

SEIZE THE DAY: A CALL TO ACTION FOR UK CLIMATE LEADERSHIP



UNIVERSITY OF
CAMBRIDGE

PROGRAMME FOR
SUSTAINABILITY LEADERSHIP



THE PRINCE OF WALES'S

CORPORATE LEADERS GROUP ON CLIMATE CHANGE
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The Prince of Wales's UK Corporate Leaders' Group on Climate Change (UK CLG) was established in 2005, bringing together some of the UK's largest businesses from across sectors to articulate their belief that there is an urgent need to develop new and longer-term policies for tackling climate change as a strategic objective for UK plc. The group's mission statement is to "trigger the step-change in policy and action needed both to meet the scale of the threat posed by climate change, and to grasp the business opportunities created by moving to a low-climate-risk economy."

The group has been one of the most consistent and outspoken voices in support of strong, pro-business policies on climate change. Its activities and achievements range from coming forward in support of a strong EU ETS and bold targets in an open letter to the Prime Minister in 2006, to developing and delivering The Copenhagen Communiqué on Climate Change in 2009, which saw over 950 global companies from 60 countries endorse the statement developed by the group, calling for an ambitious, legally binding and robust deal at COP-15. The UK CLG has been developed and is managed by The University of Cambridge Programme for Sustainability Leadership on behalf of HRH The Prince of Wales.



Contents

Introduction from HRH The Prince of Wales	5
Executive Summary	7
Introduction	10
1. Adequate and sustained ambition at all levels	12
2. A clear, long-term, simple and effective policy framework.....	15
3. Support innovation.....	18
4. Encourage behaviour change to promote efficiency and manage demand	20
5. Build a resilient economy	24
6. Action in the context of globalisation	26
7. Invest in the transformation	28



CLARENCE HOUSE

Much has changed since I established the Corporate Leaders Group in 2005. It is now commonplace, rather than exceptional, for businesses to discuss the threat posed by climate change and the opportunities of a low-carbon economy. The UK has adopted a ground-breaking framework for the transition to a low-carbon economy with the establishment of the Climate Change Act. It has shown real leadership in Europe and internationally, and with the recent decision over legally binding restrictions of carbon emissions all the way to 2027, continues to show the way. The UK Corporate Leaders Group has made an important contribution to all of these changes.

It is therefore with no small pride that I welcome the latest statement by the Group. They want us to maintain our international position and ensure we have a robust economy for future growth. I can only pray that those with the power to respond will heed their call.

Executive Summary

This is the critical time. The decisions made in this parliament will either set the UK firmly on the path to a low-carbon economy or send us well off track. The UK leads the world in ambitious targets to tackle climate change. We are the first country in the world to extend legally binding targets well into the 2020s. We have the opportunity to transform our economy and lead the world down a path of green growth, well-managed climate risks and decarbonisation. The opportunity must be seized now, or else we risk missing out on new markets and locking in high-carbon, maladapted investments.

This requires the right policy framework – a framework that takes the long-term strategic view, that is adequately ambitious, that is clear and cost-effective and does not impose unnecessary burdens on business but rather releases the energy and innovation of the private sector. Despite strong commitments from the new government, and a number of positive initiatives, that framework is not yet complete. **There is still a gap between our goals on climate change, and the level of ambition of our concrete plans and actions.**

Below we have set out seven key areas where we believe government and business must work together to raise ambition, close the gap and unlock the resilient and low-carbon green growth our country needs.

1. Adequate and sustained ambition at all levels

To deliver on the low-carbon transition requires that scientifically driven carbon reduction goals are set and achieved in the long, medium and short term. Business needs the clarity and predictability given by a clear roadmap that takes us through the required transition.

Two roadmaps have been recently proposed based on significant analysis. In the UK, the Committee on Climate Change (CCC), the key adviser on such matters, has identified that ambition for 2020 emissions reductions can be increased due to the recession, and has

called for a minimum 60% reduction target on 1990 levels by 2030. The UK Government has rightly adopted a carbon budget for the 2020s at a level in line with the CCC recommendations. In the EU the European Commission has published a roadmap setting out the most cost-effective trajectory for Europe-wide emissions reductions, including a minimum 25% reduction in domestic emissions by 2020, and 40% by 2030. We support the vision of steady decarbonisation contained in these documents.

Currently a strong global deal on climate change, which the CLG has repeatedly advocated for as being vital for international action on climate change, does not look imminent. The UK and EU must redouble efforts towards this goal, whilst pursuing other viable avenues of international cooperation that can drive the low-carbon transition. In the absence of global action, action at a UK and EU level should not put the UK economy at a competitive disadvantage.

2. A clear, long-term, simple and effective policy framework

Business needs a clear and simple policy framework which is appropriate and sufficient to achieve our climate goals without imposing unnecessary burdens, stable over the long-term and providing the certainty required to make investments.

This means fewer but clearer interventions that are more targeted and integrated than the current situation. The government should introduce a strong and consistent carbon price signal across as much of the economy as possible – incentivising action, but allowing private sector actors to shape the delivery of national goals. On top of this, alternative policy instruments that go beyond the carbon price signal should be deployed where the carbon price signal will not or cannot deliver – cases where the barrier to action is not price but other issues like the difficulty of managing risk, or cultural and social inertia.

Three priorities are replacing the Carbon Reduction Commitment (CRC) with a simpler and more effective alternative, careful reform to ensure the EU Emissions Trading Scheme (EU ETS) delivers over the medium term, and policies that give business the certainty required to make major investments in areas such as electricity generation and transport.

3. Support innovation

The government should provide support for new industries, technologies and practices, on the basis of a comprehensive and long term plan to deliver a low-carbon economy, by promoting innovation that delivers results. Intervention along the chain of innovation is needed, with investment in research and development, ambitious pilot projects and action to support the roll out of new technologies at scale. Government and business must work together to deliver this.

Sector-specific regulations that, without selecting winners, provide long term certainty that low carbon solutions will be required and that current high carbon practices will be phased out, will underpin the investment in new technologies that take many years to reach widespread deployment. The example of “zero carbon homes” needs to be studied, improved and extended. The government can also provide strong outcome focussed incentives, and support the development of the required national infrastructure.

One powerful, low cost tool that can help influence and create new markets is signalling to the supply chain through procurement structures that there is demand for new low-carbon goods and services. The UK CLG is already piloting a new project that would see public-private cooperation on ‘Forward Commitment Procurement’ to promote new low carbon technologies and practices.

4. Encourage behaviour change to promote efficiency and a shift to sustainable consumption

Increased efficiency is a crucial part of the low-carbon transition, and more needs to be done to promote it. The government must take a proactive approach to promoting energy efficiency – and wider resource efficiency – across the economy.

As part of this, emphasis should be put on greater consumer and public engagement in the low-carbon transition, both to encourage sustainable consumption and to create political support for wider policy change. A combination of measures including fiscal measures and other incentives, clear labelling to enable informed choices, and regulation such as appropriate minimum efficiency standards are needed to promote low-carbon choices to consumers. Efficiency of resource use needs to become a core public value.

The best results in this area, as in others, will come from business and government working together. If done well, the ‘Green Deal’ has the potential to be a flagship example of how to approach this.

5. Build a resilient economy

Climate change means that the future will be different. Our infrastructure must therefore be robust, flexible and responsive to the challenges ahead. In the last 5-6 years, the UK has seen heatwaves, drought, flooding and extreme winters. Failure to act in response to predictable risks is harshly judged by the public, while successful adaptation to new climate-impacts has the potential to both protect economic assets and to create jobs and spur growth.

The UK’s new national adaptation plan must deliver real actions to strengthen our economic resilience. Given the plan should be in place by 2012, delivery should be well underway by the following year. Adaptation actions must take place in the context of uncertainty - we can manage, but not eliminate, risks. And while priorities must be set nationally, delivery must be in the local context and the approach must be flexible enough to allow this.

Resilience must also be approached holistically – respecting the globalised and interconnected nature of the economy. This includes looking carefully at the role of SMEs, who are the life blood of the supply chain, and who need more targeted advice and support from government.

6. Action in the context of globalisation and an interconnected world

Action to tackle climate change needs to go with the grain of a globalised world,

and greater focus needs to be placed on interventions that prompt awareness and action along the supply chain. For example, increasingly the UK's carbon footprint lies not in the direct emissions within our border but in the emissions generated in production of goods for UK consumption. The Committee on Climate Change should be tasked with examining whether the UK could develop a pragmatic methodology for assessing and addressing these emissions.

Similarly the Government has the opportunity to introduce mandatory reporting requirements for businesses carbon emissions. This should be done alongside the replacement of the CRC, and in a way that is in line with existing reporting requirements and international standards, so that any additional burden to businesses is minimised. Reporting should also be structured to incentivise action – so, for example, companies that procure or generate low-carbon electricity should not have to report their electricity usage at the average carbon intensity of the whole electricity supply. However it should also seek, as much as is possible and reasonable, to facilitate and encourage clarity for investors and purchasers looking to monitor sources of carbon in their supply chain and investment portfolio.

7. Invest in the transformation

While the clean energy economy is one of the great global economic and environmental opportunities of the 21st century, there are immediate costs in dealing with climate change. Investment in the transformation to a low-carbon, climate resilient future must not be held back by the economic downturn.

This will require spending by both the public and private sector acting together, and the public sector should seek to leverage private sector finance. The new Green Investment Bank (GIB) will be able to do this, which is welcome. It also needs the independence and expertise required to act effectively as it leverages green investment. Finally it must be designed in such a way that private investment is not crowded out, and should be supported by strong policy across the board to stimulate the level of private sector flows required. It is not a substitute for good policy.

Public sector spending in general should facilitate and support private investment, reduce risks facing the private sector and tackle areas that are to some extent inappropriate for private sector investment (such as supporting research, development and deployment of new technologies and assisting developing countries in facing the costs of action on climate change).

Where the Government wishes to raise revenues through carbon taxation, this should only be as part of a clear, appropriate and strategic approach which does not impose unnecessary burdens on business. The Government has not followed this approach in its decision to keep revenues from the Carbon Reduction Commitment, which is now a significant but poorly designed carbon tax.

Introduction

“Climate change poses global social, environmental and economic risks and demands a transformational change in how we manage our economy. Incremental change will not do...

Government and business must now work together to demonstrate real change on the ground by delivering the new projects and practices that are needed to create a low climate risk economy.”

Letter from The Prince of Wales's UK Corporate Leaders Group on Climate Change to leaders of the UK's main political parties, September 2008

“I want us to be the greenest government ever.”

David Cameron, UK Prime Minister, May 2010

This is the critical time. The decisions made in this parliament will either set the UK firmly on the path to a low-carbon economy or send us well off track. The UK leads the world in ambitious targets to tackle climate change. We are the first country in the world to extend legally binding targets well into the 2020s. We have the opportunity to transform our economy and lead the world down a path of green growth, well-managed climate risks and decarbonisation. The opportunity must be seized now, or else we risk missing out on new markets and locking in high-carbon, maladapted investments.

This requires the right policy framework – a framework that takes the long-term strategic view, that is adequately ambitious, that is clear and cost-effective and does not impose unnecessary burdens on business but rather releases the energy and innovation of the private sector. Despite strong commitments from the new government, and a number of positive initiatives, that framework is not yet in place.

There is still a gap between our goals on climate change, and the level of ambition of our concrete plans and actions.

Since 2005, the UK CLG has worked with the government of the day to secure strong climate policies that are able to deliver the required transition to a low-carbon economy in a timely, cost effective and well managed way. Since we started our work there has been progress - new policies have been introduced, climate impacts are being better understood and planned for, UK emissions have decreased and low-carbon investments have increased – but the UK must go further and faster to transform its economy. We can now choose to focus our efforts on delivering our climate change goals, or we can carry on as we are, and the gap between ambition and delivery will grow.

It is particularly important that the UK seizes the opportunities of the current moment. We



David Cameron: Reuters



must ensure that as the UK economy grows after the recession it follows a path of low-carbon growth. Failure to do this will lock us into a high-carbon, high-risk future. Success offers new competitive advantages as UK businesses take a leading position in new low-carbon, climate-resilient industries. Successful transformational action by the UK will also deliver political leadership – strengthening the UK's hand in making the case for action on climate change at the EU and global level, by being able to demonstrate commitment and delivery, whilst not sacrificing our competitiveness.

This Government wants to be the greenest government ever. Now is the time to implement the policies that are required and make the green economy the centre piece of the government's vision. But this call to arms is not just aimed at the government of the day. Transforming the British economy will need all of us to work together. Political parties must reach across the divide and identify policies that will be maintained, whatever the

government of the day. Business must also be responsible and sustainable and act to implement this change.

The UK CLG as a group of world-leading UK businesses stands ready to do our part and to support renewed government ambition and action on this area. On the following pages we have set out seven key areas where we believe government and business must work together to raise ambition and unlock the resilient and low-carbon green growth our country needs.

1. Adequate and sustained ambition at all levels



The UK and the EU are both bound by current emissions targets, and have established a long-term goal for emissions reductions of at least 80% by 2050 on 1990 levels. Internationally many countries are bound by the Kyoto Protocol up until 2012, and all major emitting countries have put forward emissions reductions efforts, which have been noted by the UN as part of discussions in Cancun in December 2010.

The members of the UK CLG have strongly supported an ambitious approach to climate change with targets driven by science. We stood behind the UK government as it adopted an 80% target in the Climate Change Act, supported this level of ambition across the EU, and led calls for an adequate, effective and equitable global deal on climate change through the international business communiqués we have published.

Success in limiting the scope of climate change requires that sufficient progress must be made now to ensure we are on the right pathway to 2050. Leaving action too late will raise the costs and endanger the whole effort. This means, among other things, setting the right targets and milestones for the short- and mid-term.

In the UK

Analysis by the UK's Committee on Climate Change (CCC) has documented how, with emissions reduced by the recession the UK can strengthen its ambition for 2020, as can the rest of Europe. The Committee have noted how if the UK does not reduce its emissions by at least 60% by 2030, on 1990 levels then the pace of emissions reductions after 2030 becomes so dramatic as to be impractical.¹

The UK CLG welcomes the leadership shown by the UK government in setting a carbon budget for the 2020s that is in line with the level of ambition recommended by the CCC. Clear and consistent progress towards our long-term goal helps create the certainty needed for investors. The priorities for the UK now must be in setting the right policies for delivery of our goals in the UK, and successfully making the case in Europe and internationally for other countries to adopt comparable ambition.

Across the EU

While the UK sets its targets and has the scope to increase the ambition of its actions in the non-traded sector, only by working with partners across the EU can EU-level ambition and EU-wide policies like the EU's Emission Trading Scheme (ETS) be reformed and strengthened. Recently released European Commission analysis indicates that the EU can afford to strengthen its 2020 emissions reductions targets to at least a 25% cut in domestic emissions on 1990 levels, and that this can be done by delivering on energy efficiency targets and setting-aside EU ETS allowances from the current phase. Such interventions are appropriate as long as they are done in a careful, systematic and well consulted way and, as in this case, as part of an ongoing process to strengthen the ETS. Ad-hoc changes to the ETS would undermine investor confidence and should be guarded against. Failure to tighten ambition for 2020

¹ Committee on Climate Change, 7 December 2010, 'The Fourth Carbon Budget – Reducing emissions through the 2020s', <http://www.theccc.org.uk/reports/fourth-carbon-budget>

risks higher costs, and the lock-in of high-carbon infrastructure.²

The CLG strongly believes that business needs clear long-term signals, and that, irrespective of what happens with the 2020 targets, the EU must plan for emissions reductions through the mid-term. The EC analysis also indicates that the EU can aim to achieve a 40% reduction by 2030. Following a clear low-carbon roadmap like the EC proposal establishes the timeline necessary for finalising policies across all sectors. It will also be key to ensuring the effectiveness of the EU ETS both in Phase III and its subsequent design in Phase IV, on which discussion should be started now.

Global action

Ultimately, action on climate change must happen internationally to be effective, and UK and EU leadership must aid rather than hinder further international ambition. The UK and EU must redouble efforts to make the case for an ambitious, robust and equitable global deal, which is the most effective, transparent and efficient way of ensuring the global cooperation to achieve climate change goals.

However, given the slow progress towards such a deal, the international community

should also take other opportunities to progress the low carbon transition. The EU and UK should pursue other viable avenues of international cooperation that support the key goals, including: energy efficiency across all sectors; low-carbon energy systems; emissions capture and storage; reducing emissions from non-CO₂ greenhouse gases; and urban planning, land-use management and land-use change.

Without such global cooperation, action to tackle emissions will be severely curtailed. In the absence of global action, action at a UK and EU level must not put the UK economy at a competitive disadvantage. This leaves particular problems for certain sectors that are particularly exposed internationally. For example, international aviation and shipping are significant sources of emissions, which must be tackled globally. A global sectoral carbon cap and trade scheme for aviation and shipping can deliver environmental certainty as well as revenues for climate change projects in developing countries. Key members of the aviation industry have already shown leadership by working together to articulate how global action in the aviation industry can deliver.



² European Commission, 8 March 2011, 'A Roadmap for moving to a competitive low carbon economy in 2050' http://ec.europa.eu/clima/documentation/roadmap/docs/com_2011_112_en.pdf

Case Study: Aviation sector cooperate on global vision:

The aviation sector is the first sector to agree global long term targets for reducing its carbon emissions. Specifically, through its trade bodies IATA, ACI, CANSO and ICCAIA, the industry has committed to year on year efficiency improvements, carbon neutral growth from 2020, and the ambition to cut the sectors net emissions by 50% by 2050. ICAO, the UN's body for regulating aviation has welcomed these targets and provided its support for carbon neutral growth from 2020, as well as 2% year on year efficiency improvement out to 2050. Delivery of these targets will be through a mixture of technological and operational improvements, sustainable



alternative fuels and market measures including cap and trade systems. ICAO has committed to further analyse options for market mechanisms, whilst the Aviation Global Deal group has in 2009 in the run up to COP15 set out specific proposals for a global cap and trade system for aviation.

The Aviation Global Deal (AGD) Group is an industry coalition that brings together leading international airlines (British Airways, Virgin Atlantic, Virgin Blue, Cathay Pacific, Finnair, Qatar, Air France, KLM, LOT Polish Airlines), as well as BAA and international NGO The Climate Group.

AGD's goal is to contribute towards a pragmatic, fair and effective policy solution that incorporates international aviation CO₂ emissions into a new global climate change deal that sits within the broader international climate change framework.

Based on a set of key principles, including environmental benefit, the Group has developed a proposal which sets out the main design elements of a global sectoral agreement for international aviation.

Specific elements include:

- The international aviation sector is integrated within overall post-2012 global climate change agreement. All international airlines on all international routes are covered
- Informed by recommendations from ICAO, an emission reduction target is set by the UNFCCC for the sector in line with wider, global emission reduction targets
- Aviation emission allowances are auctioned and also allocated to individual airlines by a central, independent authority (to be established)
- Airlines are required to surrender allowances based on carbon content of fuels uplifted
- Aviation allowances are fully fungible with other UN-backed allowances eg EUAs, CERs, ERUs etc, allowing for emissions trading to take place
- Revenue from aviation allowance auctioning is used to support climate change initiatives in developing countries

The latest version of the AGD proposal can be found at www.agdgroup.org

2. A clear, long-term, simple and effective policy framework

To give businesses the best opportunity to deliver the low-carbon transition in the UK, the government needs to provide a clear and simple policy framework, appropriate and sufficient to achieve our climate goals without imposing unnecessary burdens on business, and stable over the long-term. Only with this will business have the certainty to invest.

A clear economy-wide strategy

This means fewer, clearer and smarter interventions that are both targeted and integrated are required. At the moment, for example, the combination of the Climate Change Levy, the Carbon Reduction Commitment (CRC), and Climate Change Agreements for companies in the non-traded sector is overly complex, whilst failing to deliver adequately on climate change goals.

In particular the shift of the CRC from a revenue neutral to a revenue raising scheme under the 2010 Comprehensive Spending Review was undesirable for a number of reasons, including the problems created for businesses and investors through a sudden regulatory change without clear consultation or wider engagement, the removal of incentives for private sector investment in low-carbon projects and the opening of the scheme up to accusations of being a 'stealth tax'.

The delay in introducing the CRC provides an opportunity. We do not believe the CRC should be a revenue raising instrument, and regret the removal of incentives for reducing carbon. However, given that it has become a de facto tax, we urge the Government to abolish the bureaucracy associated with the CRC, and instead collect revenue through the introduction of a simple carbon tax or the extension of the Climate Change Levy, whilst ensuring transparency through company reporting requirements.

The Government should introduce a strong carbon price signal across as much of the economy as possible – incentivising action, but allowing private sector actors to shape the delivery of national goals. On top of this,



alternative policy instruments that go beyond the carbon price signal should be deployed where the carbon price signal will not or can not deliver – cases where the barrier to action is not price but other issues like the difficulties of managing risk (such as investing in new technologies), or cultural and social inertia (such as changing consumption patterns, driving behaviour or energy efficiency measures at home).

Such policies should be long-term, targeted and based on best available evidence. In this way business can hope to have the certainty to invest and operate with the minimum of market distortion.

Specific strategies will also be needed for individual sectors. For example, key to managing transport emissions is an integrated strategy that takes a multi-modal approach – allowing people and goods to connect seamlessly between air, rail, road and sea. Sector specific strategies will also need to be joined up. For example, decarbonising transport also has important implications for the power generation sector (e.g. battery electric vehicles recharging using surplus renewable energy at night and pre-combustion CCS providing a source of hydrogen for fuel cell vehicles).

Case Study: Certainty of policy needed for low-carbon investment:

EDF Energy, a wholly-owned subsidiary of the EDF Group, is one of the UK's largest energy companies and the UK's largest producer of electricity. It has set itself the target of reducing the carbon intensity of its electricity generation by more than 60% by 2020 from a 2006 baseline. EDF Energy plans to make multi-billion pound investments in low-carbon electricity generation. But it has significant concerns that the EU ETS, as it stands, is not sufficiently strong to encourage the urgent investment into the UK and does not provide the long-term certainty required to make those investments.

EDF Energy believes UK Government actions to establish the appropriate policy framework will help encourage investment in low-carbon technologies and enable the UK to meet its ambitions for the power sector.

Certainty to allow investment

The low-carbon transition will depend on a number of large-scale, capital-intensive projects, particularly in key sectors like electricity generation, which accounts for as much as 37% of all UK CO₂ emissions.³ Without decarbonising the power sector it will be impossible to achieve adequate reductions in carbon emissions. Decarbonisation in other sectors like transport and heating is also assisted by decarbonisation of the power sector.

The EU-ETS and the carbon price it generates is the principal policy instrument in the power and heavy industry sector across the EU. It is important that this investment signal is robust as it affects decisions now that will impact emissions in the decades to come. Ensuring an effective EU ETS is vital to ensure that EU energy policy is stable and sustainable.

There is a clear need for recalibration of the ETS, so that it delivers a strong, long-term price signal that supports low-carbon investment. As mentioned above, set-aside of Phase III allowances as proposed by the European Commission and consequent agreement on a more ambitious 2020 target for the EU can contribute towards this, provided this is carried out in the context of a review of the ETS as a whole, which must include the setting of Phase IV parameters to provide confidence to market participants and clarity on climate ambition.

However the UK faces an urgent need to replace significant portions of its generating

capacity and there is a widespread view that the ETS is not providing an appropriate signal to ensure this capacity is appropriate to meet the 2050 goal of 80% decarbonisation, although it must be recognised that the annual reductions in the ETS cap will continue after meeting the 2020 target.

In the longer term, the best way of addressing this is by introducing an EU wide reserve price and sufficiently robust annual reductions in the 2020s to clearly signal the need to decarbonise electricity by 2030. However the electricity generation sector may still require further action to help manage the risks associated with large scale investment. The Government's current review of policies in the power sector has the potential to address these risks and allow businesses to make major investments with confidence.

To ensure that, the final proposals need to be clear, certain, avoid complexity and be implemented quickly given the urgency and long lead times for many investments.

Similarly, in the transport sector, the Renewable Transport Fuels Obligation (RTFO) provides an incentive for the reduction of the carbon intensity of transport. Uncertainty around the unsustainability of some biofuel production, and consequent policy changes to address this, have undermined investments. The RTFO needs to be reformed so it is robust and delivers better results. This requires clear long-term policy on biofuels with sustainability conditions that have wide stakeholder support.

³ Committee on Climate Change, 1 December 2008, 'Building a low-carbon economy - the UK's contribution to tackling climate change' <http://www.theccc.org.uk/pdf/7980-TSO%20Book%20Chap%205.pdf>



Case Study: Lack of long-term certainty undermines carbon-savings



Under the UK's Renewable Transport Fuels Obligation, biofuels must make up 5% of all road fuels. Until autumn 2009, **Tesco** had gone far beyond this and run the majority of their distribution fleet on B50 biodiesel from Greenenergy, which contains 50% biodiesel and 50% standard mineral diesel. From March to August 2009, Tesco's use of B50 saved 34,000 tonnes of carbon dioxide but they were disappointed when the UK Government withdrew a key tax incentive in April 2010 – a 20p per litre rebate on the purchase of biofuels – making continued usage of 50% fuel financially unviable and forcing them to revert down to 5% across their fleet. The retraction was due to government uncertainty as to the sustainability of biofuels. A clearer position from the outset is needed to avoid such situations and provide greater investment certainty for business.

3. Support innovation



The new, low-carbon economy will be built off the back of innovation. There is a strong case for government support for new industries, technologies and practices, particularly given the urgency of achieving a low-carbon transition.

Such support needs to be on the basis of a comprehensive and long term plan to deliver a low-carbon economy, which provides businesses with certainty and promotes innovation that delivers results.

Target policies at innovation

The Government already uses a wide range of investment, incentives and regulation to support low-carbon goals. Such support should be focussed on stimulating investment in, and deployment of, new technologies.

Sector specific regulations that, without selecting winners, provide long term certainty that low carbon solutions will be required and that current high carbon practices will be phased out to underpin the investment in new technologies that take many years to reach widespread deployment. The example of “zero carbon homes” needs to be studied, improved and extended.

As stated above the RTFO needs reforming to deliver the certainty for investors that will unlock the carbon savings from biofuels in a sustainable manner. There also needs to be significant innovation in this sector. Trials are needed for a wider range of alternative engine fuels including fuel from waste. The RTFO should be reshaped to provide a broader incentive for innovation, including more ambitious minimum performance standards to ensure meeting best practice potential.

Similarly, targeted support for commercialising sustainable fuels for aviation, including knowledge-transfer from universities and start-up business, will help cushion some of the risks involved for this sector.

A number of policies have been introduced to incentivise low carbon energy, including the Renewables Obligation, Feed-in Tariffs (FITs) and proposed support for CCS demonstrations. Uncertainty from government over such policies has discouraged investment, and a longer-term, more certain approach should deliver dividends. Such long-term vision must be focussed on outcomes and support results across all technologies. For example Feed-in Tariffs (FITs) are critical to accelerate decentralised energy deployment but should be extended to capture other appropriate low-carbon, decentralised technologies, such as provision of renewable gas or biogas – which can be used in a number of ways.

Public-private partnerships to deploy new technologies at scale

Areas like decarbonising the transport sector will involve the roll out of new technologies at a significant scale. To deliver this will require government and business to work together.

Many companies are already investing significantly in developing electric vehicles that use both batteries and fuel cells. The Government should stand ready to support that investment and commit to pilot schemes of adequate scale and duration. Building on successful schemes the Government must

Case Study: Fleet Innovation at John Lewis

John Lewis Partnership's distribution fleet is an industry leader in carbon reduction, thanks to several initiatives. Miles driven and empty running are reduced through the use of computerised route planning, forward and backhauling on otherwise empty vehicles on outward or return journeys and 'load consolidation' to avoid unnecessary journeys. Vehicle fuel consumption is improved through training and in-cab telematics to help drivers and managers to assess driving styles and fuel efficiency. JLP trucks also have a range of features to reduce drag, in particular aerodynamic drag, and improve fuel efficiency. Future developments include extending the use of scientific assessment and modelling to further optimise the aerodynamics of vehicles. For example, JLP is fitting a moulding to the front of double-deck trailers, which improves fuel consumption and offers a payback under four months in fuel savings.

JLP aims to build on this work, by devising a long-term fuel policy using a range of technologies with the potential to reduce carbon and become cost-effective alternatives to fossil fuels. However, to develop this policy JLP needs a clear commitment to longer-term measures, giving the certainty to support low-carbon investment, as well as a greater provision of funding for carbon reduction pilot schemes.

For example, the Partnership has been piloting the use of pure plant oil in their fleet but the removal of the fuel duty incentive of 20 pence per litre means it is no longer cost-effective. JLP would like to see the reintroduction of a biofuel duty differential that is proportionate to the carbon reduction potential of the alternative fuel and dependant on it being sustainable. It would be necessary to introduce a process to certify those biofuels identified as being truly sustainable and which confirms their provenance, combined with current information on their carbon reduction potential, as published by DEFRA.

ensure that an adequate, national battery-charging and hydrogen-fuelling infrastructure is rolled out in good time.

However electrification will not be appropriate for all purposes for example, it is unlikely to significantly help with reducing emissions from road freight, aviation, or shipping. The government needs to retain the flexibility to support a family of technologies, rather than picking a sole technology to achieve public goals.

Harness public procurement

Procurement is a powerful, low cost tool that can help influence and create new markets. The UK CLG is already piloting a new project that would see the public sector and private sector working together to use 'Forward Commitment Procurement' to promote new low carbon technologies and practices, by guaranteeing future markets for low-carbon goods and services.

Such an approach gives suppliers the certainty to invest in and develop new products and services, but does not require any weakening of other procurement specifications. It can also specify an outcome that procurers are interested in, allowing flexibility to suppliers

on the appropriate technologies or methods of delivering that outcome..

The UK CLG urges government to adopt a bold new approach to procurement that shows real support for low-carbon, climate-resilient products and services. If the UK Government were, for example, to specify its future fleet would favour vehicles of a certain emission and efficiency standard, this would revolutionise the market and many companies would then be prepared to adopt a similar compact.



4. Encourage behaviour change to promote efficiency and manage demand



Delivering the low-carbon transition on the scale and speed required will be challenging. The crucial role of energy efficiency as part of this – in reducing energy demand, cutting emissions and improving energy security has long been acknowledged. However more needs to be done to drive the necessary change, particularly in sectors not covered by the EU Emissions Trading Scheme.

Energy efficiency will be particularly important as a way to manage and maximise the impact of any low-carbon intervention on the supply-side, and ensure that the transition is carried out in a stable and politically sustainable manner.

As part of this, consumers and the public need to be engaged in support of the low-carbon transition, both to deliver behaviour change and to create political support for wider policy change. Efficiency of resource use needs to become a core public value.

Put efficiency at the heart of any low-carbon transition plan

While the EU and the UK have strong plans in place to promote renewable energy and cap carbon emissions, promoting energy efficiency should not be neglected. Currently the EU as a whole is not on track to achieve its 2020 target of a 20% improvement in energy efficiency, and is predicted to achieve only 9%.⁴ The European Parliament has proposed that the 20% goal should be made mandatory.⁵ Clearly to get the most out of our energy provision the government must take a proactive approach to promoting energy efficiency across the economy.⁶ For example – Combined Heat and Power should be applied where it can deliver effective efficiency gains and CO₂ savings.

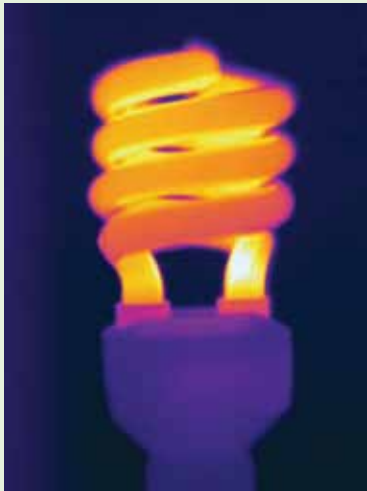
Provide support and incentives for behaviour change and low-carbon choices

A combination of measures is needed to promote low-carbon choices to consumers. Fiscal incentives, such as lower-VAT on green products can help to tackle the price barrier. Clear labelling supports informed consumer choice. Transparent and appropriate minimum standards for products efficiency and resource intensity can improve product quality. This is a clear area where the best results can come from business and government working together. Businesses know their customers best and how to work with their preferences, whilst carefully designed incentives and regulation can facilitate low carbon choices. The UK CLG stands ready to work with government on how to scale up and support such strategies across the economy.

⁴ European Commission, 8 March 2011, Energy Efficiency Plan 2011

⁵ <http://www.europarl.europa.eu/en/pressroom/content/20101215IPR10136/html/Energy-efficiency-efficient-buildings-and-implementing-existing-legislation>.

⁶ <http://www.businessgreen.com/bg/news/2025551/eu-threatens-mandatory-energy-efficiency-targets>



Case Study: Promoting low-energy light bulbs

In 2006, **Philips** called for a phase-out of energy-inefficient incandescent light bulbs. In 2007, retailers, including John Lewis/Waitrose, Kingfisher and Tesco, made a voluntary agreement with the government to phase out incandescent light-bulbs by 2011. Building on these initiatives and mounting evidence to show potential emissions savings from the switch, in December 2008 the EU mandated a Europe-wide phase-out by 2012. This demonstrates how business can go so far, but with government support, wider success can be achieved.

The Government's 'Green Deal' could, if done well, be a flagship example of how to provide a strong, new incentive for home-owners to improve their energy efficiency, with the support of forward-thinking businesses. However, if it is to be successful it must provide an adequate financial incentive, delivered in an effective and accessible way, with the right support policies.

A successful Green Deal will be:

- **Ambitious** – aiming to achieve improvements in energy efficiency in line with the Committee on Climate Change's intended carbon target of 42% emissions reductions by 2020, and measures to ensure the government monitors and reviews progress regularly.
- **Trustworthy** – with strong consumer protections to ensure that all Green Deal products and services are of a high standard, and that mis-selling and poor works are avoided.
- **Commercially viable** – this means it must deliver for consumers up front, and that businesses must have clarity and certainty in funding sources.
- **Supported by wider policies** – including complementary fiscal incentives and other tools designed with human behaviour in mind, such as variable rates of council tax, stamp duty reductions, and a reduced VAT rate for retrofits through the Green Deal as well as regulation of the rented sector, including minimum efficiency standards for rented homes.

- **Complementary of other measures** – allowing and encouraging home owners to make the most environmentally favourable choices for their whole home.

Promoting efficient transport

There is also the potential for major efficiency gains in the transport sector, where governments can encourage both a reduction in vehicle usage and push the boundaries in terms of vehicle efficiency.

Strong and increasing vehicle efficiency standards and carbon emissions standards for vehicles at the EU level will help drive efficiency through innovation. On top of this, taxation of private vehicles could be further structured to incentivise the use of efficient vehicles and to discourage heavy personal usage.



Case Study: Trialling the Green Deal

Kingfisher's UK operating company B&Q led a trial project in the London borough of Sutton in conjunction with the Department of Energy & Climate Change and the Energy Saving Trust to refit owner occupiers' homes on a 'Pay As You Save' basis with a range of measures to reduce their levels of energy use and, as a result, carbon emissions.

B&Q recruited homeowners to the scheme through a strong local advertising campaign giving people the chance to have energy saving measures installed by a trusted local partner at attractive rates. The aim of the trial was to assess people's willingness to undergo the conversion process, discover what the trigger points were for agreeing to a refit and identify the practical challenges that would be faced by the installer. It also allowed B&Q to understand the potential costs and thus financial returns that this market could entail.

On completion of the trial, B&Q had successfully signed up 72 homes to the programme with an average spend in the region of the government's proposed £10,000 threshold.

Key learning points are:

- Customers are motivated by three opportunities – greater comfort, immediate financial returns through energy savings and longer term returns through increased house value or return on investment.
- In many cases low energy refurbishment was undertaken together with other work planned or at 'trigger points' such as moving into a new home or re-fitting a kitchen or bathroom.
- Solid wall insulation is the biggest challenge from both a technical and planning perspective – innovation is needed to bring prices down as well.
- Pay back alone is not enough to drive the market. A combination of incentives as well as some financial pressure if the market does not move fast enough will be needed.





Case Study: Moving from road to rail

In 2008, **Reckitt Benckiser** transported approximately 27.8 million tonne-kilometres (a function of tonnage transported and distance travelled) by rail reducing their CO₂ emissions by 525 tonnes. They are working to try to increase the proportion of goods distributed by rail rather than road, but current issues concerning price and practicality are pushing them the other way. If the incentives were in place, Reckitt Benckiser would be ready to deliver change.

Fiscal incentives should be introduced to encourage distribution of goods by rail networks, and improved rail services which are lower carbon, more efficient and cost-effective are central to reducing emissions from road-miles. This needs to be carefully implemented to balance the needs of rail to carry both passengers and freight.

More than just energy

An efficient economy is about more than just energy use. A resource efficiency mindset must be applied throughout. For example, domestic water heating alone represents

5% of UK emissions and 25% of household energy bills.⁷ Promoting water efficiency can cut carbon, whilst saving on energy and water bills to the consumer.

Similarly waste is not only a problem in its own right but is also a source of emissions, as is the mining and extraction of raw materials and water. More efficient production processes, together with greater recycling and resource efficiency is therefore an essential part of the picture.

⁷ Waterwise, http://www.waterwise.org.uk/reducing_water_wastage_in_the_uk/the_facts/hot_water_and_energy.html, viewed 13 May 2011

5. Build a resilient economy

Any response to climate change must not simply focus on cutting carbon. Climate change means that the future will be different. We therefore have to do things differently. Our infrastructure must therefore be robust, flexible and responsive to the challenges ahead.

In the last 5-6 years, the UK has seen heatwaves, drought, flooding and extreme winters. Failure to act in response to predictable risks is harshly judged by the public. Conversely a successful approach to adapting to new climate-impacts has the potential to both protect economic assets and create jobs and spur growth.

We need to build a resilient economy that is capable of dealing with climate-related impacts, both within our borders and also where we are vulnerable to international impacts affecting our supply chains and key markets. Businesses and local communities have key contributions to make and must be at the heart of this work, but leadership and clear vision must come from the government.

A clear, long-term and economy wide adaptation plan

The UK is probably at the forefront of countries in developing a national adaptation plan in response to climate impacts. However

that plan is worthless if it does not deliver real actions to strengthen our economic resilience. Given the plan should be in place by 2012, delivery should be well under way by the following year.

Long-term certainty is just as important a signal to investors in this area as in other policy areas. The UK needs a framework for responding to climate impacts, and other related risks, which actually ensures delivery takes place, takes the long-term view and is clear on where the responsibility for action lies. As ensuring resilience will involve the entire national infrastructure and all public services, the Prime Minister should personally take ownership of this agenda. Inconsistency on behalf of the state, for example between national government and regulators, is a threat to this work.

Deal with uncertainty

We must act in the context that 100% certainty is not possible and we can manage, but not eliminate risks. Failure to actively manage risks, and just waiting for ever greater certainty is a recipe for disaster. Decisions on infrastructure – including buildings, transport, energy, water, etc – made over the next five years will have lasting consequences far into the future. Delay on delivery is not an option. As businesses we are used to managing



clearly defined risks such as those posed by climate change.

There can be a tendency to want to focus on the most recent crisis, and on trying to push climate science to make concrete predictions of impacts. Such strategies will not succeed. Instead the government, together with UK businesses and communities, must decide on the acceptable thresholds of risk and plan to ensure risks are kept below these thresholds. This means communicating to the public that there are residual risks.

National priorities and local action

While the need and framework for action can be set out internationally (e.g. through the EU), national governments must take the lead in analysing risks to their economy, and setting priorities for response. However, delivery of improved resilience to climate-related risks must be in the local context. The approach must be flexible enough to allow appropriate local delivery.

Interconnectivity and interdependence – look at the whole picture

The UK is one of the most globalised and interconnected economies in the world. Our thinking on resilience and climate-related

risks will be a failure if it stops at our borders, or tries to deal with each sector or area of the economy in isolation.

For example, climate change impacts that damage our transport or energy infrastructure could undermine our imports or exports. Conversely the resilience of our infrastructure and services is dependent on imports of fuel or other key supplies.

At the more local level, because of the diverse nature of modern supply chains this is not just an issue for large organisations where much of the Government focus has been so far. It is also a critical issue for SMEs, who are the life blood of the supply chain. Members of the CLG are already talking to their supply chains to highlight this need, but the Government should help provide more targeted advice and support. This is something that the CLG would be willing to work to develop with government.

Failure to take a holistic approach and address risks as they systematically affect the economy can lead to lack of adaptation, unintended consequences, maladaptation or wasted investment.

Case Study: Unintended consequences undermine flood resilience work



Water companies are custodians of vital infrastructure and need to be able to plan how best to protect this infrastructure. A cost beneficial scheme to make one of **Thames Water's** major water treatment works more flood resilient and therefore better adapted to the impacts of climate change was estimated to cost about £2 million to deliver. However, with the additional cost to provide flood compensation as required by the Government, this cost increased by around another £20 million. The cost-benefit analysis with the inclusion of flood compensation, now indicates that the scheme should not, strictly speaking, proceed. In reality the need to protect London's water supply may mean that the scheme is only delayed.

The need to protect critical national infrastructure in a timely and effective manner remains a significant concern. Therefore there is a need for clarity and pragmatism from government in terms of active support, policy

responses and direction to Planning Authorities, to ensure that flexible cost-effective responses to protect critical national infrastructure can be delivered. Without this leadership, this becomes a potentially insurmountable barrier to effective climate change adaptation.

6. Action in the context of globalisation



As businesses we are used to working in a global context. Trade is our lifeblood. Our customer-base, supply chains, investors and investments are drawn from an international community. Action to tackle climate change needs to go with the grain of a globalised world. Interventions that prompt awareness and action along the supply chain should be encouraged.

Embedded emissions

For example, increasingly the UK's carbon footprint, lies not in the direct emissions within our border but in the emissions generated in production of goods for UK consumption. One estimate of the total indirect UK carbon footprint put it at up to 15% of total global emissions.⁸ The Policy Exchange thinktank have recently published a report highlighting how this greater and growing footprint of consumption emissions

can lead to a different set of priorities in tackling climate change.⁹

The Committee on Climate Change is well equipped to examine this subject, which would benefit from their expertise and advice. There may be innovative ideas that the UK can adopt to incentivise reduced embedded carbon for key products and services, and the CCC should examine the pros and cons of such actions.

Drive transparency to encourage action

One key indicator of the level of business action on climate change is the levels of carbon disclosure and, subject to a duty in the Climate Change Act, the government must announce by April 2012 whether or not it will introduce mandatory reporting requirements for businesses carbon emissions.

⁸ Trucost and Henderson Global 2006 'The Carbon 100: Quantifying the carbon emissions, intensities and exposures of the FTSE 100'

⁹ The Policy Exchange, 19 November 2010, 'Carbon Omissions: Consumption-based accounting for international carbon emissions' <http://www.policyexchange.org.uk/publications/publication.cgi?id=215>

Case Study: Looking at the data from the whole value chain

In 2010 **Unilever** announced their new sustainable living plan. This covers a number of aspects of sustainability in their business including climate change. Crucially, it rests on strong data and good measurements. Their approach has been to measure the impacts of their products and set targets for reducing this impact across the whole product life cycle.

Their research has shown that for many products the most significant emissions come at the point of consumer use. This means that to bring down their associated greenhouse gas emissions, as well as tackling areas more directly under their control, Unilever are seeking to develop products that can be used in a less environmentally damaging way. Without the careful monitoring and analysis that went into drawing up their plan, it is unlikely that they would have identified this as a key task for improving their sustainability.

Unilever also publically report on progress towards achieving their plan, using externally assured data.

Such a policy has the scope to be particularly useful to investors and supply chain managers looking to reduce the carbon emissions of their investments or procurements, and to manage the risks associated with climate change, both physical and associated with policies to cut carbon emissions such as a carbon price. For this reason mandatory reporting could helpfully be introduced for direct corporate emissions in a way that encompasses existing reporting and uses existing international standards. This should

be instead of, not in addition to, the complex reporting requirements of the CRC. In addition companies should also be encouraged, as far as is reasonable and practicable, to report on their carbon risk and that transparency covers all material sources of carbon for a company, ideally including major emissions from the supply chain and investments, and the government could usefully provide standards to help with the comparability and use of such information.

Case Study: Taking action on embodied carbon



Anglian Water set themselves a goal to halve the embodied carbon of all new assets designed and built in 2015 against a 2010 baseline. Engineers calculate embodied carbon impacts for every new planned investment, with each design rigorously challenged before construction commences. This process involves questioning whether the business need can be met without building a physical asset, how existing assets can be re-used, whether lower embodied carbon materials are available and whether material quantities and waste can be reduced.

The supply chain is a critical part of delivering this goal. In 2008 and again in 2010 Anglian Water challenged suppliers to reduce carbon impacts of products and services they offered. Positive results have been achieved, highlighted by the competition that has evolved between the concrete and plastics industries with each striving to reduce carbon from material and construction of potable water tanks they offer.

Anglian Water would support policies such as mandatory reporting of GHG emissions that could encourage measurement of emissions across the supply chain. This will further assist in identifying suppliers with the common drive of reducing future carbon impacts.

7. Invest in the transformation



While the clean energy economy is one of the great global economic and environmental opportunities of the 21st century, there are immediate costs in dealing with climate change. Much of the upfront investment will be repaid and the total costs will be dwarfed by the costs of failing to act but there is a bill that needs to be paid.

Paying this bill by spending on the transformation to a low-carbon, climate resilient future must not be held back by the economic downturn. Although recession has contributed to bringing down UK carbon emissions in the short-term, this has not been as a result of significant shifts towards greening our economy in the long-term, but simply of a decline in economic activity. Indeed by weakening the carbon price, and thus weakening the signal for low-carbon investment, it has restricted finance for low carbon projects. It has also created a risk of declining momentum on the climate agenda. The UK Government must stay the course and deal jointly with the twin challenges of economic recovery and climate risk-reduction together.

Financing the transition will require spending by both the public and private sector acting together. However, the single most important

pre-requisite to enabling large scale private investment in climate change solutions is a clear, legally backed, long-term policy framework. Investors need the certainty this will provide.

A real 'Green Investment Bank' supported by a strong policy framework

The establishment of the Green Investment Bank (GIB) shows government's willingness to engage in a low-carbon recovery. However for the GIB to realise its potential in tackling barriers to investment, it must have the ability to issue bonds and raise funds itself. It will need access to greater initial core funding than currently proposed as well as adequate independence and expertise to act effectively in leveraging green investment.

The GIB must be designed in such a way that private investment is not crowded out, and should be supported by strong policy across the board to stimulate the level of private sector flows required. It is not a substitute for good policy.

Appropriate and strategic new sources of funds for public investment

Public sector finance has a number of key roles to play, including facilitating and supporting

private investment, and tackling areas that are inappropriate for private sector investment.

The Government needs to be careful about imposing any new burdens on business particularly in the current economic environment. The decision to retain the revenues from the Carbon Reduction Commitment represents a significant increase in carbon taxation on businesses. Whilst we support a strong, consistent carbon price as part of the policy framework, we urge the government to adopt a clear, appropriate and strategic approach in introducing any new revenue-raising measure along such lines.

Change the balance between risk and reward

One of the most effective uses of public finance is in using it to reduce risk to investors so as to encourage private investment. This should complement, not substitute for, private investment. The public sector can absorb risks or undertake activities that the private sector is not prepared to. One key opportunity for the public sector to play a strong role is in helping coordinate and aggregate small investments into packages at sufficient scale to be attractive to funds and large scale investors.

Invest in accelerated technology development

Public sector funding of basic research and development in key technologies, to places like universities and research institutions, to speed commercialisation of ideas, (particularly

carbon capture and storage, and solar and marine power) is key to the UK capturing global low carbon markets.

It will also be important for the UK to explore further opportunities for partnerships with business on taking early stage technologies through to demonstration and deployment.

Effectively deliver on the UK's contribution to international climate change funding

To enable global action on climate change, developed countries need to contribute to the costs of action in developing countries. A High Level Advisory Group, set up by UN Secretary General Ban Ki-Moon has examined potential sources of funding which can contribute towards an annual transfer of \$100billion a year. They conclude that this sum, while challenging, is feasible given a mixture of private and public funding and they have put forward analysis of different sources which can contribute to this sum.

The UK Government should engage with the private sector, with international financial institutions like the World Bank, with the UN and with other governments to investigate the proposed funding sources and ensure that promising ones are mobilised urgently. The Capital Markets Climate Initiative (CMCI) has the potential to play a helpful role in this, and should focus on bringing key stakeholders from governments and the private sector together with the investment community.



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works with business, government and civil society to build leaders' capacity to meet the needs of society and address critical global challenges. Our seminars and leadership groups and our partnerships with those who make or influence decisions are designed to transform public and private sector policies and practices and build greater understanding of our interdependence with one another and the natural world. Our Network of alumni brings together the most influential leaders in the world who share an interest in and a commitment to creating a sustainable future.

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In the UK:

1 Trumpington Street
Cambridge CB2 1QA UK
T: +44 (0)1223 768850
F: +44 (0)1223 768831
E: info@cpsl.cam.ac.uk

In Brussels:

48 Rue de Stassart
1050 Brussels
T: + 32 (0)2 894 9320
E: info.eu@cpsl.cam.ac.uk

In South Africa:

PO Box 313
Cape Town 8000
T: +27 (0)21 469 4765
E: info.sa@cpsl.cam.ac.uk

In Australia:

PO Box 1861
Melbourne 3001 Australia
T: +61 (0)3 9642 0220
E: info.aus@cpsl.cam.ac.uk