

Carbon Reduction Delivery Plan



Foreign &
Commonwealth
Office



A Mitigation Plan
for the FCO

Photo credits:

Front page/left image:

Decorated cooling tower in Soweto near Johannesburg, South Africa.

Dan Fieller

British High Commission, Maputo.

Front page/right image:

Sir Michael Arthur, British Ambassador to Germany, tests an electric motorbike in Stuttgart, Germany.

Birgit Dammert

British Consulate-General, Munich.

Ministerial Foreword

When we look back in ten, twenty or a hundred years from now, the role of climate change will not always be clear, immediate, or necessarily the principal factor in any given event. It belongs to the great historian Fernand Braudel's 'longue duree': a slow, but irresistible, influence on human behaviour and our societies.

But if we do not act to cut the emissions responsible for climate change, we do know what the result could be – rising sea levels that threaten millions, causing mass migration; unpredictable weather patterns leading to hunger through drought and crop failure; scarcer water supplies leading to conflict and instability; economic tensions as the world struggles to adapt to the escalating price of fuel and food.

So climate change is rightly a government priority, and the 2008 Climate Change Act made the UK the world's first country with a legislative timetable for becoming a low-carbon economy. The Government did this in recognition that the transition to a low-carbon economy is vital to our long term security.

The Foreign Office too has made the transition to a low-carbon economy a strategic objective. We are using our global platform to help build the political conditions in countries around the world so that governments are more able to agree a binding international deal. And through our networks and alliances, we are working to ensure that climate change is seen not just as an environmental crisis, but as a major threat to our security and prosperity. Alongside this core work, there are two other areas in which the Foreign Office must lead the way. These are reflected in the FCO's Climate Change Plan, which is divided into two sections: the Climate Change Adaptation Plan and the separate Carbon Reduction Delivery Plan.

This, the Carbon Reduction Delivery Plan, is based on the premise that if we wish to lead a global transition to a low carbon economy, we need to practice what we preach in the way we do business. This means cutting our own emissions, and the plan sets out how we will reduce our impact on the environment and exemplify

sustainability throughout the FCO's global network. We will also use this programme to drive a transformation about how we do business, and demonstrate on a global stage that a more sustainable future will allow organisations to be healthier, happier and better off. In short, the FCO's role goes beyond helping secure a global deal, as important as that is. We will be instrumental in helping the UK to adapt to climate change - by understanding and influencing what happens overseas - and by setting an example of sustainable working ourselves.



David Milliband
Foreign Secretary

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1. Introduction

This Carbon Reduction Delivery Plan sets out the approach that the Foreign and Commonwealth Office (FCO) will take to its first three Carbon Budgets in the period 2008 to 2022. It explains the purpose of the Carbon Budgets, their scope and level; as well as the actions that the FCO is taking to meet them. It also touches upon some carbon reduction activities being undertaken by the FCO, which are currently outside of the scope of Carbon Budgets but have the same objective of reducing emissions of climate changing green-house gases.

The Climate Change Act of 2008 established a legally binding target of reducing the UK's green-house gas emissions by at least 80% by 2050 and by 34% by 2020. The UK's route map for achieving this was set out in the Government's Low Carbon Transition Plan, published in July 2009. That plan also introduced successive five-year Carbon Budgets for Departments. The First Carbon Budget period is 2008-2012.

This plan shows that, although the FCO's emissions are likely to exceed our First Carbon Budget, a substantial programme of carbon reduction activity is in hand to bring the FCO's emissions down to a level commensurate with future Carbon Budgets.

2. Scope of the FCO's Carbon Budget

For the FCO, the Carbon Budget sets a limit on the amount of CO₂ we should emit from our UK office estate and road vehicles used for administrative purposes. Within the scope of the FCO's Carbon Budget are the CO₂ emissions from offices occupied by the FCO and its Trading Fund FCO Services; plus CO₂ from FCO and FCO Services road vehicles and from the road vehicles of our Wilton Park Executive Agency. The FCO's estate in London consists of two owned 'heritage' buildings: King Charles Street and the Old Admiralty Building which accommodate

about 2400 staff, and three leased buildings (Lancaster House, 1 Carlton Gardens and a small office in Centre Point). We also share with HMGCC a 77 acre freehold site at Hanslope Park near Milton Keynes which accommodates another 2400 staff in total. We have also leased two properties in central Milton Keynes. The total size of the UK estate within the scope of the FCO's carbon budget is 92,455m².

The FCO currently has 34 vehicles in the UK. These are mostly messenger and mail vans or HGV lorries for delivering diplomatic supplies. CO₂ emissions from the FCO's network of 261 overseas posts are not currently within the scope of the FCO's Carbon Budget but are measured and plans are being developed and implemented to reduce them (see page 12 below).

Also outside of scope are the Wilton Park buildings and the FCO's Non-Departmental Public Bodies (NDPBs). The largest of the FCO's NDPBs is the British Council. The other seven are very small (ranging from zero to 17 permanent staff) and are not significant emitters of CO₂.

This plan is based on the current scope of the SOGE targets and the department's current carbon budget, which includes the office estate, and owned administrative transport emissions. As the details of the new SOGE framework are built into the carbon budget allocation from Carbon Budget period 2 (2013) onwards, we will work across our estate and wider departmental family to ensure that we monitor and report against, and then meet the broader and more challenging targets. These reductions in public sector carbon emissions will also deliver financial savings, contributing to Government's aim of releasing £300M in energy bill savings by 2012/13 through greater energy efficiency. The CRDP is expected to be reviewed and updated in the next 18 months in order to present the department's new share of the public sector Carbon Budget, and the revised set of measures being planned to secure both carbon and financial savings.

3. The FCO's carbon reduction ambitions

One of the FCO's four Policy Goals is to promote a low carbon, high growth, global economy. The FCO's Climate Change and Energy Group supports the UK's leading role in international efforts to tackle climate change (see box). The FCO will play its part in Government to give visible leadership in reducing carbon by making sure carbon reduction measures are integrated into all our activities. In 2008, therefore, the FCO established 'Greening the FCO' as one its high level change programmes. The purpose of 'Greening the FCO' is to:

- i) ensure that all aspects of FCO operations at home and overseas are managed sustainably, and that environmental considerations are at the heart of the way the FCO is run
- ii) reduce the FCO's global carbon footprint and make our performance against central HMG sustainability targets the best in Whitehall

The FCO's approach is set out in the Environmental Policy Statement on its website. One way in

The FCO's Climate Change and Energy Group (CCEG)

CCEG is part of the FCO's Global and Economic Issues Directorate. The team leads the FCO's contribution towards cross-Whitehall delivery of Public Service Agreement 27 on "leading the global effort to avoid dangerous climate change". The FCO's specific contribution, as identified in the PSA, is to build the necessary political conditions and mobilise key constituencies to influence the major emitters. Departmental Strategic Objective (DSO7) (promote a low carbon, high growth, global economy) sets out how this is being delivered. CCEG is responsible for the first three DSO7 key performance indicators:

- > A visible and accelerated shift in investment initiated in the major economies towards low carbon;
- > Political conditions created for an equitable post 2012 agreement at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP) of sufficient ambition to avoid dangerous climate change;
- > Risks to the UK and EU energy security managed through more diverse and reliable external sources of supply and more efficient global consumption.

Key examples of successes include the FCO's support to Mexico. An FCO/Defra co-funded study, with a foreword with Lord Stern, analysed the inter-relationships between climate change and the economy in Mexico. The headline study found it will cost Mexico about 5% of GDP to reduce emissions to 50% below 2002 levels by 2050, versus a cost of 'inaction' of around 8% GDP. This has prompted a commitment to strong national action in Mexico - who will host COP16 in December - through their National Climate Change Plan that binds Mexico to cutting their emissions by 50% by 2050 and peaking by 2012. In China - now the world's largest carbon emitter - Jilin City was designated as China's first low carbon zone. A Foreign and Commonwealth Office funded project paid for Chinese and UK think-tanks to put together the initial methodology and concepts, which helped persuade the Chinese Governments of the benefits of the pilot, as well as providing guidance on feasibility.

which the FCO will fulfil this ambition will be to reduce its CO₂ emissions from offices and vehicles sufficiently to meet future Carbon Budgets.

4. The FCO approach to carbon management

The FCO's commitment to improving its carbon management starts at the top and is matched by the support and expectations of its staff at all levels. The FCO's Permanent Under-Secretary includes action to meet HMG sustainability targets in his personal performance objectives. The Director-General Finance is the FCO's Sustainability Champion. With the Director of the Global and Economic Issues Directorate, he co-chairs a sub-Board of the FCO Board addressing sustainability issues. The Sustainability Board oversees the FCO's performance against its Sustainable Development Action Plan (SDAP), of which sustainable operations is a part. This Carbon Reduction Delivery Plan is an annex of the FCO's SDAP.

The Sustainability Board has established a Carbon Working Group comprising officials from those parts of the FCO and elsewhere most able to influence its carbon emissions. These include the Sustainable Operations Team; Facilities Management Client Unit; our external facilities management provider; Information and Technology Directorate; FCO Services and UK Estates. The Carbon Working Group identifies measures to reduce the FCO's CO₂ emissions, coordinates work and agrees responsibility for implementing those measures.

The Sustainable Operations Team, in the FCO's Estates and Security Directorate, is responsible for monitoring the FCO's sustainable operations performance, initiating and advising on policy changes to improve this performance and for implementing the Greening the FCO Change Programme. It receives technical support from FCO Services. An organogram showing the showing the key positions of staff in the FCO and Wilton Park working on carbon reduction in the UK, is annexed.

The facilities management provider has sustainability performance indicators written into its contract, including performance indicators relating to its contribution to reducing the FCO's carbon emissions.

5. Carbon emissions monitoring and reporting

The FCO has reliable procedures for measuring and monitoring its CO₂ emissions. Those procedures form part of the FCO's Environmental Management System, which is externally audited by Lloyd's Register Quality Assurance Ltd and approved by them to the ISO14001: 2004 Environmental Management System Standard.

The FCO reports and publishes its CO₂ emissions from its UK estate and vehicles, annually as part of the Sustainable Development in Government process. From 2011/12, both the FCO and FCO Services will also have to publish their CO₂ emissions in sustainability reporting in their Annual Reports and Accounts.

There is close internal coordination to identify practical ways in which we can reduce energy use and emissions. For example, our extensive additional sub-metering across the UK estate, is now giving us a much more detailed picture of our energy consumption and is expected to highlight significant opportunities for carbon reduction.

All qualifying FCO buildings have Display Energy Certificates giving the energy rating of that building.

6. FCO performance against its First Carbon Budget

The FCO's first Carbon Budget sets a limit on how much CO₂ the FCO should emit from its UK office estate and road vehicles used for administrative purposes. The size of the Carbon Budget is aligned to the FCO's Sustainable Operations on the Government Estate (SOGE) targets to reduce its CO₂ emissions from offices by 12.5% by 2010/11 compared to 1999/2000 and by 30% by 2020; and to reduce CO₂ from vehicles by 15% by 2010/11 relative to 2005/06 levels.

FCO CO₂ emissions are expected to exceed its first Carbon Budget allocation of 58,424 tonnes of CO₂ by 18,179 tonnes. This is due to high emissions in the first two years of the Carbon Budget period. FCO

FCO first Carbon Budget 2008-2012

Year	2008	2009	2010	2011	2012	TOTAL
CO ₂ from Offices(tonnes)	11,752	11,604	11,456	11,274	11,036	57,122
CO ₂ from vehicles (tonnes)	277	268	259	251	247	1,302
Total	12,029	11,872	11,715	11,525	11,283	58,424

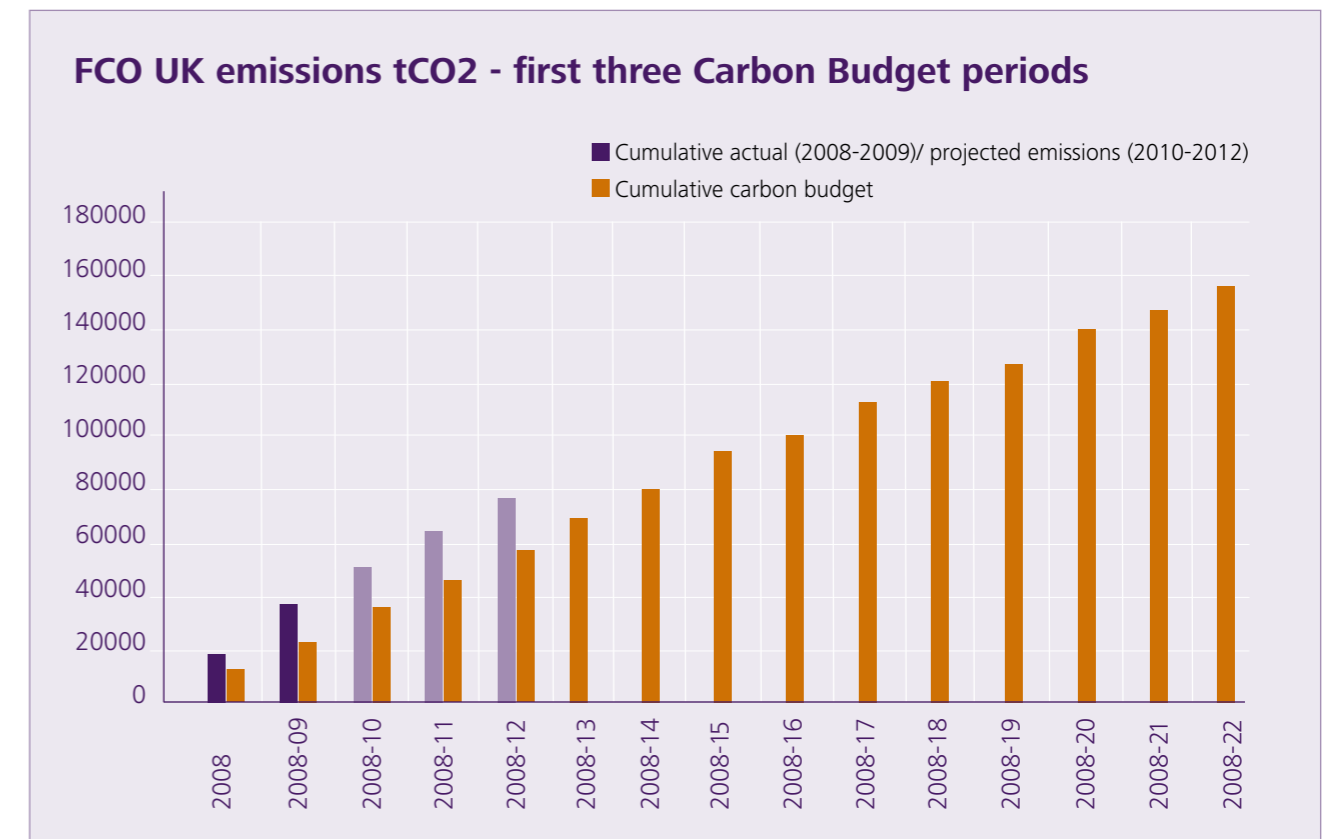
Actual and projected FCO CO₂ emissions in first Carbon Budget period

Year	2008	2009	2010	2011	2012	TOTAL
CO ₂ from Offices(tonnes)	16,994	18,575	14,924	13,316	11,316	75,125
CO ₂ from vehicles (tonnes)	358	337	303	240	240	1,478
Total	17,352	18,912	15,227	13,556	11,556	76,603

emissions increased significantly during this period as a consequence of the roll-out of an enhanced IT system, including the consolidation of some energy inefficient servers currently located overseas, into additional server capacity in the UK. The existing and new servers are running in parallel until completion of the roll out later this year and transfer of all applications to the new servers. The new IT system is more resilient, more energy efficient and more effectively supports the FCO's operations, including its climate change diplomacy in the UK and abroad. Emissions from IT in the overseas network will fall, with the shift to providing most data-centre services from the UK.

The FCO's emissions are not projected to fall below the 2010/11 SOGE target level of 11,419 tCO₂ until 2012.

The FCO's actual and projected performance against its first Carbon Budget is shown graphically below:

**7. Main carbon reduction measures and milestones for the First Carbon Budget****Carbon reduction measures implemented in 2008-09**

- > Office heating temperature on UK estate turned down by 2° Celsius to a range 19-22 degrees, targeted on 21° Celsius. Saving: 507 tonnes CO₂ per annum
- > Automated lighting upgraded in Old Admiralty Building. This coincided with and contributed to a 7% reduction in electricity consumption in the OAB which saved 81 tonnes of CO₂
- > 2008 to 2009 was a period of planning and feasibility studies for measures that will be implemented during the remainder of this Carbon Budget period.

Carbon reduction measures to be implemented in 2010 (projected savings in 2010)

- > Powering down desk top computers at night (860 tCO₂)
- > Scale back use of former IT system servers to vital functions (650 tCO₂)
- > Savings identified by extra metering (685 tCO₂)
- > Voltage regulation (563 tCO₂)
- > Converting Hanslope Park boilers to run on reconstituted cooking oil (435 tCO₂)
- > Raise cooling temperature in data-centres (200tCO₂)
- > Replacing cooling towers, chillers and air handling units in King Charles Street (191 tCO₂)
- > Staff energy saving campaign (180 tCO₂)

- > Lighting upgrades (100 tCO₂)
- > Other energy efficiency measures (196 tCO₂)
- > £244,000 DECC Low Carbon Technology funding secured to purchase three electric mail and messenger vans and three low-drag trailers for the HGV lorries (55 tCO₂)

Carbon reductions in 2011

As most of the 2010 carbon reduction measures will be implemented part way through the year, the full annual CO₂ saving will not be recorded until 2011. The additional savings in 2011 will be as follows:

- > Converting Hanslope Park boilers to run on reconstituted cooking oil (435 tCO₂)
- > Scale back use of former IT system servers to vital functions (350 tCO₂)
- > Savings identified by extra metering (343 tCO₂)
- > Voltage regulation (187 tCO₂)
- > Raise cooling temperature in data-centres (94 tCO₂)
- > Replacing cooling towers, chillers and air handling units in King Charles Street (64 tCO₂)
- > Other energy efficiency measures (47 tCO₂)

FCO Services is also considering introducing a managed print service across the UK estate, which should increase the energy efficiency of printing, photocopying and scanning; and significantly reduce the amount of unnecessary printing, saving both energy and paper. The CO₂ savings are estimated at 100 tonnes per annum.

Carbon reductions in 2012

Initial investigations suggest that the FCO may be able to save 2,000 tonnes of CO₂ per annum by consolidating its data-centres and virtualising its servers. Further studies are planned to confirm the viability, costs, savings and timing of this project.

8. FCO Second and Third Carbon Budgets

If the FCO's planned carbon reduction measures in the first Carbon Budget period deliver their projected CO₂

Year	2013	2014	2015	2016	2017	TOTAL
CO ₂ from Offices(tonnes)	10,799	10,561	10,323	10,086	9,848	51,617
CO ₂ from vehicles (tonnes)	242	238	234	229	225	1,168
Total	11,041	10,799	10,557	10,315	10,073	52,785

savings, the FCO's annual emissions at the start of the second Carbon Budget period will be only 2.4% above target. With the conclusion of the data centre consolidation and server virtualisation work in the first Carbon Budget period, the long term cooling requirement of the data-centre buildings at Hanslope Park, will be more predictable. Feasibility studies, already conducted, suggest that installing ground source heat pumps for cooling one of those data-centres, would reduce CO₂ emissions by 668 tonnes. On-going work during the Second Carbon Budget period to promote flexible working may also help facilitate a rationalisation of the estate, with associated reductions in office emissions.

To meet the second Carbon Budget and achieve the 23% reduction needed to reach the 2022 target level

Year	2018	2019	2020	2021	2022	TOTAL
CO ₂ from Offices(tonnes)	9,610	9,373	9,135	8,897	8,660	45,675
CO ₂ from vehicles (tonnes)	220	216	211	207	202	1,056
Total	9,830	9,589	9,346	9,104	8,862	46,731

at the end of the third Carbon Budget period, the FCO will almost certainly need to install large scale renewable energy, such as wind turbines or a combined heat and power biomass plant, at its Hanslope Park site. We will face funding and planning constraints. The FCO has begun investigating the feasibility of installing wind turbines in collaboration with the Carbon Trust's Partnership for Renewables. Three wind turbines could potentially save 3,500 tonnes of CO₂ per annum.

9. Other current FCO carbon reduction activities

10:10

The FCO has given impetus to its carbon reduction plans in 2010 by signing up its UK operations to the 10:10 carbon reduction campaign. As well as

committing to reducing the CO₂ from the FCO's vehicles, grid electricity and on-site fossil fuel consumption by 10% in 2010; signing up to 10:10 commits the FCO to a 10% reduction in CO₂ from its UK originated air travel. Air travel will be reduced by combining trips and using video-conferencing facilities instead. Our network of overseas posts around the world are also encouraged to sign up to 10:10.

Carbon off-setting

The FCO purchases high quality carbon off-sets for UK originated air travel under the Government Carbon Offsetting Facility.

Innovative solutions

We have put forward our main headquarters building

in central London for an 'Energy Efficiency Whitehall' competition run jointly by the Office of Government Commerce and the Technology Strategy Board. This competition will invite businesses to design and trial innovative ways of improving the energy efficiency of a selection of Whitehall Buildings.

The FCO is also working with the Department of Business, Innovation and Skills on an Innovation for Sustainability Forward Commitment Procurement. In this project, the FCO will seek to stimulate a market for a solution to one of its unmet sustainability needs.

Work with the Carbon Trust

The FCO participates in the Carbon Trust Management Programme and is intending to join its Carbon Management Service for Central Government. The Carbon Trust has also provided advice on the FCO's strategy to reduce its carbon footprint.

Supplier carbon disclosure

Since 2008 the FCO has been working with the Carbon Disclosure Project to encourage its main suppliers to consider the impact of climate change and to disclose their carbon emissions.

Staff commuter travel

In 2009, the FCO signed up to the Cycle to Work Guarantee, which commits the FCO to a number of measures to promote cycling to work by its staff.

The FCO is currently developing a Travel Plan for its Hanslope Park site, which aims to reduce CO₂ emissions, air pollution and congestion, by providing and encouraging alternatives to single occupancy vehicle commuting to the site.

Carbon reduction in the FCO's network of overseas posts.

The FCO manages an overseas estate of over 4,000 offices, residences and other properties in 279 locations that provide a platform enabling the UK Government's interests to be represented across the world. Measuring, monitoring and reducing the environmental impact of these operations is a major

challenge, given the diverse nature of the estate. Posts operate in a range of climates and building types. Certain environments, such as those where power is supplied by generators, and properties such as historic buildings present specific challenges.

In 2008/09 under the Greening the FCO change programme all Posts were asked to set up a green team to take responsibility for driving their sustainable actions, to adopt a basic list of principles as a minimum towards improving their environmental performance and to mainstream environmental considerations into their decision making. Over 160 Posts were selected or volunteered to take on environmental management system principles, and additional funding has been made available for staff, environmental audits and projects that were assessed to significantly reduce their environmental impact.

Following work with the Carbon Trust, we launched a customised on-line calculator in June 2009 to measure the FCO's global carbon emissions. We believe that this is the first time a foreign service has attempted to gain a comprehensive carbon footprint of its overseas estate. Emissions arising from energy in buildings, vehicles, flights and other travel, water and waste are included, as well as optional areas such as measuring the footprint of an individual event. Initial analysis shows that the main contributors are emissions from buildings and air travel. Work continues on drawing up detailed and specific guidance on how these can be reduced, and in time different targets will be set for groups of posts with similar criteria. It is important to recognise however that some posts will be severely limited in what they can achieve due to their operational requirements, security issues or the local environment. Other factors, such as lease arrangements and the extent to which retrofit work can take place, are also relevant.

A key decision is whether our overseas estate should be incorporated into the revised SOGE targets in the near future, and if so over what timescale. Doing so would have many policy advantages but would present considerable challenges too, particularly on funding change in a diverse, extensive and highly

dispersed global estate. Regional conversion factors make direct comparisons with performance in the UK difficult and there are many practical issues to be overcome. Over time we will seek to better align the targets for the UK and overseas estate and will continue to push forward progress on carbon reduction in our overseas network. The immediate challenge is to ensure that sustainability is mainstreamed into all decisions that affect how the estate is run. A key element of this is posts' inclusion in the 10:10 campaign: they are being encouraged to sign up and to reduce their emissions by 10% where this is possible.

There have been some outstanding achievements by posts. A combination of staff behavioural change and low cost technology have resulted in significant savings in energy, vehicle emissions and air travel, while the installation of solar water panels, motion sensors and heating/cooler controls have been responsible for additional gains. Other initiatives include rainwater harvesting, district heating systems, hybrid vehicles, fuel efficient driver training, water-efficient fittings and more use of electronic communications instead of travel.

The Foreign Secretary endorsed an awards scheme in 2009 that recognised the impressive advances being made across the Foreign Office network in a number of key areas. The Green Award was established to recognise significant innovative and successful measures taken by teams in the UK and the overseas network to make their operations more sustainable. The overall winner was announced at the annual Leadership Conference when they received an award and prize from the Foreign Secretary. This year's award will provide the opportunity to recognise work being undertaken to further reduce the FCO's carbon emissions.

There is also scope to incorporate sustainable measures into the design of new builds and major refurbishments. This is measured through a customised BREEAM framework, with all projects aiming for at least a Very Good rating. The new Embassy in Manila is the first building to be awarded Excellent.

10. Carbon Reduction Activities of the British Council and Wilton Park

The British Council's procedures for collating and managing its carbon emissions are governed by an Environmental Management System (EMS). This EMS is regularly internally and externally audited and, in February 2009, was approved to ISO 14001 standard. The environmental impacts of its overseas operations are managed through a more flexible Environmental Framework Tool.

Since 2008, the British Council has reduced electricity consumption at its London Head Quarters building by 17 %. The British Council is a member of the GLA500, a London Mayor initiative on carbon savings and, in June 2009, received a special mention and gold award under that scheme. It has also an e-Government National Award for sustainable IT. The British Council is currently developing its Sustainable Action Plan. This plan will set out the British Council's holistic approach to sustainability.

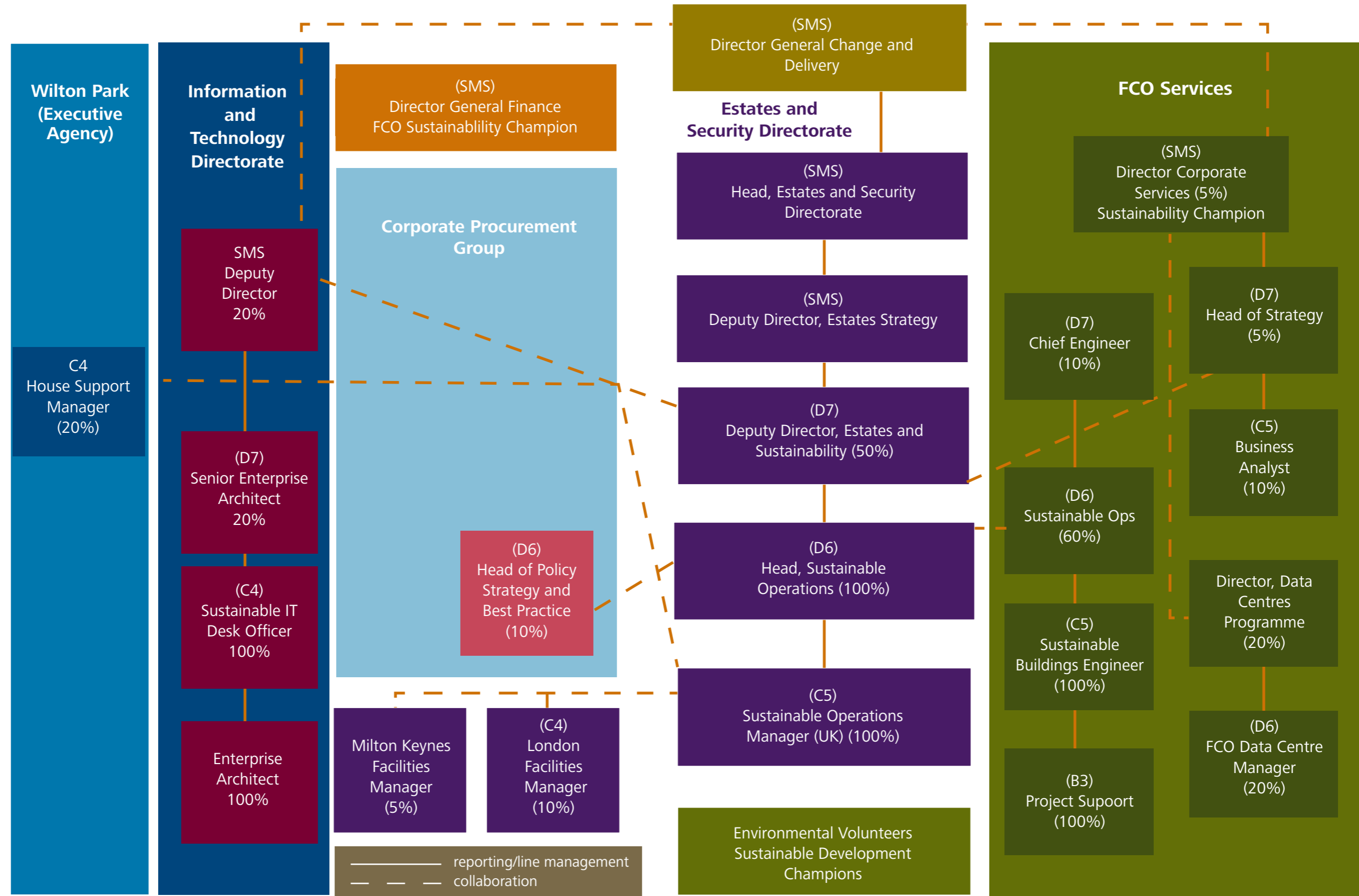
In July 2007, Wilton Park installed a biomass boiler, running on wood-chip from its grounds, which supplies all its heating and hot water requirements, leading to an estimated 120-160 tCO₂ savings annually.

Wilton Park has an Environmental Green Group, which acts as a forum both for raising environmental awareness and for channelling staff's sustainability ideas.

11. Conclusion

Like all government departments, the Foreign and Commonwealth Office is firmly committed to reducing carbon emissions from our activities and meeting our future Carbon Budgets. We will continue to push forward best practice on our UK estate and are developing innovative solutions for the unique circumstances of our overseas network of posts.

Key UK FCO and Wilton Park Staff with Responsibility for Sustainable Operations and Sustainable Procurement





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