

01 November 2011

To: All Members of the Budget Scrutiny 2012/13

Dear Member,

Budget Scrutiny 2012/13 - Thursday, 3rd November, 2011

I attach a copy of the following reports for the above-mentioned meeting which were not available at the time of collation of the agenda:

6. CO2 EMISSIONS REDUCTION BUDGET SCRUTINY REPORT (PAGES 1 - 28)

To consider the report presented on CO2 emissions reduction.

Yours sincerely

Robert Mack
Senior Policy Officer

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Report for:	Budget Scrutiny Panel	Item Number:	
Title:	Budget Scrutiny Panel – Reducing CO2 emissions across Council services		
Report Authorised by:	Lyn Garner, Director of Place & Sustainability Julie Parker, Director of Resources		
Lead Officer:	Ben Brown, Sustainable Business Manager (Corporate Procurement) Jessica Sherlock, Policy & Projects Manager (Environmental Resources)		
Ward(s) affected: n/a	Report for Key/Non Key Decisions:		

1. Describe the issue under consideration

The issue for consideration by Budget Scrutiny Panel is reducing CO2 emissions across Council services.

2. Cabinet Member introduction

Haringey has adopted a target to reduce borough wide carbon emissions by 40% by 2020 from a 2005 baseline and by 40% by 2015 on a 2007 baseline for its corporate estate. The policy background, baseline emissions and assessment of measures needed to achieve these targets are set out in the Council's Annual Report to Full Council in January 2011.

In the current economic climate there is now a wider imperative to reduce fossil fuel energy consumption from Council operations and provide support to households and businesses to do the same - this will help to mitigate rising energy costs, protect the economic competitiveness of businesses and tackle fuel poverty. In addition, the low carbon goods and services sector represents one of the strongest prospects for jobs creation in the borough while the promotion of low carbon active lifestyles has potential to increase well-being and reduce public health expenditure.

At a corporate level the Council has already agreed a Carbon Management Plan covering CO2 emissions from its corporate estate. This has the potential to avoid utility costs of £7.4m per annum by 2014/15. By 2009/10 measures introduced as part of this plan had reduced CO2 emissions by 8.05%, ahead

of its agreed interim target of 5.5% and saving £112,612 on Council annual utility costs.

Measures to reduce CO2 emissions from households and businesses at large are so far unproven and are dependant on Government legislation and policy such as the Green Deal and Eco subsidy. This year Haringey was one of nine local authorities nationally to be selected to take part in the Department of Energy and Climate Change, Local Carbon Framework Pilot, aimed at identifying the policies, finance and measures needed for area wide carbon reduction plans.

The Local Carbon Framework pilot is being used to inform the development of a single low carbon journey that can be rolled out to all Local Council's through the Local Government Group and to revise the Nottingham Declaration on Climate Change. Haringey's Local Carbon Framework will be reviewed by independent experts engaged on the Council's Carbon Commission to inform the development of a borough wide 40:20 Action Plan in spring 2012.

In line with this ambition on climate change, the Council has established a new Carbon Management & Sustainability service with the aim of mainstreaming carbon management activity throughout core Council functions such as planning, regeneration and housing.

This report sets out capital and revenue expenditure in relation to CO2 reduction programmes, firstly dealing with those programmes which are funded for the purpose of energy and CO2 reduction from Council operations or the borough at large, and secondly highlighting Council wide services which contribute to this objective, though this is not their primary or sole purpose.

3. Recommendations

It is recommended that the panel note the content of this report.

4. Other options considered

N/A

5. Background information

Corporate CO2 reductions

Delivery of the corporate Carbon Management Plan is undertaken by the Energy Management Team in the Central Procurement Unit (CPU).

The Energy Management Team has a much broader remit than simply energy management, encompassing procurement strategy, billing administration, contract and customer relationship management.

The current staff resource associated with delivering the Council's corporate carbon reduction target is £31,389 p/a as a proportion of staff time (See Table 7 Appendix 1).

There are potentially three capital programmes that currently support CO2 reduction from corporate operations, these are outlined below.

Fund	2010/11 Capital cost (£)	2011/12 Capital cost (£)	CO2 tonnes savings p/a for 2010/11 and 2011/12, (expected)	Cumulative cost avoidance (£) to date	Revenue generation potential (£)
Sustainable Investment Fund (SIF) £1m	213,901	0**	1,033	370,455	-
Schools SIF	92,917	61,982	224	7,937	-
Solar PV (contract model)* (Now under review)	-	<i>Up to 2.7m</i>		0	56,867
Total	306,818	61,982	1,257	378,392	

Table 1: Corporate CO2 reductions – capital costs and CO2 savings

*The level of expenditure and income generated will depend on site assessments and capacity to install panels prior to the anticipated reduction in FITs levels. On the 31st October 2011 the Government announced that it is proposing to reduce FIT payments levels in December 2011 (4 months earlier than anticipated). Following this all Council Solar PV expenditure is now under review.

** See Appendix 1, table 3 for the pipeline of projects expected for 2011/12

5.1.1 The Sustainable Investment Fund (SIF)

The SIF is a £1m, ring-fenced budget from Council reserves used to upgrade planned works, including environmental enhancements. The SIF acts as an interest free loan and is repaid in instalments (usually up to 5 years) derived from demonstrable energy cost savings.

Prior to the creation of this fund, the Council would renew end-of-life equipment with like-for-like in order to keep within annual budget targets. The programme has mainstreamed whole-life-costing by removing the 'price premium' barrier and focusing on the combined costs of price, operations and disposal. The scheme can also be used to finance entire projects requiring significant capital investment, with a return on investment of less than five years through energy cost reduction.

A number of projects have already been implemented that will contribute towards the carbon savings needed to achieve the 40% reduction by 2014/15. Works carried out to date are given in Table 2 in Appendix 1 and future programmed works are illustrated in Table 3. Total cost avoidance associated with these works was £183,558 per annum in 2010/11.

5.1.2 The Schools Sustainable Investment Fund (SSIF)

In 2009 Haringey Council created the Schools Sustainable Investment Fund (SSIF). This fund is derived from the overall sum of existing school balances. The SSIF loan funding available will vary year-on-year, but will never exceed 12.5% of total balances. A number of projects have already been implemented that will contribute towards the carbon savings needed to achieve the 40% reduction by 2014/15. The projects are set out in Appendix 1.

This year, the Council has begun working in an innovative partnership with En10ergy, a social enterprise company set up with support of grant funding received from Haringey Council's Low Carbon Communities Challenge. Under this arrangement En10ergy will project manage engagement and surveys of the schools, and provide the Council with a programme of works (funded by SSIF) for which the Council will then seek competitive quot..

In addition, the Council continues to manage projects that remain on the initial programme of works, including the investigation of voltage optimisation potential at a further six schools (Fortismere, Heartlands, the Octagon, Park View Academy, St Thomas More and the Sixth Form Centre), and installation of a pool cover at Northumberland Park. The pipeline of projects is set out in Appendix 1.

5.1.3 Solar Photovoltaics

On the 19th July 2011, Cabinet approved the adoption of a Solar Photovoltaic installation programme, to contribute to the Council's carbon reduction targets and generate revenue to support frontline services. An optimal combination of the contracting and roof rental solutions, both in terms of income and risk, were intended to be employed, enabling the Council to meet its objectives within tight timescales, whilst also ensuring risks were minimised. However, following the announcement on 31st October that the Feed In Tariff payments for solar PV schemes will be reduced in December 2011, (earlier than planned date of April 2012), the Council's Solar PV programme, outlined below is now under review and is likely to be significantly scaled back.

Cabinet approved the use of a "contracting" model for all properties out of which the Council operates, including schools, granting access to a maximum loan of £8,658,000 through prudential borrowing to generate income of up to £162k per annum above the cost of borrowing, and cost avoidance of circa £155k per annum in energy, spread across the Council and schools. Funding of £2.715m is included in the Capital programme for 2011/12.

Cabinet also approved the use of a 'rent-a-roof' model for installations on housing stock, where no capital expenditure will be required, and the installations will result in potential income for the Council of up to £91k per annum allocated with the Council's general fund and avoidance of £115k per annum in energy costs for residents.

The initial portfolio of suitable properties has been rationalised to take into account considerations beyond electricity generating potential, such as estate rationalisation, roof renewal programmes and planning restrictions.

5.1.4 Estates Rationalisation

Whilst investment, in line with the Council's Carbon Management Plan as above, is directed at retained properties there are also reductions in the Council's own emissions effected by property disposal and rationalisation.

Since 2006/7 five properties have been vacated and either disposed or are awaiting disposal and this has resulted in a reduction of the Council's CO₂ emissions as illustrated in table 6 in Appendix 1.

The Council's Office Accommodation strategy has brought about disposals through rationalisation and the more recent Council service closures. Further service redesigns will release buildings and reduce emissions resulting from the Council's operations. It should be recognised that long term this may not improve the Borough wide emissions levels until the sites are redeveloped to improved standards or new occupants carry out energy efficiency measures.

Maintenance and repair investment decisions continue to include measures to improve management and control of energy use and CO₂ emissions. This is mainly led by operational needs but also affords the opportunity to contribute to the Carbon Management Plan targets. Outcomes from these investments, in terms of CO₂ reduction, are not quantified for carbon management purposes. However, we have indicative figures for some projects, most notably the upgrade of thermostatic radiator valves in the River Park House stairwell. An initial capital outlay has returned savings within two months of £240, and we anticipate associated annual carbon savings of 18 tonnes.

5.2 Borough wide carbon reduction

Environmental Resources Team – Carbon Management & Sustainability

The Environmental Resources team has a specific remit to develop policy and services to meet CO₂ reduction objectives at a borough wide level. Over the last 2 years this has involved the development of pilot projects and feasibility studies to test innovative approaches to finance and deliver CO₂ reduction measures. The team includes 3 core funded permanent members of staff and up to 4 fixed term contract staff funded through a combination of grant funding and capital funding.

Core funded staff salaries (£125k per annum for 2011/12) are used as match funding required for grant funded programmes such as the Low Carbon Zone and DECC Low Carbon Communities Challenge. Total grant funding for the current and previous financial year was £1.2m. Details of grant funds attained are provided in Appendix 2.

This year the Council has allocated a £500k loan fund for homeowners in the Muswell Hill Low Carbon Zone for energy efficiency improvements and renewable energy technologies. Loans are offered at a low interest rate (sufficient to cover the administration costs of the scheme) and can be repaid with fuel cost savings over 25 years. The scheme aims to be cost neutral over 25 years and will help to achieve the 20% CO₂ reduction target for the Zone and to develop learning to support the roll out of the Green Deal in Haringey. [Appendix 2](#) provides further information on the types of retrofit packages that will be offered to households and a breakdown of the costs of running the scheme.

Future funding needs and opportunities

The total cost of measures needed to achieve a 40% CO₂ reduction target is likely to be upwards of £400m (see Annual Carbon Report, January 2011), however measures to reduce carbon emissions from heat and energy use which account for 80% of CO₂ emissions in the borough, such as energy efficiency and renewable energy technologies can pay for themselves over time through fuel costs savings. In addition renewable energy technologies can generate revenue through the Renewable Heat Incentive and Feed In Tariff. A detailed discussion on financing the borough wide target was provided in the Annual Carbon Report to full Council in January 2011.

The Council's Carbon Commission, an independent advisory panel being set up in partnership with the *new economics foundation* will help to identify the investment and ownership models that are most appropriate to the Council to achieve the 40:20 target alongside wider objectives such as generating employment opportunities. The Carbon Commission will report in Spring 2012.

6. Mainstreaming CO₂ reduction and sustainability across the Council

6.1 Carbon Management & Sustainability service

The Carbon Management & Sustainability service brings together core Council functions with potential to impact on carbon emissions while delivering on wider social and economic objectives. This includes planning and transport policy, housing enablement and major regeneration programmes and fuel poverty. Altogether this accounts for around 27 staff. Further details of this work such as Local Implementation Plan and grant expenditure are outlined in [Appendix 2](#).

6.2 Wider scope of services contributing to CO₂ reductions

A number of other Council services deliver grant funded programmes or other service that contribute to CO₂ reduction objectives though they are not funded specifically for this purpose. This includes:

- Homes for Haringey: Decent Homes works, including energy efficiency improvements.
- North London Strategic Alliance, Decentralised Energy Network feasibility, part of the economic development strategy for the area
- The Veolia contract that became operational this year was awarded on the basis of an output specification and includes a target to reduce operational CO2 emissions by 40% by 2015.
- The Communications team has produced five CO2 reduction themed Haringey People articles and 18 press releases over the last 12 months.

Further detail on the above cross council work is provided in [Appendix 3](#).

7. Comments of the Chief Finance Officer and financial implications

The core resources for delivering reductions CO2 emissions are split across Place and Sustainability and Corporate Resources directorates. The dedicated staff team within Place and Sustainability consists of 3 permanent posts at a cost of around £125,000, this is supplemented by temporary resources to work up business cases, deliver projects where external funding can be secured.

Additionally as part of the Rethinking Haringey Proposals this small team is part of a wider Carbon Management Service within the PRE directorate, comprising Planning Policy, Transport Planning and Strategic Housing services with the aim of mainstreaming Carbon reduction strategies across key Council functions with the potential to impact on CO2 emissions.

In addition to the staff resources within Place and Sustainability the Energy Team within Central Procurement are responsible for reducing the Councils own CO2 emissions and embedding Carbon Reduction principles into procurement processes.

The total Council spend on Carbon Reduction will vary as Business Cases are worked up and presented to Cabinet for agreement or otherwise and as opportunities for External Funding are maximised. At present there are 2 significant schemes within the Capital Programme relating to the installation of Solar PV (currently under review) and support for energy efficiency measures in the Muswell Hill Low Carbon Zone. However, it should be noted that the financial imperative in the future will be to ensure that the Council remains aware of the legislative Environment in areas such as the Green deal to maximise the opportunities for external funding for both the council itself and residents.

8. Head of Legal Services and legal implications

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8.1 The Head of Legal Services notes the contents of the report and advises that there are no specific legal issues arising.

8.2 Legal Services should be consulted on any individual projects which are entered into pursuant to the carbon reduction initiative.

9. Equalities and Community Cohesion Comments

The Councils Carbon Management Plan covering corporate CO2 emissions helps to mitigate against rising fuel costs of fuel costs and helps to mitigate against cuts to frontline services.

At a borough wide level CO2 reduction programmes have the potential to address fuel poverty and protect SME business against rising fuel costs. Climate change will have a disproportionately high impact on the poorest and most vulnerable community and therefore it is essential that the Council plays its part to mitigate climate change.

10. Head of Procurement Comments

Supply markets are still evolving in relation to CO2 reduction and there is either limited capacity to implement major schemes or limited cost efficient solutions to meet demand.

Nevertheless, the Council is managing to identify innovative solutions and is successfully procuring these within the overall Carbon Reduction Programme.

However, as the early “quick wins” are implemented, it will become increasingly more difficult to demonstrate viable cost:benefit business cases.

11. Policy Implication

Carbon reduction is a cross cutting issue that is linked to a wider range of policy objectives such as economic development, fuel poverty alleviation and traffic congestion and air quality. These are set out in the Council’s Core Strategy and Local Implementation Plan.

12. Use of Appendices

Appendix 1: Corporate Carbon Management Plan

Appendix 2: Borough wide CO2 reduction

Appendix 3: Mainstreaming CO2 reduction across Council services

13. Local Government (Access to Information) Act 1985

There is no exempt information.

Background information referred to: Annual Carbon Report to full Council, January 2011



Appendix 1: Corporate CO2 reduction programme

Energy Projects	Site	Installed	CO2 saved tonnes p.a.*	Capital	Cost Centre	Annual Loan Repayments**	08/09 Cost Avoidance	09/10 Cost Avoidance	10/11 Cost Avoidance
Voltage Optimisation	River Park House	Aug 08	116	£54,958	F47000	2 x £46,791 1 x 27,291	£27,260	£16,582	£18,853
	Alexandra House	May 08	42	£22,731			£10,079	£6,092	£6,826
	Central Library	May 08	36	£18,451			£8,991	£5,164	£5,851
	48 Station Road	April 08	24	£12,935			£6,026	£3,375	£3,901
Variable Speed Drives	Park Road Swimming Pools	July 08	21	£17,236	V15101	1 x £43,860 1 x £747	£4,585	£2,954	£3,973
	Tottenham Green Leisure Centre	July 08	120	£27,371			£29,187	£17,158	£22,703
Swimming Pool Covers	Park Road Swimming Pools	Sept 09	84	£24,011	V15308	1 x £24,011	N/A	£13,555	£15,892
	Tottenham Green Leisure Centre	Sept 09	113	£36,211	V15208	1 x £36,211	N/A	£18,352	£21,378
Regenerative Water Filtration***	Tottenham Green Leisure Centre	Dec 09	106	£150,000	V15208	4 x £35,000 1 x 10,000	N/A	£17,167	£20,054
	Park Road Swimming Pools	Dec 10	65	£150,000	V15308	4 x £35,000 1 x 10,000	N/A	N/A	£12,297
Boiler Works	Haringey Park Children's Home	Feb 10	13	£4,481	S34600	4 x £16,255 1 x £16,248	N/A	N/A	£693
	The Red House	June 10	36	£14,763	S14212		N/A	N/A	£3,288
	48 Station Road	April 10	24	£13,125	F47122		N/A	N/A	£3,964
	40 Cumberland Road	May 10	11	£6,912	F47121		N/A	N/A	£623
	639 High Road	April 10	6	£3,875	F47225		N/A	N/A	£53
	Chestnuts Recreation Ground	Mar 10	3	£1,823	V12302		N/A	N/A	£973
	Ermine Road Day Centre	May 10	9	£5,875	S52300		N/A	N/A	£2,619
	Finsbury Park Admin Building	May 10	18	£5,414	V12310		N/A	N/A	£2,439
Faith Plant Centre	May 10	105	£25,000	V12206	N/A	N/A	£16,680		
Lighting Upgrades	Tottenham Green Leisure Centre	Mar 09	23	£12,614	V15208	2 x £4,627 1 x £3,360	N/A	£19,276****	£19,851
	Park Road Swimming Pools	Mar 09	14	£13,541	V15308	4 x £2,945 1 x £1,763	N/A	-£10,800*****	N/K
	Marcus Garvey Library	Mar 09	29	£40,867	V15208	4 x £9,808 1 x £1,636	N/A	See above****	See above
	White Hart Lane Sports Centre	April 09	13	£13,179	V15408	4 x £2,640	N/A	£370	£399



Haringey Council

	Alexandra Park Library	July 10	2	£3,700	C51004	1 x £2,619 5 x £740	N/A	N/A	£248
Total			1033	£525,391		£525,391	£86,128	£100,769	£183,558

* Anticipated CO2 savings.

** The loan repayments demonstrate the anticipated cost savings factored into the loan. As the return on investment is not often exactly to the year, the final loan repayment reflects the remaining savings.

*** Savings are from gas consumption reduction only and do not include water and chemical cost avoidance.

**** Marcus Garvey Library and Tottenham Green Leisure Centre cannot be split out as there is currently no sub-metering arrangement.

***** In upgrading the lighting, many broken lights were brought back into use, increasing overall consumption at Park Road Pools. This means we do not have accurate operational data with which to assess cost savings against a business as usual operating environment.

Table 2: Carbon Management Plan – SIF projects installed 2008-2010



KEY	Year				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Completed Projects	Opening Fund Balance				500,000	425,243	714,941	679,089	424,474	508,500	542,344
Unavailable Projects (Cash Flow Restrictions)	Repayments				-	90,651	169,749	180,609	317,872	363,558	232,844
Cost Avoidance Generation	Closing Fund Balance				334,592	45,192	498,480	106,602	144,942	309,500	-68,242
Project	Cost (£)	Savings (£)	CO2 (tonnes)	Pay back (years)							
Voltage Optimisation-Corporate	120,801	46,791	276	3	-120,801	46,791	46,791	27,219			
VSDs Leisure	44,607	43,860	294	1	-44,607	43,860	747				
Lighting Controls - Leisure	84,441	33,922	69	2		-84,441	33,922	18,301	17,034	9,435	5,749
Swimming Pool Covers - Leisure	60,222	36,211	168	2		-60,222	36,211	24,011			
Tott Green Water Filtration	150,000	35,000	64	4		-150,000	35,000	35,000	35,000	35,000	10,000
Boiler Works (Top 20 Bldgs)	85,388	17,078	131	5		-85,388	17,078	17,078	17,078	17,078	
Alexandra Palace (Low e ceiling)	66,461	24,000	N/A	3			-66,461	24,000	24,000	18,461	
Water Filtration (PRLC)	150,000	35,000	60	5			-150,000	35,000	35,000	35,000	35,000
Streetlight Dimming	298,000	132,227	921	2				-298,000	132,227	132,227	33,546
Replacement Streetlight Lamps	150,000	32,330	225	5				-150,000	32,330	32,330	32,330
Replace Lighting to T5	62,487	12,497	87	5				-62,487	12,497	12,497	12,497
Voltage Optimisation in Offices	62,000	12,706	59	5				-62,000	12,706	12,706	12,706
Boiler Optimum Start Controls	23,649	5,912	36	4					-23,649	5,912	5,912
BMS Fine Tuning	61,892	8,047	50	8					-61,892	8,047	8,047
Streetlighting Electronic Gear Controls	102,748	4,922	34	21					-102,748	4,922	4,922
Draught Proofing (Corporate Property)	84,434	38,181	235	2					-84,434	38,181	38,181
Variable Speed Drives in Offices	3,000	748	5	4					-3,000	1,000	1,000
Office Pipework Insulation	3,809	762	5	5					-3,809	762	762
LED Car Park lights	99,000	27,992	195	4						-99,000	27,992



			Centre	Savings (tonnes) p.a.		Loan Repayment s	Avoidance	Avoidance	Avoidance *
Voltage Optimisation	Highgate Wood	Oct 10	E34004	21	£13,789	4 x £3,047 1 x 1,600	N/A	N/A	£7,418
	Northumberland Park	Nov 10	E34007	31	£18,524	4 x £4,293 1 x £1,352	N/A	N/A	N/K**
	John Loughborough	Feb 11	E34010	20	£10,337	4 x £2,526 1 x £234	N/A	N/A	N/A
	Gladesmore	June 11	E34003	22	£23,059	4 x £4,939 1 x £3,304	N/A	N/A	N/A
	Hornsey School for Girls	June 11	E34005	25	£15,615	4 x £3,276 1 x £2,513	N/A	N/A	N/A
Lighting Upgrades	Devonshire Hill	June 10	E33007	20	£21,860	4 x £4,319 1 x £4,252	N/A	N/A	N/K***
	Stamford Hill	Oct 10	E33032	23	£20,750	4 x £3,726 1 x £2,847	N/A	N/A	£519
Auto TRVs	Stamford Hill	Jul 10	E33032	19	£7,657	2 x £3,133 1 x £1,391	N/A	N/A	N/K**
	Highgate Wood	Sept 11	E34004	20	£16,557	7 x £2,208 1 x £1,104	N/A	N/A	N/A
	South Haringay	Sept 11	E31013	10	£6,751	5 x £1,350	N/A	N/A	N/A
Total				224	£155,487				

* The majority of installations have occurred in the 2011/12 financial year, for which we don't currently have a full year's worth of data.

** Data currently insufficient to analyse performance due to estimated bills distorting consumption figures.

*** Summer Fete spiked consumption figures, and has distorted data. Indications from the last three months show reductions.

Table 4: Schools Sustainable Investment Fund - works carried out 2010/11-2011/12



Energy Projects	Site	Installed	Cost Centre	CO2 saved tonnes p.a.*	Projected Capital	Annual Loan Repayments	08/09 Cost Avoidance	09/10 Cost Avoidance	10/11 Cost Avoidance
Voltage Optimisation	Fortismere	N/A	E34002	5	£35,785**	Tbc**	N/A	N/A	N/A
	Heartlands	N/A	E37010	9	£25,872**	Tbc**	N/A	N/A	N/A
	The Octagon	N/A	E41232	1	£6,470	3 x £1,878 1 x £836	N/A	N/A	N/A
	Park View Academy	N/A	E34006	47	£36,204	4 x £8,219 1 x £3,329	N/A	N/A	N/A
	St Thomas More	N/A	E34011	18	£14,760	4 x £2,975 1 x £2,861	N/A	N/A	N/A
	Sixth Form Centre	N/A	E34012	39	£41,652	4 x £8,335 1 x £8,314	N/A	N/A	N/A
Swimming Pool Covers	Northumberland Park	N/A	E34007	124	£20,000	4 x £4,019 1 x £3,924	N/A	N/A	N/A
Total									

* Anticipated CO2 savings

** Awaiting new project costs based on site surveys

Table 5: Pipeline of potential Schools Sustainable Investment Fund projects



Building	Cost Centre	Year Disposed	CO2 Savings (tonnes p.a.) ¹	08/09 Cost Avoidance	09/10 Cost Avoidance ²	10/11 Cost Avoidance ³
Tottenham Town Hall	F47232	2008	414	N/A	£27,462	£31,833
782 High Road, Tottenham	H32000	2010	36	N/A	N/A	£5,874
768 High Road, Tottenham	F47227	2008	114	N/A	£11,937	£13,627
476 High Road, Tottenham	F47223	2011	100	N/A	N/A	N/A
95 Western Road, Wood Green	C63400	2009	45	N/A	N/A	£7,378
Total			709		£39,399	£58,712

¹Using 2006/7 baseline consumption estimates for forecasted, theoretical use

²Using a 2009/10 average cost of 7.5p/kWh for electricity and 3p/kWh for gas.

³Using a 2010/11 average cost of 8.5p/kWh for electricity and 3.5p/kWh for gas.

Table 6: Asset Disposal 2008-2011

Post	% Time	Grade	Pro-rata Salary + On-costs
Sustainable Business Manager	10%	PO8	£6,810
Energy Manager	30%	PO5	£16,386
Programme and Projects Delivery Manager	15%	PO5	£8,193
		Total	£31,389

Table 7: Revenue (staff costs) Corporate CO2 reduction



Haringey Council

Appendix 2: Borough wide CO2 reduction – Environmental Resources team, Carbon Management & Sustainability

Item	2011/12	2012/13 (indicative)
3 x core funded permanent staff	£125,000	£125,000
1 x fixed term member of staff (capital funded)	£23,744	£23,744
3 x staff, 1 yr fixed term contract (funded grant and supplemented by core funding if needed)	£50,000	£50,000

Table 8: Core revenue funding - borough wide CO2 reduction

Item	2010/11 (£K)	2011/12 (£K)	CO2 savings
Muswell Hill Low Carbon Zone – Mayor London	135	135	9% by august 2011
European Regional Development Fund	27	108	10% saving per business target
Department of Communities & Local Government	20	30	Feasibility and business planning
Department of Energy & Climate Change, Local Carbon Framework, 40:20 business planning & feasibility	227	-	Feasibility and business planning
Department of Energy & Climate Change, Low Carbon Communities Challenge	335	-	Solar renewable energy installations (savings TBC)
Department of Energy & Climate Change, License Lite development	-	20	Feasibility and business planning
London Development Agency (now Greater London Authority)	30	-	Feasibility and business planning
Future Jobs Fund	75	10	Awareness raising 6,000 households door knocked
<i>Interreg European Fund (awaiting result)</i>	-	50	Feasibility and business planning
Total	849	333	

Table 9: Borough wide CO2 reduction - grants received

Small amounts of income are received from the lease of an Eco House (demonstration model of environmental measures), Feed In Tariff generated from the Low Carbon Communities Challenge funded solar photovoltaic programme and contributions from other north London boroughs to cross borough initiatives. Total estimated income for the 2011/12 is £20k.

Low Carbon Loan scheme



Haringey Council

The Muswell Hill Low Carbon Loan Scheme is financed by £500,000 of capital funding over the initial 1 year program launching in 2011/12. It is a pilot scheme and will be used to help the Council to develop its borough wide strategy on the Green Deal, due to be launched in September 2012 . The proposed budget spend breakdown is as follows:

Cost description	£ (estimated)
Staff Costs - Contractors	10,000
Staff Costs - Internal	37,000
Grant support Solid Wall insulation	25,000
Legal & marketing	5,000
Credit & land Registry Checks	3,000
Outgoing Loans	420,000
Total	500,000

Loans ranging from £500 to £18,000 per household will be offered to residents in the Muswell Hill Low Carbon Zone to carry out a variety of energy saving measures to their home including draught proofing, fabric insulation, replacement windows, heating & hot water control upgrade, replacement boiler and renewable measures e.g. solar PV. There are two interest rates applicable to the loan: 4% interest rate applied to Solar PV and 0.25% interest rate applied to all other measures. The repayment periods will vary between 10-25 years depending on a number of factors such as the lifespan of each measure and the applicant's wish to pay off the loan quickly.

The scheme aims to encourage householders to retrofit their home by removing the barrier of high upfront costs. Each loan applicant will be presented with three packages of measures. Thus a suitable package of measures can be finalised with the applicant, tailored to suit their home and budget. Similarly to 'The Green Deal' the package of measures will be developed to ensure that the fuel bill savings could equal the monthly loan repayments.

The exact revenue generation potential for the scheme will be finalised once all loan packages have been agreed.

Examples of future funding opportunities for carbon reduction measures

- **JESSICA - London Green Fund**

The London Green Fund (LGF) is a £100 million fund set up to invest in schemes that will cut London's carbon emissions. The fund was launched in October 2009 by the Mayor of London and the European Commissioner for Regional Policy - the first JESSICA (Joint European Support for Sustainable Investment in City Areas) holding fund in the UK.

It is made up of £50 million from the London ERDF Programme, £32 million from the London Development Agency (LDA), and £18 million from



Haringey Council

the London Waste and Recycling Board (LWARB). The European Investment Bank manages the London Green Fund on behalf of the LDA and LWARB.

The LGF will provide funding for two UDFs that will invest directly in waste and energy efficiency projects. These will be 'revolving' investment funds, where monies invested in one project are repaid and then reinvested in other projects. The scope of the LGF may be expanded in future to include support for medium and large scale decentralised energy systems.

- **ELENA (European Local ENergy Assistance)**

The European Local Energy Assistance (ELENA) fund has been set up to help city and regional authorities invest in renewable energy and energy efficiency initiatives.

Established by the European Commission and the European Investment Bank (EIB) and is financed through the Intelligent Energy-Europe programme, the ELENA budget consists of €15 million for the first year of operation. Only public bodies in eligible countries can apply, other entities can be involved to implement the investment programme.

ELENA can support for the implementation of the investment programmes and projects such as retrofitting of public and private buildings, sustainable building, energy-efficient district heating and cooling networks, or environmentally-friendly transport etc.

The fund can cover up to 90% of the costs associated with technical assistance for preparing large sustainable investment programmes, such as feasibility and market studies, structuring of programmes, business plans, energy audits, preparation for tendering procedures - in short, everything necessary to make cities' and regions' sustainable energy projects ready for EIB funding.

- **Intelligent Energy – Europe (IEE)**

Intelligent Energy – Europe (IEE) offers a helping hand to organisations willing to improve energy sustainability. Launched in 2003 by the European Commission, the programme supports EU energy efficiency and renewable energy policies, with a view to reaching the EU 2020 targets (20% cut in greenhouse gas emissions, 20% improvement in energy efficiency and 20% of renewables in EU energy consumption).

Running until 2013, the programme is open to all EU Member States, plus Norway, Iceland, Liechtenstein, Croatia and the Former Yugoslav Republic of Macedonia. A budget of € 730 million is available to fund projects and put into place a range of European portals, facilities and initiatives.



Haringey Council

A large part of the programme budget is made available through annual calls for proposals to support projects putting the concept of 'intelligent energy' in practice. Carried out by public, private or non-governmental European organisations, they support three main objectives - more energy efficiency, more renewables, and better transport and mobility. This covers for instance new training schemes, promotion campaigns, or the transfer of good practices between EU countries.



Haringey Council

Appendix 3. Mainstreaming CO2 reduction across Council services

A. Planning Policy to support CO2 reduction

There is no specific budget available for planning policy and development management objectives, rather CO2 reduction is tackled alongside attainment of wide social and economic outcomes. The following policies have been agreed contributing to carbon management, in line with the Mayor's London Plan:

- a. From 2011 onwards, all new residential development will achieve a minimum 44% reduction in total (regulated) CO2 emissions in line with Code for Sustainable Homes Level 4 energy standards, and should aim at achieving Level 6. All new residential development shall be zero carbon from 2016 onwards; and
- b. From 2011 onwards all new non-residential development shall be built to at least BREEAM "very good" standard and should aim at achieving BREEAM "excellent" or the current nationally agreed standard. All new non-residential development shall be zero carbon from 2019.

The Council will promote low- and zero-carbon energy generation through the following measures:

- a. Requiring all developments to assess, identify and implement, where viable, site wide and area-wide decentralised energy facilities including the potential to link into a wider network;
- b. Establishing local networks of decentralised heat and energy facilities by requiring developers to prioritise connection to existing or planned networks where feasible;
- c. Working with neighbouring boroughs and other partners to explore ways of implementing sub-regional decentralised energy networks including the potential in the Upper Lee Valley Opportunity Area; and
- d. All new developments will be required, where viable, to achieve a reduction in predicted carbon dioxide emissions of 20% from on site renewable energy regeneration which can include connections to local sources of decentralised renewable energy.

b. Local Implementation Plan Schemes, funding and CO2 reduction

Haringey's has a LIP target to reduce CO2 emissions from ground based transport by 45.3% by 2025 (from a 2008 baseline of 164 kilo tonnes CO2). Our interim LIP target is a 20% reduction by 2014. The Mayor's Transport Strategy has a target of a 60% reduction in London's CO2 by 2025, from a 1990 baseline, which is expected to be predominately achieved from improved vehicle efficiency (based on EU policy targets for production of cleaner vehicles) and a significant increase in usage of low carbon vehicles.

In 2011/12 Council capital funding of £2.8m was allocated for the following works: Road Safety programme, Parking Plan - (CPZ expansion), the borough road and footway maintenance programme, street lighting and street tree planting. A range of


Haringey Council

other works such as walking and cycling infrastructure improvements and behaviour change initiatives are funded from the Councils LIP allocation from Transport for London.

LIP schemes 2011/12 -2013/14: Corridors, Neighbourhoods & Supporting Measures:	Funding (£k) 2011/12 (includes 20% costs for staff resources)	Funding (£k) 2012/13 (Includes 20% costs for staff resources)	Funding (£k) 2013/14: (Includes 20% costs for staff resources)	% change in CO2 emissions achieved by 2020	Cost per tonne CO2 abated
Green Lanes Corridor, Haringay and St Ann's Neighbourhood	150 design and consultation and partial implementati on	586 implementati on costs	500 Implement ation costs	Tbc - to be assessed with post scheme modal share monitoring	Tbc – post scheme implementation & monitoring
Tottenham gyratory complementary measures -	0	30 Design + consultation	100 Implement ation	"	"
Local safety scheme programme –	200	160	100	0.9%	£143.9
Road Safety programme + structures & drainage programme.	100	200	200	-0.9% Potential rise in emissions due to traffic speed reduction	-£143.9 Negative cost due to potential rise in CO2 emissions.
Environmental (DIY) streets/20 mph zones – Turnpike Lane area (2010-2012)	400			-0.7% reduction estimated for all Env Street schemes	£145.2 for all Env schemes
Hornsey area (2011-2013).	75	225	100		
Warwick Gardens (2012 – 2013)		80	270		
Environmental (DIY) Streets total	475	305	370		
CYCLING PROJECTS: Local cycle routes: Greenways/LCN	300	100	0	-0.8% reduction estimated for all cycle projects.	£159.8 for all cycle projects.
Link 78. Finsbury Park to Green Lanes at the Enfield Boundary.		100	0		
Greenways/LCN total	300	200	0		
Biking Borough – Cycle hub in Wood Green.	156	147	147		
Biking Borough Strategy delivery	61	205	54		
Cycle training.	100	100	110		



Haringey Council

Cycle parking	23	21	21		
Car club expansion	20	30	0	-0.5%	£61.5
Electric charging points	20	0	20	-1.3%	£50.4
Street Lighting enhancements - borough wide.	800	800	800	Tbc	Tbc
Parking Plan – Finsbury Park CPZ review; additional CPZ Hornsey CPZ. Other parking measures	330 270	600	600	-3.7%	£69.7
Smarter travel					
Sub regional workplace travel planning.	25	25	25	-0.6%	£25.2
Smarter Travel website	5	5	5	-0.5% for Smart travel marketing campaign.	£181.4
Launch event for smarter travel initiatives	20	0	0		
Marketing campaign. Smarter Travel marketing campaign	70	50	70		
Festival road shows	40	40	60		
Walk and cycle reward incentives	40	40	50		
Smarter travel staff resource	83	90	90		
Setting up neighbourhood champions	5	5	5	-3.6% for personalised travel advice	£73.5
Supporting measures for Cycle Hubs	50	83	83	-0.8%	£159.8
Town centre and retail areas travel planning	50	50	60	-0.3%	£97.2
Publicity and marketing measures for schools	50	100	104	-0.1%	£327.2
Road safety interventions in schools	50	50	60		
Greenways complementary measures	25				
Child Road Safety Project -	20	20	20		
Smarter Travel sub total	533	578	632	-	-
Shopmobility/ Community Accessibility scheme	40	40	40	Tbc Monitoring undertake in 2011/12	Tbc
Local transport project	100 £20k for road safety; £40k for bus stop accessibility	100 £10k to be used for Gardens DIY Streets	100 £30k to be used for Gardens DIY Streets		
Principal Road maintenance - 2012/13 priorities are: High Road N17	380	610	472	N/A	N/A
Enabling budget – Wood Green bus shelter; Ashley Road bus stands; Muswell Hill roundabout redesign	60			N/A	N/A
Borough road and footway maintenance programme	1274	1,300	1,300	Tbc – based on borough walking modal share	Tbc



Haringey Council

				data provided by TfL in Dec 2011.	
Bridge maintenance and assessment -	88	1,989	1,304	N/A	N/A
Wood Green High Road Major Scheme	100 scheme development	1800 implementation	1,956 implementation	Tbc - to be assessed with post scheme modal share monitoring	Tbc – post implementation monitoring.
Overall total (£'000)	5,980	9,801	8,806	-	-

Table 10: LIP programme 2010/11 – 2013/14 and projected CO2 savings

c. Fuel Poverty Work

Grant funding of £186k for 2011/12 has been awarded to deliver easy to water and energy saving measures in the Northumberland Park area by the Mayor of London.

In 2010-11 £752,625.41 was received by residents from Warm Front, the national fuel poverty grant programme. Warm Front referrals data for 2011/12 will be available in October 2012.

d. Decent Homes Funding

2008 saw the start of Haringey's Decent Homes Programme. To date 5,825 dwellings have been brought up to the Decent Homes Standard and the programme is ongoing at a cost of £113.7m. Further details are given below.

Of those homes receiving works, 3,627 have had post works energy surveys (RdSAP2005) carried out to date. The table below shows average pre and post works SAP rating and annual CO2 emissions for these properties.

	Average SAP 2005 Score	Average CO2 Emissions (Tonnes per Year)
Pre works (based on 2008 energy report by Sapphire Energy using Level 0 calculation)	61.9	4.54
Post Works (based on RdSAP 2005 surveys carried out by GLEEN)	68.3	3.01

The table below shows the 2008 baseline position, the current position and the estimated position once all the essential Decent Homes works have been completed for average SAP rating and CO2 emissions for the whole of the tenanted stock (approximately 16,200 dwellings). For comparison, the English



Haringey Council

Housing Survey Headline Report 2009-10 estimated the average SAP rating of Local Authority Homes in England to be 59.6 in 2009.

	Average SAP 2005 Score	Average CO2 Emissions (Tonnes per Year)
2008 Baseline Position	62.6	4.4
Current Position	64.0	4.1
Estimated Position when essential Decent Homes works complete (2014/15)	67.2	3.4

Grant and externally funded programmes

- **'Here to Help' British Gas (2006-2009)**

Between 2006 to 2009 Homes for Haringey ran an energy efficiency programme in conjunction with British Gas called the 'Here to Help' scheme, which provided both loft and cavity wall insulation as well as other low cost measures such as hot water tank jackets. A total of 2,560 council homes benefited from insulation measures over the period.

- **SHESP 2009**

In 2009 we successfully bid for SHESP (Social Housing Energy Saving Programme) funding which enabled us to install cavity wall insulation to 458 homes in high rise blocks which are traditionally 'hard to treat'. This scheme completed in 2010.

- **Community Energy Saving Programme (CESP)**

This scheme places an obligation on energy companies to fund carbon reduction measures in homes in the most deprived areas in the country. Haringey has a large proportion of housing stock in CESP eligible areas.

Since the scheme was announced in 2009 Homes for Haringey have been working to develop a viable CESP scheme in the borough. This has not been possible to date due to the low level of funding we have been offered by the energy companies for proposed schemes (around 30%) and hence the high level of match funding required. Also, the measures which CESP gives highest priority to (solid wall insulation, fuel switching) are not consistent with our Decent Homes priorities (Roofs, Windows etc).

CESP has had limited success in London with only a handful of schemes having been proposed to OFGEM to date.



Haringey Council

We continue to investigate options and are beginning to see more generous funding offers being made as energy companies seek to fulfil their obligation by the December 2012 deadline.

- **Solar PV – Rent-a-roof scheme**

The Council has appointed a contractor, Smarter Energy Solutions, to deliver a 'rent-a-roof' solar PV programme to its social housing stock at zero capital cost. The scheme will provide a roof rental income to the Council. The amount of revenue available from the scheme will depend on the results of detailed site assessments being carried out.

- **Future opportunities**

Homes for Haringey is following with interest the development of the Government's new Green Deal and the Energy Company Obligation in order to identify the opportunities these schemes may present for investment into Social Housing. The Green Deal is due to be launched in October 2012 with consultation on the secondary legislation due to start this autumn and detailed guidance prepared by next spring.

E. North London Strategic Alliance

The North London Strategic Alliance, jointly funded by LB Haringey, Enfield and Waltham Forest does not have a specific budget for CO2 reductions programmes. From 2010/11 to the current financial year the organisation has delivered a pre-feasibility study for a decentralised energy network with the aim of supporting local economic development. The study cost £50k, delivered by external consultants and was funded by LB Enfield (completed July 2011) and £6,000 for project management by NLSA. A further phase of feasibility work is now being planned and will be fund jointly by LB Enfield and the GLA through the ELENA European fund with project management support from Haringey and Waltham Forest.

F. Waste & recycling

Veolia was awarded the Haringey waste management contract on an output based specification and reduced costs for the Council; this became operational in April 2011. A key objective in re-letting the contract was to reduce carbon emissions through developing innovative waste management solutions. Veolia has committed to reducing the carbon footprint of the service by 40% by the end of 2015.

Carbon Reduction targets

Veolia have agreed a year on year carbon reduction targets for the first 5 years of the contract, starting at 20% reduction in year 1, and rising to 40% by the end of year 5.



Haringey Council

In order to achieve this target, Veolia are in the process of introducing a number of measures, including:

- Introducing a more carbon efficient fleet (i.e. electric street cleansing vehicles), reducing the size of the fleet and moving to a more efficient zonal waste collection system
- Use of telemetric information from vehicles to monitor driver behaviour (e.g. monitoring braking, acceleration, fuels used etc) to ensure individual CO₂ targets are met
- Green Carbon audits for top 100 LBH trade waste customers.

Furthermore, Veolia have committed to increasing the recycling rate to 40% by the end of year 5. The associated carbon savings linked to the increased recycling tonnage have been estimated at 12,000 tonnes CO₂ (equivalent). This increase will result in an estimated reduction in disposal cost of £1 million per annum.

Targets for CO₂ reduction have been set only for the first 5 years of the contract, at which point we have the opportunity to review, and set (taking into account then current technologies) additional targets for future years.

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