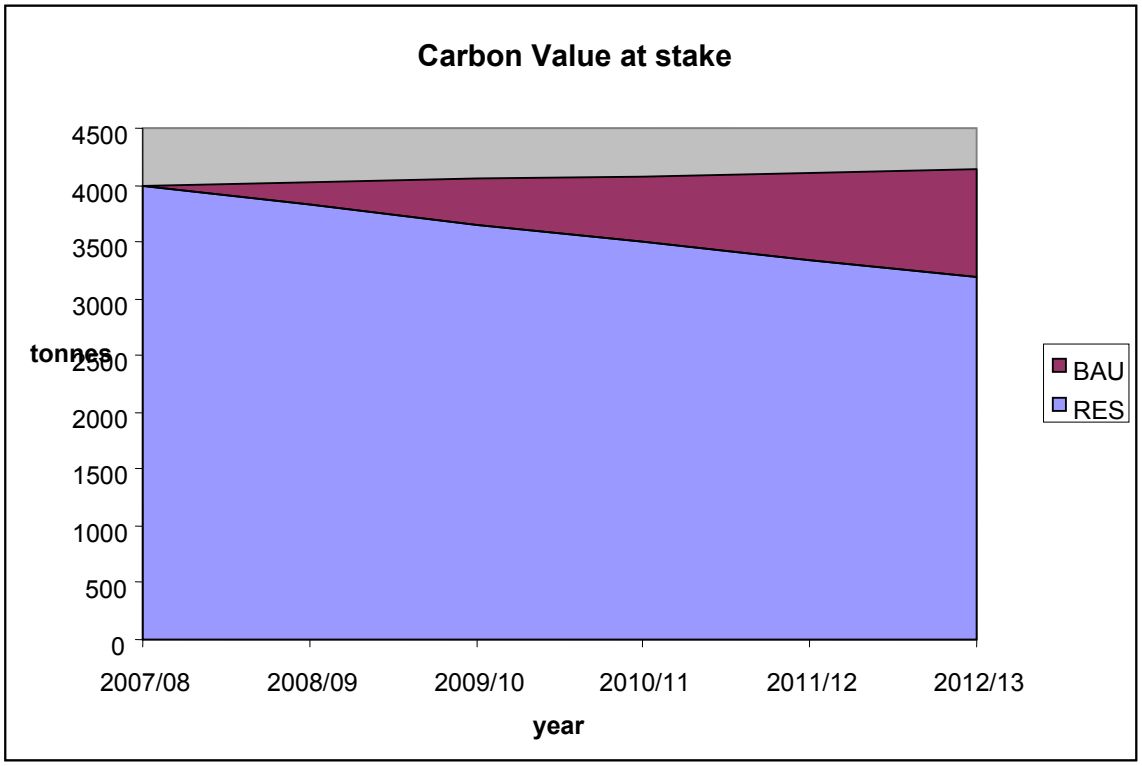
Swale Borough Council has calculated its carbon footprint for 2007/08 as being 4000 tonnes – split approximately equally between static sources and transport. We spent £485k on energy and carbon related costs – heating for buildings, fuel for fleet vehicles and staff business travel.



Under a business as usual scenario these costs will rise by an estimated 80% by 2013. By implementing this plan and achieving the reduced emissions scenario we may avoid this additional expenditure and reduce costs by 23%.

The total cumulative value at stake (total amount of carbon and money to be saved) over the period of this plan is 2890 tonnes of CO_2 and £527,000





BAU - business as usual
RES - revised emission scenario

We will achieve these savings by investing in improved technology, by educating our staff and by better management of our assets.

Projects have been identified and are detailed in this plan – others will be developed over the next few years. We currently have identified half of the savings required to meet our 20% target.

An internal Invest to Save fund has been set up of £75k and we expect to match this with equal funding from Salix Finance. Other funding will come from within existing budgets.

By 2013 we intend to have reduced our CO_2 emissions by 20% and to have embedded carbon management across our organisation

1 Introduction

The purpose of this document is to describe in detail our plan of action to achieve a 20% reduction in CO_2 emissions by 2012-13

In our baseline year of 2007-08 we emitted 3,996 tonnes of CO_2 and spent £485,000 on energy and carbon related costs – heating fuel and electricity for buildings, diesel fuel for fleet vehicles and staff business travel. This includes our out sourced services such as swimming pools and waste collection.

Under a business as usual scenario these costs will rise by an estimated 80% by 2012-13.

By implementing this plan – and achieving reduced emissions we should avoid this additional expenditure and reduce costs by 23% by 2013-13.

The total value at stake or cumulative avoided expenditure is £527,000 to 2013.

The cumulative avoided emissions from implementing this plan amount to 2,892 tonnes of CO_2 by 2012-13.

This plan consists of a range of energy efficiency projects in our buildings and vehicles ranging from simple to low or no cost measures such as staff awareness and driver training to investments in swimming pool covers and voltage optimisers. There are also enabling actions around staffing, governance, procurement, policy, monitoring and performance.

Implementation of this plan has commenced, however the plan is a living plan and will be revisited and revised as new projects are identified.

£75k has been identified to establish an internal Invest to Save fund to finance projects not already occurring as part of routine management and Salix Finance have agreed in principle to extending this funding by another £75k – confirmation is expected in early 2009.

Other planned expenditure will contribute to achieving the target.

Swale Borough Council will gain the following benefits from the programme:

- A reduction in carbon emissions associated with council business and services operated directly or through its contractors.
- A reduction in running costs associated with changes to behaviour and the implementation of selected efficiency measures
- To be seen as a carbon conscious authority reflected through its community leadership.

2 Carbon Management Strategy

2.1 Context and drivers for Carbon Management

The debate on climate change has shifted from whether action is needed towards how much needs to be done, by when and the economic implications of doing so. Climate change is now regarded as one of the most significant challenges facing our communities both local and global over the coming years.

The Stern Review of the Economics of Climate Change, 2006 found that the benefits of strong early action to tackle climate change will outweigh the costs required to make these changes.

Extracts from the Stern Review

"The evidence shows that ignoring climate change will eventually damage economic growth. Our actions over the coming few decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and the depression of the first half of the 20th century. And it will be difficult or impossible to reverse these changes. Tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries. The earlier effective action is taken, the less costly it will be"

"The effects of our actions now on future changes in the climate have long lead times. What we do now can have only a limited effect on the climate over the next 40 or 50 years. On the other hand what we do in the next 10 or 20 years can have a profound effect on the climate in the second half of this century and in the next."

"At the same time given that climate change is happening, measures to help people adapt to it are essential. And the less mitigation we do now, the greater the difficulty of continuing to adapt in future."

National Drivers

The Climate Change Act

The UK Government is committed to addressing both the causes and consequences of climate change and has therefore passed the Climate Change Act, which received ascent in late 2008. The Act creates a new approach to managing and responding to climate change in the UK through: setting ambitious targets, taking powers to help achieve them, strengthening the institutional framework, enhancing the UK's ability to adapt to the impact of climate change and establishing clear and regular accountability to the UK, Parliament and devolved legislatures.

This Act puts into statute the UK's targets to reduce carbon dioxide emissions through domestic and international action by at least 80% 2050 and at least 26% 2020, against a 1990 baseline.

Display Energy Certificates

From 1 October 2008 there has been a legal requirement for all public sector buildings with a total useful floor area of over 1,000m, to show a Display Energy Certificate (DEC) in a prominent place, clearly visible to the public. These are on display in Swale House and the Alexander Centre. They will be renewed annually in October and reflect any change in performance.

Carbon Reduction Commitment (CRC)

From 2010 mandatory emissions trading will apply to large public sector and commercial organisations. While Swale Borough Council's energy consumption is too low to fall into the initial round of CRC it is expected that the scheme willl be ratcheted downwards and will apply to the Council in time.

National Indicator 185 – Percentage CO_2 Reduction from Local Authority Operations

The public sector is in a key position to lead on efforts to reduce CO_2 emissions by setting a behavioural and strategic example to the private sector and the communities they serve. Measurement against this indicator requires each local authority to calculate its CO_2 emissions from analysis of the energy and fuel use in their relevant buildings and transport, including where these services have been outsourced.

National Indicator 186 – Per Capita CO_2 Emissions in the Local Authority Area:

Local authorities are uniquely placed to provide vision and leadership to local communities by raising awareness and to influence behaviour change. The percentage reduction in CO2 per capita in each Local Authority will be reported annually. This will be produced by Central Government based on CO2 emissions in the Local Authority Area from business and Public Sector, domestic housing, and road transport. This indicator has been chosen as one of the 36 Kent wide ones in the Kent Local Area Agreement.

National Indicator 188 – Planning to Adapt to Climate Change.

Local Authorities need to be prepared to manage risks to service delivery, the public, local communities, local infrastructure businesses and the environmnet from a changing climate. The indicator measures progress on assessing and managing climate risks and opportunities and incorporating appropriate action into local authority strategic planning. This indicator has also been chosen as a Kent wide one.

Local Drivers

The Nottingham Declaration

On 21 November 2007 Swale Borough Council signed the Nottingham Declaration committing itself to address the causes and effects of climate change and to develop a climate change strategy within two years.

The Carbon Management Programme supports this commitment to the Declaration by setting out a plan to enable the Council to reduce emissions from its activities and services, demonstrating to the community its commitment to reducing its impact on the environment and leading by example.

"We commit……to publicly declare, within appropriate plans and strategies, the commitment to achieve a significant reduction of greenhouse gas emissions from our own authority's operations, especially energy sourcing and use, travel and transport, waste production and disposal and the purchasing of goods and services"

From the Nottingham Declaration on Climate Change, signed by Swale Borough Council, 21 November 2007

Corporate Plan

Swale's Corporate Plan "Shaping the Future of Swale" identifies four interrelated corporate priorities;

1. Regenerating Swale
2. Creating a cleaner and greener Swale
3. Promoting a safer and stronger community
4. Becoming a high performing organisation

In particular the Carbon Management Programme supports priorities 2 and 4

Sustainable Community Strategy – Ambitions for Swale

This strategy recognises that "managing, adapting to and developing solutions to climate change" is one of the challenges facing the borough as set out under the Ambitions for the Environment section. This Carbon Management Plan will show how the Council is beginning to address these issues setting an example for the community. Further work planned with the Energy Saving Trust will address how the community can rise to these challenges.

Local Development Framework

A Guide to Sustainable Construction is currently in development, which may in time become a Supplementary Planning Document to support the core Local Development Framework. The CMP will support this document by showing that the authority is taking climate change seriously and is leading by example in improving its own properties.

Climate Change Strategy

A requirement of signing the Nottingham Declaration is that a Climate Change Strategy is produced. The CMP will inform this document which we will be drafting and consulting on during 2009.

Finally, and by no means the least, measures to increase energy efficiency will reduce energy costs, which is particularly important for the future given the volatile nature of energy prices. Energy and fuel costs have seen a dramatic rise in recent years, with energy prices increasing by well over 50% since 2004. This trend is not expected to change and we must accept that the price we pay for our energy will continue to increase in the coming years.

2.2 Our low carbon vision

Swale – reducing emissions, reducing costs

Within five years Swale Borough Council will

- Have a "best practice" carbon programme that has delivered cuts in the Council's direct emissions of greenhouse gases
- Have successfully mitigated against rising energy prices and avoided increasing energy-related costs
- Have ring-fenced savings and reinvested them in energy efficiency and low carbon technologies
- Have directed routine expenditure towards the lowest emissions options
- Be widely recognised as having an excellent record of reducing its emissions.

2.3 Strategic themes

In order to move towards our vision we will focus on these strategic themes

- Our core buildings; Swale House in Sittingbourne, the Alexander Centre in Faversham, and the Sheerness District Office on the Isle of Sheppey.
- Our outsourced operations; refuse collection, sports and leisure centres
- Our partnerships with the Carbon Trust and the Energy Saving Trust
- Our management – carbon saving will be part of our management function, policies and procedures will be developed
- Our resources will be established to support carbon savings
- Our communication will advise staff and our community of the progress being made.

2.4 Targets and objectives

The objectives of this programme are to

- Quantify the carbon emissions associated with running the council, in order to identify priority areas for emission reduction action
- Provide a strong business case for making improvements and changing behaviour within and outside the organisation
- Embed the principles of carbon management in the council's Corporate Plan and service design and improvement through its service plans
- Reduce CO_2 emissions from Council operations by 20% in 2012-13 compared to a baseline of 2007-08
- Switch to lower cost, lower carbon energy sources where possible
- Encourage workforce involvement in the identification of opportunities and the implementation of action
- Lead by example and encourage our partners and the community to make behavioural changes to reduce carbon emissions.

3 Emissions Baseline and Projections

3.1 Scope

From April 2009 Local Authorities will have to report their performance against a number of National Indicators. NI185 considers CO_2 emissions. Defra describe the scope of NI185 as

"NI 185 is to include all CO_2 emissions from the delivery of local authority functions. In terms of the meaning of the word in legislation "function" covers both the duties and powers of an authority. It covers all an authority's own operations and outsourced services. Even if the services are being provided by an external body (e.g. a private company) they remain the function of the authority. There is no exhaustive list of the powers and duties of an authority in legislation, as the term function is taken to understand what that means for the relevant authorities."

In consultation with the Carbon Trust we have used the NI 185 guidelines and software as a starting point for calculating our carbon footprint. However, we need to develop further how we collect data for all our buildings and contracted out services.

We have included

- Our three main buildings (90% of our direct energy spend)
- Business travel – staff and members
- Council owned fleet fuel use
- Commuting (emissions only, not cost as this is borne by staff)
- The borough's swimming pools and leisure centres
- Waste collection
- Grounds maintenance
- Water use
- Waste generated

As data becomes available we will broaden the scope of our reporting and revise our footprint. We shall also be considering our footprint under the Use of Resources key lines of enquiry reporting.

3.2 Baseline

The baseline year for our carbon footprint is the financial year 2007– 08. This will support NI 185 reporting, which after some initial changes will use the financial year rather than the calendar year for reporting.

Data has come from various sources – bills, meter readings, mileage claims, staff surveys etc

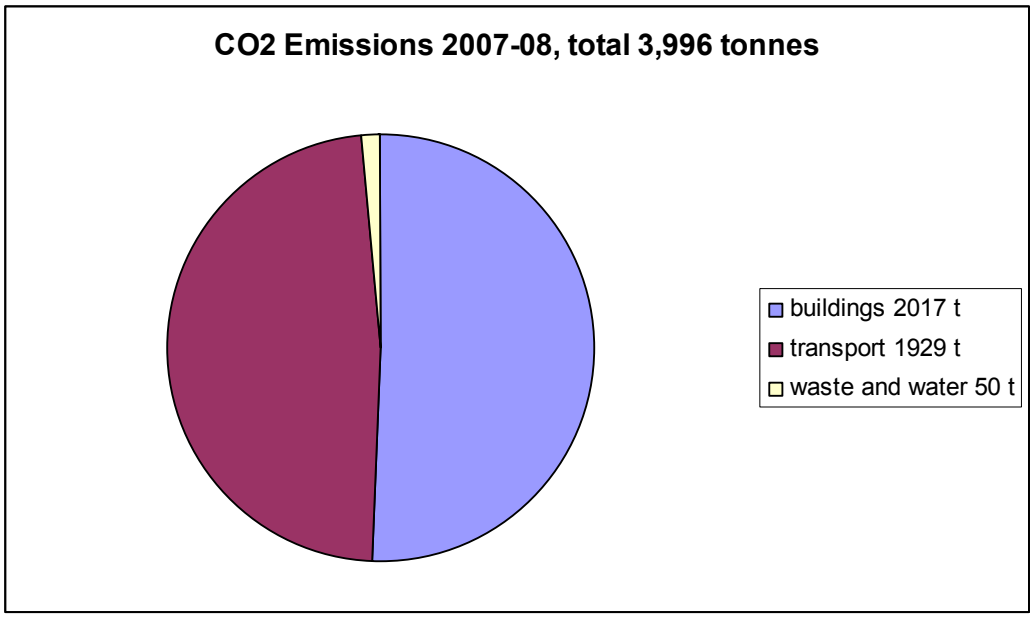
Emission source	Data	Comment
Swale House, Sittingbourne	Meter reads Bills Waste collection volumes	Robust data, able to cross check
Alexander Centre, Faversham	Meter reads Bills Waste collection volumes	Robust data, able to cross check
Sheerness Office, Isle of Sheppey	Meter reads Bills Waste collection volumes	Robust data, able to cross check
Swallows Leisure Centre and Pool	Meter reads Waste collection volumes	Unable to cross check with bills, but accurate recording of meter reads
Sheerness Pool	Meter reads Waste collection volumes	Unable to cross check with bills, but accurate recording of meter reads
Healthy Living Centre, Sheerness	Meter reads Waste collection volumes	Unable to cross check with bills, but accurate recording of meter reads
Faversham Pool	Fuel bills Water meter reads Waste collection volumes	Unable to cross check
Staff business travel	Mileage claims Rail warrants	Some staff do not claim – under reporting of mileage, changes in vehicles not always picked up Rail journeys not always detailed, under reporting
Councillor travel	Mileage	Not all councillors claim
Staff commute	Staff survey	Survey conducted in 2006 Based on average fuel consumption
Contractors	Fuel consumption and bill data	Contractors own spreadsheets

Various emissions factors have been used to calculate the carbon value of the emissions
– the sources are listed in appendix C at the end of this document.

Table 3.2 – Summary table of emissions for baseline year 2007/08

	Total	Buildings	Transport	Waste and Water
Baseline CO_2 emissions (tonnes)	3,996	2,017	1,929	50
Baseline Cost (£)	£485,280	£338,711	£106,147	£40,422

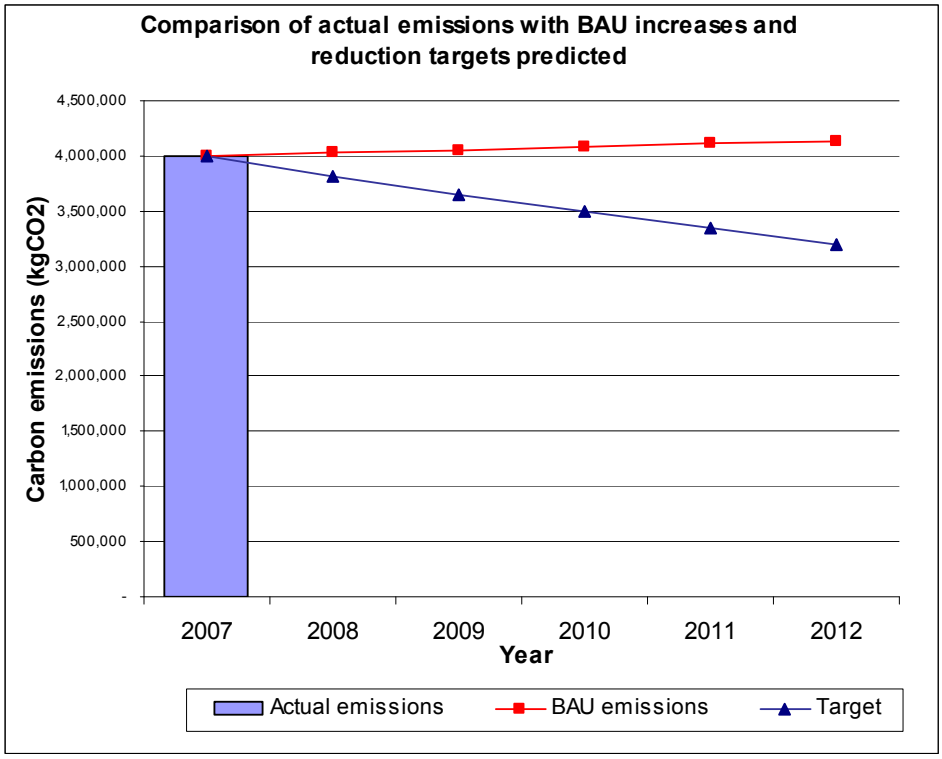
Figure 3.2 Summary of emissions for baseline year 2007/08



The sources of the emissions are split almost evenly between stationary sources and transport with a small amount coming from waste and water.

3.3 Projections and Value at Stake

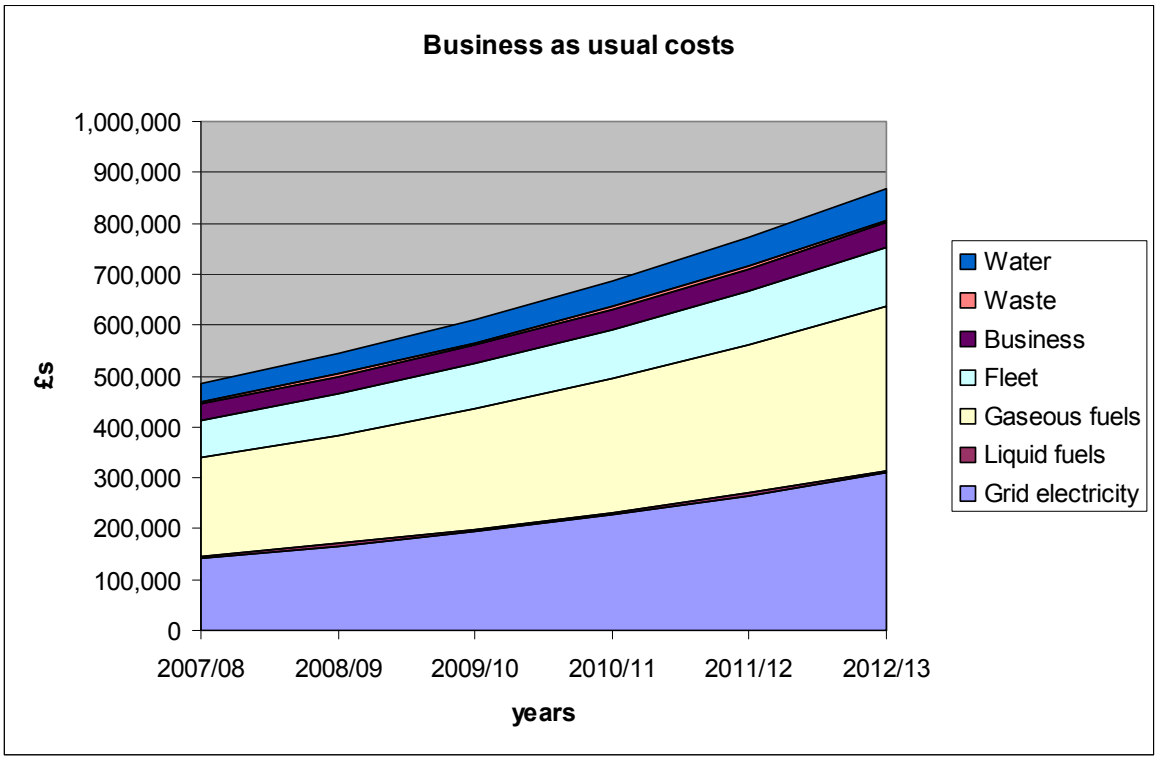
If we continue our business as usual (BaU) we can assume an increase in demand for both stationary sources and transport of 0.7% per annum (source DTI/DBERR EP68) giving a rise in emissions across the period of 142 tonnes. This is shown in the table below.



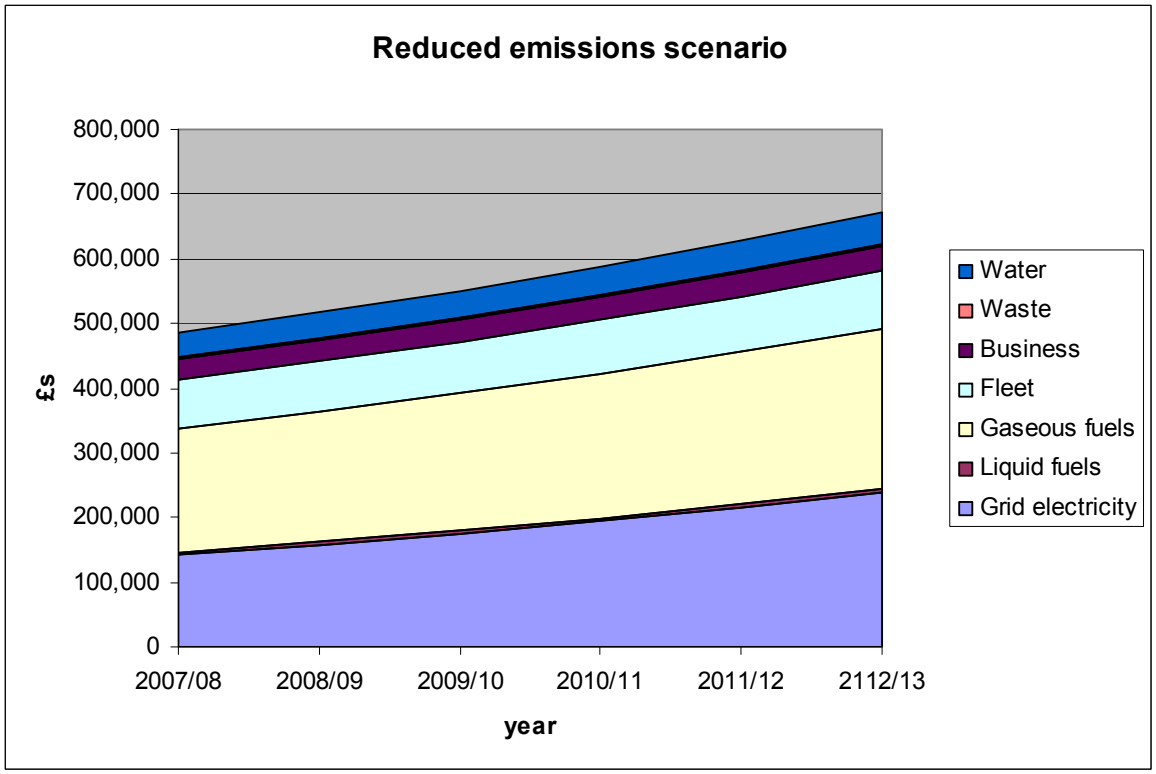
Calculating the financial cost of the emissions over the next five years is more complicated and makes the following assumptions about price rises. Given the volatility of the energy markets and the limitations of the modelling software (only one price per fuel, price rises the same annually – no ability to vary year by year) this figure is less accurate but gives a trend and can be revised over time.

Assumptions

Commodity	Price Rise per annum
Grid electricity	16%
Liquid fuels	8.4%
Gas	10%
Transport	8.4%
Waste	8.4%
Water	10%

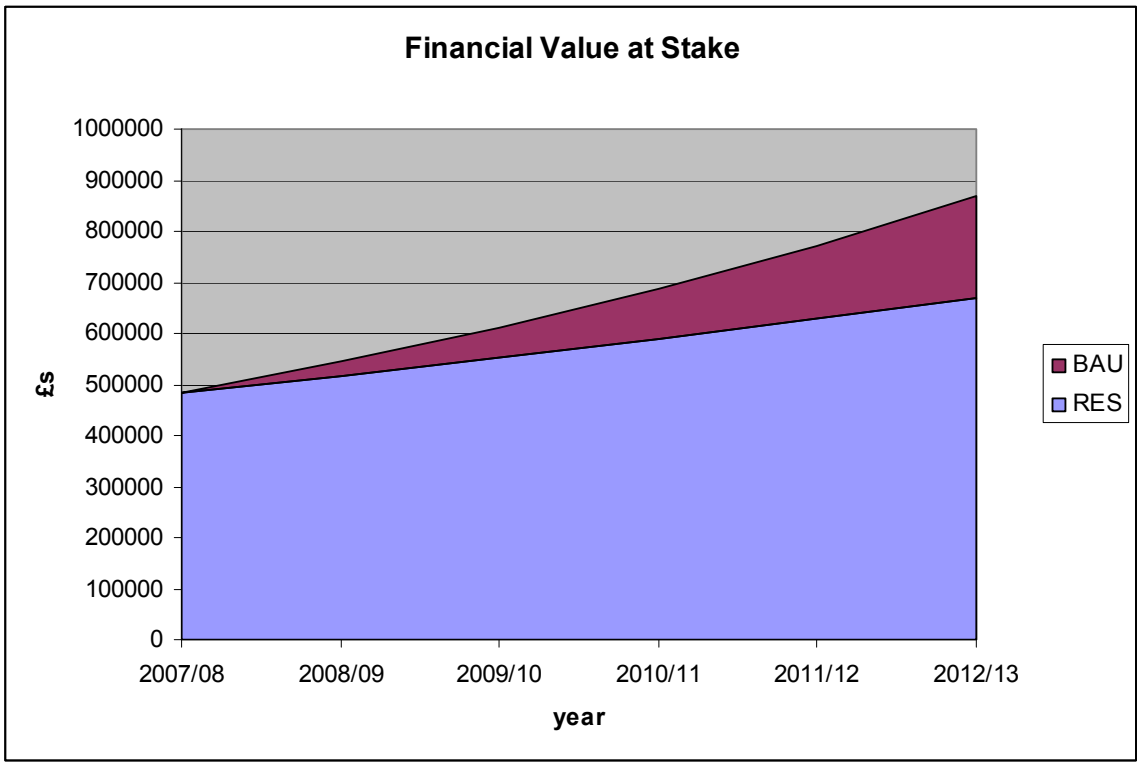


Energy and emissions related cost will rise by 79% from the baseline year to 2012-13

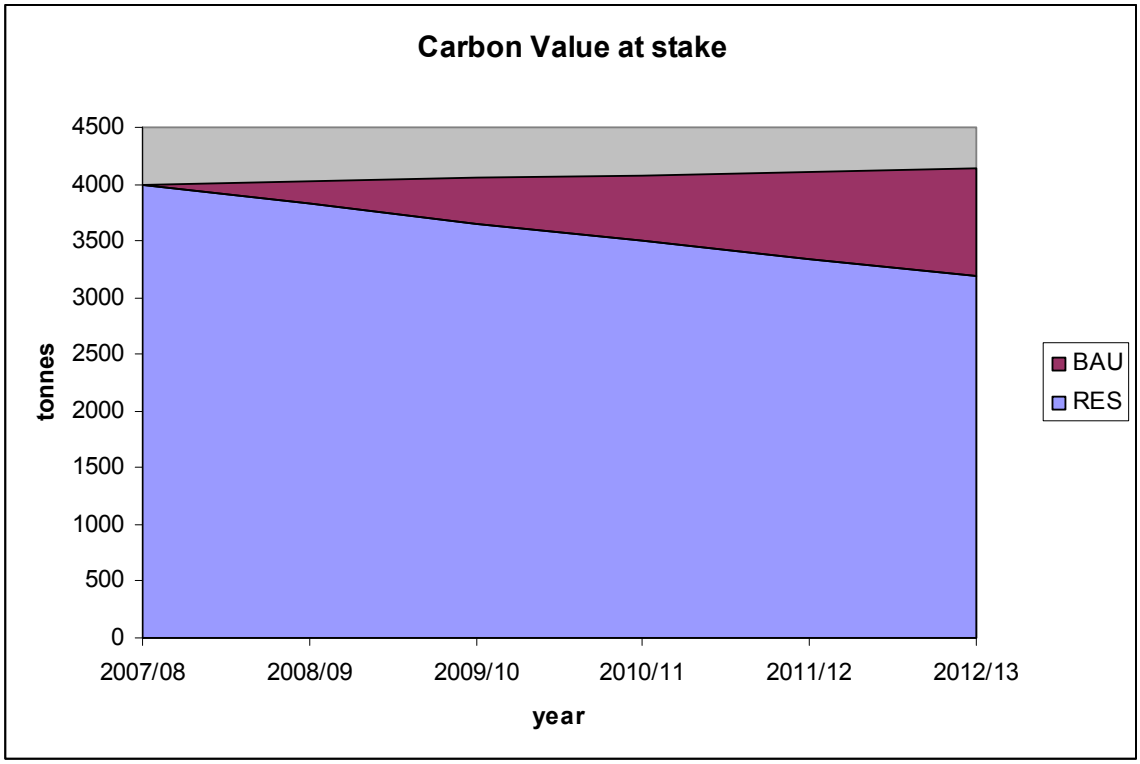


Operating under the reduced emissions scenario, costs will still rise but by 38%.

Value at Stake



Over the five year period the cumulative financial at stake is £527,150



The cumulative carbon value at stake is 2,892 tonnes

4 Carbon Management Projects

Projects have been proposed by various members of the Carbon Management Team and then evaluated using the Carbon Trust's Project's Register Tool. The Salix Finance assessment tool has also been used to evaluate projects that will be put forward for Salix funding.

4.1 Existing projects

Opportunity/Project	Cost £s	Pay back period in years	Year 1 CO_2 Saving (tonnes)	Year 1 £ Savings	Salix eligible?	Notes
Training and awareness programme	1,000	0.2	54	9,303	no	
Server virtualisation	7,500	3.2	14	2,364	no	All ready funded and happening
Renewal of boiler pumps, valves and isolators	50,000	Does not pay back	11	1,861	no	completed

4.2 Planned / funded projects

Opportunity/Project	Cost £s	Pay back period in years	Year 1 CO2 Saving (tonnes)	Year 1 £ Savings	Salix eligible?	Notes
Swimming pool cover Sittingbourne	17,950	1.6	61	10,923	yes	
Swimming pool cover Faversham	5,300	0.6	51	9,184	yes	
Swimming pool cover sheerness	18,200	2.3	45	8,003	yes	
Voltage optimisers (SH and Fav)	20,000	2.9	41	6,938	yes	
Replacement light fittings Fav	4,000	1.5	16	2,700	yes	
Replacement light fittings SH	630	2.1	2	303	yes	
Timelocks on drinks machines	50	0.2	2	315	yes	
BMS	45,000	8.3	30	4,745	yes	
Training and awareness programme	1,000	0.2	54	9,303	no	Could use Salix funded savings
Driver education	1,000	0.1	41	17,957	no	Could use Salix funded savings
Replacement boiler	200,000	Does not pay back	35	6,327	no	funded
Wiring test and replacement	25,000	20.1	7	1,228	no	funded
Weekly Car free day	No cost to council	n/a	3	n/a	no	
Home working one day per week, commute save only	No cost to council	n/a	3	n/a	no	

4.3 Near term projects

Projects which are being considered at the moment and will be evaluated in the near future are:

Reduced winter collection of brown bins

Use of smart metering

District office rationalisation

Our waste contractor is trialling biofuels and fuel saving devices should these be successful and economically viable they will be rolled out across the waste collection fleet.

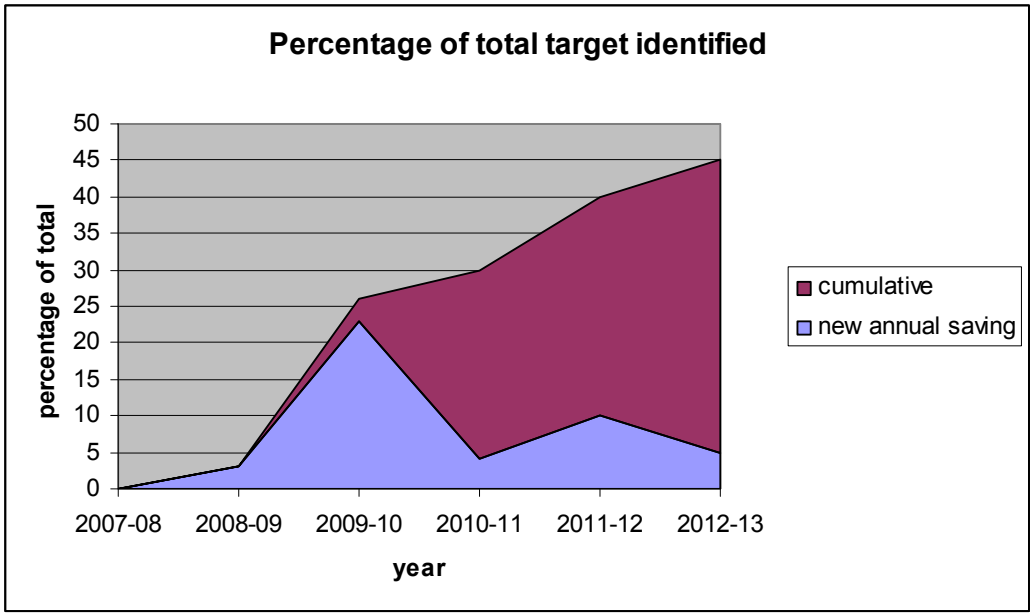
4.4 Medium to long term projects

These projects will depend on the savings generated from the Invest to Save Fund and whether Swale Borough Council gets match funding from Salix Finance.

The future of Swale House, in Sittingbourne, is yet to be confirmed, however it is likely that it will remain our main office in the medium term. A move would give the opportunity to Swale Borough Council to commission a state of the art headquarters which would make considerable carbon savings from our core operations.

4.5 Projected achievement towards target

Currently we have identified just under half of our target emission saving. As the near term, medium and long term projects emerge they will be evaluated and where viable added into the programme.



5 Carbon Management Plan Financing

5.1 Assumptions

- BAU increase in consumption 0.7% pa
- Electricity rises by 16% pa
- Gas rises by 10% pa
- Transport costs rise by 8.4% pa
- Waste costs rise by 8.4% pa
- Water costs rise by 10% pa

Over the last year there has been increased volatility in all the above costs, consequently these can only be taken as a best informed estimate and may in fact be conservative.

- Cost savings in 5.2 below are at 2008/09 prices.

5.2 Benefits / savings – quantified and un-quantified

The table below shows the costs and savings already quantified to date. As more projects are evaluated so the savings will increase towards our targets.

	2008/09	2009/10	2010/11	2011/12	2012/13
Annual cost saving £	**4225**	**42591**	**48564**	**64194**	**82151**
Annual CO_2 saving t	**28**	**245**	**282**	**376**	**423**
% of target achieved	**3**	**26**	**30**	**40**	**45**

Unquantified benefits:

- NI indicators – 185, 186
- Fullfilling obligations of Nottingham Declaration
- Setting an example to the community.

5.3 Additional resources

Swale Borough Council currently needs to find budget savings of £750,000. Projects will have to be carried out by existing staff. However Swale Borough Council will build on the partnerships developed with the Carbon Trust, the Energy Saving Trust and with Creative Environmental Networks and draw on their knowledge and expertise. The Mid Kent Improvement Partnership will also be approached where appropriate.

5.4 Financial costs and sources of funding

figures in £ 1000's	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Annual costs of evaluated projects (provisional)	**58.5**	**337**	**51**	**20**	**20**	**20**
Total annual capital cost	**50**	**227**	**11**	**20**	**20**	**30**
Total annual revenue cost	**8.5**					
Invest to Save Fund		**55**	**20**			
Salix		**55**	**20**			
Total costs	**50**	**337**	**51**	**20**	**20**	**20**

These are provisional figures and depend on Salix funding being confirmed. Annual savings generated from the invest to save fund and Salix will be reinvested into carbon saving projects – most as yet undefined.

Swale Borough Council is currently committed to making a saving of £750,000 from the £2009/10 budget

An Invest to Save fund of £75k has been established in the 2009-10 budget. The savings generated by investments from this fund and anticipated matching funding from Salix finance will be ring fenced for other carbon saving measures yet to be identified. No additional funding is expected, however outside sources of funding will be explored.

Routine and planned expenditure will contribute to carbon saving.

6 Actions to Embed Carbon Management in Swale Borough Council

Swale is currently at an average of level 2 on the Carbon Trust's Carbon Management matrix (see Appendix A) and we aim to be at a minimum of level 4 by the end of this programme.

This will be achieved by:

6.1 Corporate Strategy – embedding CO_2 saving across our organisation

Endorsement of the Carbon Management Plan by the Leader, Chief Executive and Portfolio holder

The Carbon Management Plan will be published, including on the Council's website

The refreshed version of the Corporate Plan makes a specific reference to this Carbon management Plan and to the planned Climate Change Strategy and Action Plan as activity areas

Service units will be expected to contribute to overall savings

Embedding carbon saving into service plans.

6.2 Programme Management – bringing it all together effectively

This factor of embedding Carbon Management is covered in Section 7 of this Plan.

6.3 Responsibility – being clear that saving CO_2 is everyone's job

Carbon Management Team – carbon champions

Managers' handbook – explains what is expected of managers in terms of carbon management

Carbon Management will be integrated in responsibilities of all senior managers and reviewed during appraisals

Carbon Management will be part of all job descriptions.

6.4 Data Management – measuring the difference, measuring the benefit

Improvements in data collection – mileage claims will be automated

NI reporting data – annual collecting and collating of data

Smart metering – plan to install to give a much more accurate data

6.5 Communication and Training – ensuring everyone is aware

Awareness campaign winter 2008 and subsequent years

Staff briefings/team briefings used to get across carbon management messages

Intranet messages

Staff induction

Managers' handbook

Travel plan – in development

Home working – policy in development

Driver training

Updates in Inside Swale – residents newspaper/magazine, internet, press releases.

6.6 Finance and Investment – the money to match the commitment

This factor of embedding Carbon Management is covered in Section Five of this Plan.

6.7 Policy Alignment – saving CO_2 across our operations

Climate Change Policy – in development

Sustainable Design and Construction Guide – near completion. Developers encouraged to build homes to at least Code level 3 of the Code for Sustainable Homes and business premises to BREEM "excellent"

As key policies including the Corporate Plan, Procurement Policy and Asset Management Strategy are reviewed carbon management will be considered. The recent Corporate Plan refresh makes a specific reference to this Carbon Management Plan and to the proposed Climate Change Strategy and action plan as activity areas.

Community recipients of council funding will be expected to show regard for carbon saving and have a policy as part of their application process

Housing grants to include carbon saving measures where practicable

Travel plan in development – this will include a review of HR policies regarding business travel and lease car arrangements.

7 Programme Management of the Carbon Management Programme

Swale Borough Council has a Performance Board. It was decided early in the programme that a separate Programme Board was unnecessary as our Performance Board could fulfil that role and function.

7.1 The Performance Board – strategic ownership and oversight

The Performance Board comprises of:

- Chair: Cllr Andrew Bowles, Leader of the Council
- Cllr Gerry Lewin, Deputy Leader and Executive Portfolio Holder for Sustainable Planning and Culture
- Cllr Mike Cosgrove, Executive Portfolio Holder for Performance and Finance; Learning and Skills
- Cllr Cindy Davis, (Councillor Project Sponsor), Executive Portfolio Holder for Environment
- Cllr John Wright, Executive Portfolio Holder for Regeneration
- Cllr David Simmons, Executive Portfolio Holder for Housing
- Cllr John Morris, Executive Portfolio Holder for Community Services
- Mike Fisher – Interim Chief Executive
- Operations Director – vacant post (formerly Officer Project Sponsor)
- Mark Radford, Director of Corporate Services (Co Sponsor)
- Barbara Thompson, Director of Regeneration (Co Sponsor)
- David Buckett, Head of Finance (Project Finance Champion)
- Paul Thirkettle, Head of Audit
- Louise Matthews, Head of Policy
- Dave Thomas, Head of IT and Customer Service
- Andrew Ervine, Policy and Performance Officer

The Boards Terms of Reference are to

1. Review and monitor the Corporate Plan.
2. To assess and manage strategic risks that might impact on the achievement of the Council's priorities and improvement activity
3. Review the approved list of performance indicators in the Annual Performance Report each year
4. Monitor Priority Improvement Actions and progress against action plans for underperforming performance indicators through the Priority Improvement Action Group
5. Monitor progress against Council set targets for performance indicators quarterly
6. Implement, review and monitor improvement actions arising from Audit Commission Inspections
7. Review Implementation Plans arising from service reviews prior to their consideration by Performance Scrutiny Committee

8. Consider requests from Performance Scrutiny Committee for amendments to the suite of National Indicators and Local Performance Indicators
9. Approve, allocate and monitor the Performance Fund
10. Approve, allocate and monitor the Partnership Reserve
11. Monitor the Council's Value for Money and efficiencies target
12. Monitor and review our comparative performance by benchmarking against high performing authorities and learning from effective practice

The Performance Board meets monthly. At the November meeting it was agreed that the Project Leader would report to the Performance Board on a six monthly basis in April and October on the progress of the Carbon Management Plan and that each Salix eligible project be agreed with the Executive Member for the Environment (Cllr Cindy Davis) and Executive Member for Performance & Finance (Cllr Mike Cosgrove)

Performance Board minutes are reported to monthly Executive meetings.

7.2 The Carbon Management Team – delivering the projects

Role	Name and position in the LA
Project Leader and Chair	Janet Hill Climate Change officer
Carbon Management Team members	Tony Turner Building Manager
	Paul Thirkettle Head of Audit
	Louise Matthews Head of Policy
	Ian Lewis Project Manager (Green Travel)
	Philippa Davies Democratic Services Officer
	Charlotte Hudson Community Safety Officer
	Steve Shrimplin Benefits Manager (Operations)
	Alan Turner Cleansing Service Manager
	Hazel Lerigo Management Accountant
	Tony Bullock ICT Development Manager

The Project Lead will chair quarterly meetings of the Carbon Management Team to review progress on activities and projects, identifying any blockages that need to be raised with the Performance Board.

7.3 Succession planning for key roles

The role of project lead will be written into the job description of the Climate Change Officer. The Climate Change Officer sits within the Policy Team and the Head of Policy's job description will include managing the climate change officer. The Climate Change Officer is a permanent role and should the officer leave the Council

Management Team would need to ensure a replacement officer was recruited as swiftly as possible

The Operations Director has been the lead project sponsor and this role will also be worked into the job description. The other two directors have taken co-sponsor roles and this will be embedded within their roles.

The Councillor Sponsor has been the Executive Portfolio Holder for the Environment. While each new Executive determines and defines its own portfolios it is expected that the Environment one would exist in any future council structure and that climate change and carbon management would be part of this portfolio.

7.4 Ongoing stakeholder management

Individual or Group	Influence	Impact	Their interest or issues	Means of Communication
Council and Executive	H	M	Varying degrees of interest Need to strengthen awareness of carbon management More likely to engage if cost saving is emphasised	Invitation to launch Portfolio briefings Reports to Executive Member briefing notes
Chief Executive Directors	H	M	Need to secure support and for information and awareness to be communicated up, down and across the council Fit to Corporate Priorities	Reports to Corporate Management Team
Key Heads of Service	H	M	Need to secure support and for information and awareness to drip down Need specialist input, not a priority area, resource pressures	Heads of Service meetings Team briefings Service Plan updates
All Staff	M	M	Varying degree of interest Success of some actions will depend on wide take up and motivation. Need to demystify concepts and challenge myths	Staff briefings Team briefings Staff newsletter Intranet
Local Strategic Partnership	M	M	Sharing Best Practice	LSP forum meetings
Public	L	L	Scope to change behaviour	Inside Swale, Press releases, website

7.5 Annual progress review

The Project Lead will report on progress every six months to the Performance Board and more frequently if changes need to be made to the plan.

The plan will be formally reviewed annually at the end of each financial year as soon as data is available.

The review will consider progress against CO_2 saving targets and financial savings, cashable and returned to Invest to Save Fund

working with

Appendix A: Carbon Management Matrix - Embedding

	CORPORATE STRATEGY	PROGRAMME MANAGEMENT	RESPONSIBILITY	DATA MANAGEMENT	COMMUNICATION & TRAINING	FINANCE & INVESTMENT	POLICY ALIGNMENT *
BEST 5	• Top level target allocated across organisation • CO_2 reduction targets in Directorate Business Plans	• Cabinet / SMT review progress against targets on quarterly basis • Quarterly diagnostic reports provided to Directorates • Progress against target published externally	• CM integrated in responsibilities of senior managers • CM part of all job descriptions • Central CO_2 reduction advice available • Green Champions leading local action groups	• Quarterly collation of CO_2 emissions for all sources • Data externally verified • M&T in place for: ○ buildings ○ street lighting ○ waste	• All staff given formalised CO_2 reduction: ○ induction and training ○ communications • Joint CM communications with key partners • Staff awareness tested through surveys	• Finance committed for 2+yrs of Programme • External funding being routinely obtained • Ring-fenced fund for carbon reduction initiatives	• CO_2 friendly operating procedure in place • Central team provide advice and review, when requested • Barriers to CO_2 reduction routinely considered and removed
4	• CO_2 reduction commitment in Corporate Strategy • Top level targets set for CO_2 reduction • Climate Change Strategy reviewed annually	• Sponsor reviews progress and removes blockages through regular Programme Boards • Progress against targets routinely reported to Senior Mgt Team	• CM integrated in to responsibilities of department heads • Cabinet / SMT regularly updated • Staff engaged though Green Champion network	• Annual collation of CO_2 emissions for: ○ buildings ○ street lighting ○ transport ○ waste • Data internally reviewed	• All staff given CO_2 reduction: ○ induction ○ communications ○ CM matters communicated to external community	• Coordinated financing for CO_2 reduction projects via Programme Board • Finances committed 1yr ahead • Some external financing	• Comprehensive review of policies complete • Lower level policies reviewed locally • Unpopular changes being considered
3	• CO_2 reduction vision clearly stated and published • Climate Change Strategy endorsed by Cabinet and publicised with staff	• Core team regularly review CM progress: ○ actions ○ profile & targets ○ new opportunities	• An individual provides full time focus for CO_2 reduction and coordination across the organisation • Senior Sponsor actively engaged	• Collation of CO_2 emissions for limited scope i.e. buildings only	• Environmental / energy group(s) given ad hoc: ○ training ○ communications	• A view of the cost of CO_2 reduction is developing, but finance remains ad-hoc • Some centralised resource allocated • Finance representation on CM Team	• All high level and some mid level policies reviewed, irregularly • Substantial changes made, showing CO_2 savings
2	• Draft Climate Change Policy • Climate Change references in other strategies	• Ad hoc reviews of CM actions progress	• CO_2 reduction a part-time responsibility of a few department champions	• No CO_2 emissions data compiled • Energy data compiled on a regular basis	• Regular awareness campaigns • Staff given CM information on ad-hoc basis	• Ad hoc financing for CO_2 reduction projects	• Partial review of key, high level policies • Some financial quick wins made
1 **Worst**	• No policy • No Climate Change reference	• No CM monitoring	• No recognised CO_2 reduction responsibility	• No CO_2 emissions data compiled • Estimated billing	• No communication or training	• No specific funding for CO_2 reduction projects	• No alignment of policies for CO_2 reduction

* Major operational policies and procedures, e.g. Capital Projects, Procurement, HR, Business Travel

Appendix B: Definition of Projects

Project: **Reference:**	Pool Cover - Sittingbourne **LA6SBC001**
Owner (person)	Janet Hill / Len Mayatt
Department	Leisure
Description	Roll out pool cover
Benefits	• *Financial savings: £10,923 pa* • *Payback period:1.6 years* • *CO_2 Emissions reduction 61 tonnes of CO2* • *6.5 % of target*
Funding	• *Project cost, £17,950* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	• *Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding* • *Principal risks: technical – breakdown, non use, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/05/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Pool Cover - Faversham **LA6SBC002**
Owner (person)	Janet Hill / Pool Trustees
Department	Leisure
Description	Roll out pool cover
Benefits	• *Financial savings: £9,184 pa* • *Payback period:0.6 years* • *CO_2 Emissions reduction 51 tonnes of CO2* • *5 % of target*
Funding	• *Project cost, £5,300* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding* • *Principal risks: technical – breakdown, non use, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/04/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Pool Cover - Sheerness **LA6SBC003**
Owner (person)	Janet Hill/ Len Mayatt
Department	Leisure
Description	Roll out pool cover
Benefits	• *Financial savings: £6,938 pa* • *Payback period:2.3 years* • *CO_2 Emissions reduction 45 tonnes of CO2* • *5 % of target*
Funding	• *Project cost, £18,200* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding* • *Principal risks: technical – breakdown, non use, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/05/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Voltage Optimisers – Swale House and Alexander Centre **LA6SBC004**
Owner (person)	Tony Turner
Department	Building maintenance
Description	Voltage Optimisers – main buildings
Benefits	• *Financial savings: £6,938 pa* • *Payback period:2.9 years* • *CO_2 Emissions reduction 41 tonnes of CO2* • *4% of target*
Funding	• *Project cost, £20,000* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding, agreement of building manager* • *Principal risks: technical – under performance, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/10/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Replacement Light Fittings – Swale House and Alexander Centre **LA6SBC005**
Owner (person)	Tony Turner
Department	Building maintenance
Description	Replacement Light Fittings – Swale House and Alexander Centre
Benefits	• *Financial savings: £2,700 pa* • *Payback period:1.5 years* • *CO_2 Emissions reduction 16 tonnes of CO2* • *2% of target*
Funding	• *Project cost, £4,000* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding, agreement of building manager* • *Principal risks: technical – under performance, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/10/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Replacement Light Fittings – Swale House **LA6SBC006**
Owner (person)	Tony Turner
Department	Building maintenance
Description	Replacement Light Fittings – Swale House
Benefits	• *Financial savings: £303 pa* • *Payback period:2.1 years* • *CO_2 Emissions reduction 2 tonnes of CO2* • *0.2% of target*
Funding	• *Project cost, £630* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding, agreement of building manager* • *Principal risks: technical – under performance, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/10/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Time locks on drinks machines **LA6SBC007**
Owner (person)	Tony Turner
Department	Building maintenance
Description	Time locks on drinks machines
Benefits	• *Financial savings: £315 pa* • *Payback period:0.2 years* • *CO_2 Emissions reduction 2 tonnes of CO2* • *0.2% of target*
Funding	• *Project cost, £50* • *Operational costs, minimal* • *Source of funding: internal, and Salix.* • *Say how /when decision on funding will be made – internal decided, Salix by 31 March 2009*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – Salix funding, agreement of building manager* • *Principal risks: technical – under performance, financial – Salix unsuccessful*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/05/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Training and Awareness Programme **LA6SBC008**
Owner (person)	Janet Hill
Department	Policy
Description	Training and Awareness Programme
Benefits	• *Financial savings: £9,303 pa* • *Payback period:0.2 years* • *CO_2 Emissions reduction 54 tonnes of CO2* • *6% of target*
Funding	• *Project cost, £1,000* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – good take up by staff* • *Principal risks: technical – lack of staff enthusiasm*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: ongoing*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Driver Education **LA6SBC009**
Owner (person)	Janet Hill/ Contractors
Department	Policy/Cleansing
Description	Driver Education
Benefits	• *Financial savings: £17,957 pa* • *Payback period:0.1 years* • *CO_2 Emissions reduction 41 tonnes of CO2* • *4% of target*
Funding	• *Project cost, £1,000* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided – from saving on earlier projects*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – good take up by staff, measures put into use* • *Principal risks: technical – lack of driver take up, refresher training*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/06/10*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Replacement Boiler – Swale House **LA6SBC010**
Owner (person)	Tony Turner
Department	Building Maintenance
Description	Replacement Boiler
Benefits	• *Financial savings: £6327 pa* • *Payback period: - does not payback* • *CO_2 Emissions reduction 35 tonnes of CO2* • *4% of target*
Funding	• *Project cost, £200,000* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided – from existing budgets*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – n/a* • *Principal risks n/a*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/10/09*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Server Virtualisation **LA6SBC011**
Owner (person)	Tony Bullock
Department	ICT
Description	Server Virtualisation
Benefits	• *Financial savings: £2,364 pa* • *Payback period: 3.2 years* • *CO_2 Emissions reduction 14 tonnes of CO2* • *2% of target*
Funding	• *Project cost, £7500* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided – from existing budgets*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – n/a* • *Principal risks n/a*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: completed*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Renewal of boiler pumps, valves and isolators **LA6SBC012**
Owner (person)	Tony Turner
Department	Buildings maintenance
Description	Renewal of boiler pumps, valves and isolators
Benefits	• *Financial savings: £1,861 pa* • *Payback period: does not pay back* • *CO_2 Emissions reduction 11 tonnes of CO2* • *2% of target*
Funding	• *Project cost, £50,000* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided – from existing budgets*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – n/a* • *Principal risks n/a*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: completed*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Wiring test and replacement **LA6SBC013**
Owner (person)	Tony Turner
Department	Buildings maintenance
Description	Wiring test and replacement
Benefits	• *Financial savings: £1,228 pa* • *Payback period: 20.1 years* • *CO_2 Emissions reduction 7 tonnes of CO2* • *1.5% of target*
Funding	• *Project cost, £25,000* • *Operational costs, minimal* • *Source of funding: internal.* • *Say how /when decision on funding will be made – internal decided – from existing budgets*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – n/a* • *Principal risks n/a*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/04/10*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Weekly car free day **LA6SBC014**
Owner (person)	Janet Hill/Ian Lewis
Department	Policy
Description	Weekly car free day
Benefits	• *Financial savings: £ n/a pa* • *Payback period: n/a* • *CO_2 Emissions reduction 3 tonnes of CO2* • *0.5% of target*
Funding	• *Project cost, £ n/a* • *Operational costs, n/a* • *Source of funding: n/a* • *Say how /when decision on funding will be made – n/a*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – staff willingness to participate, travel plan* • *Principal risks non take up, travel plan not adopted*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/04/10 ?*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	BMS – Swale House **LA6SBC015**
Owner (person)	Tony Turner
Department	Buildings Maintenance
Description	BMS – Swale House
Benefits	• *Financial savings: £4,745 pa* • *Payback period: 8.3 years* • *CO_2 Emissions reduction 30 tonnes of CO2* • *3% of target*
Funding	• *Project cost, £ 45,000* • *Operational costs, n/a* • *Source of funding: existing budgets* • *Say how /when decision on funding will be made – n/a*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – n/a* • *Principal risks n/a*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/10/09 ?*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Project: **Reference:**	Home working – one day per week **LA6SBC016**
Owner (person)	HR manager
Department	HR
Description	Home working, one day per week – commuting saving
Benefits	• *Financial savings: £n/a pa* • *Payback period: n/a years* • *CO_2 Emissions reduction 3 tonnes of CO2* • *0.5% of target*
Funding	• *Project cost, n/a* • *Operational costs, n/a* • *Source of funding:* • *Say how /when decision on funding will be made – n/a*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from n/a*
Ensuring Success	• *Key success factors, or things that will need to happen for this project to succeed – employee take up, management agreement to change in working practice* • *Principal risks – lack of take up, reluctance to permit*
Measuring Success	• *annually*

Timing	• *Milestones / key dates e.g.*
	  ○ *start date: 01/04/10 ?*
	  ○ *completion date (when it will deliver savings): ongoing*

Notes	

Appendix C

Emissions factors – sources

Stationary Sources

Energy type	Factor (kg CO_2/kWh gross)	Reference
Electricity (grid)	0.537	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Natural gas	0.185	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Gas oil	0.252	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Burning oil	0.245	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf

Mobile Sources

Fuel or vehicle type	Units	CO_2 factor (kg/unit specified)	Reference
Petrol	litres	2.32	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Diesel	litres	2.63	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Compressed Natural Gas	kg	2.73	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Small petrol car, up to 1.4 litre engine	km	0.18	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Medium petrol car, from 1.4 - 2.0 litres	km	0.21	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Large petrol cars, above 2.0 litres	km	0.30	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Average petrol car	km	0.21	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Small diesel car, up to 1.7 litre or under	km	0.15	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Medium diesel car, from 1.7 to 2.0 litre	km	0.19	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Large diesel car, over 2.0 litre	km	0.26	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Average diesel car	km	0.20	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Medium petrol hybrid car	km	0.13	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Large petrol hybrid car	km	0.22	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Average car (unknown fuel)	km	0.20	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Small diesel van (≤1.25t)	km	0.18	AEA calculation based data taken from "Emission factors for Euro II and III diesel light goods vehicles" (dft), with 15% uplift factor applied to account for "real world" driving conditions.
Medium/large diesel van (>1.25 ≤3.5t)	km	0.27	AEA calculation based data taken from "Emission factors for Euro II and III diesel light goods vehicles" (dft), with 15% uplift factor applied to account for "real world" driving conditions.
Rail - national rail	Passenger km	0.06	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Air - domestic	Passenger km	0.19	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV Rigid >3.5-7.5t	km	0.56	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV Rigid >7.5-17t	km	0.75	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV Rigid >17t	km	0.97	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV All rigids UK average	km	0.90	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV Articulated >3.5-33t	km	0.82	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV Articulated >33t	km	0.93	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf

HGV All artics UK average	km	0.92	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
HGV ALL HGVs UK average	km	0.91	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf
Refuse trucks or road sweepers (rigid size)	litres	2.63	http://www.defra.gov.uk/environment/business/envrp/pdf/ghg-cf-guidelines-annexes2008.pdf

Waste and water

Emission type	Factor	CO2 units	Reference
Waste collected (tonnes)	447	kgCO2e/tonne	Project advisor
Water consumed (m3)	0.404	kgCO2/m3	http://www.bre.co.uk/pdf/waternews4.pdf

Contacting Swale Borough Council

The **Customer Service Centre** deals with all enquiries across the Council; it should be your first stop when contacting us.

Copies of this Swale Borough Council plan are available on the Council website www.swale.gov.uk
If you would like further hard copies or alternative versions (i.e. large print, audio, different language) we will do our best to accommodate your request please contact the Council at:

Swale Borough Council
Swale House, East Street
Sittingbourne
Kent, ME10 3HT

Customer Service Centre 01795-417850

Contact Details

Janet Hill
Climate Change Officer
Swale Borough Council
Swale House, East Street
Sittingbourne
Kent ME10 3HT
Tel: 01795 417341
email: janethill@swale.gov.uk