

Stern Review
2nd Floor, Room 35/36
HM Treasury
1 Horse Guards Road
London SW1A 2HQ

09 December 2005

Dear Sirs

Acclimatise submission to Stern Review

Acclimatise is pleased to respond to the Stern review call for evidence. Acclimatise is a specialist risk management company, primarily serving businesses in the infrastructure and property sectors, and those with large, fixed assets. We help our clients assess and manage the threats, opportunities and costs of climate variability and climate change. From this base, we also advise pension funds, investors, insurers and law firms on how to manage these risks across their portfolios.

While much of the research undertaken to date has been on mitigation costs, the costs of adapting to climate change have received much less attention. Adaptation costs will become an increasingly important issue for all countries. Our response to the review focuses on outlining the wide range of risks posed by climate change, and emphasising the importance to the review of covering the full range of risks.

We consider that the impacts of climate change will be seen across all business areas, including:

- supply of natural resources and raw materials
- markets for goods and services
- customer requirements
- asset design and construction
- asset performance and maintenance
- asset values
- supply chains
- logistics
- operations and processes
- products and services
- workforce.

To date, much of the published research that quantifies and costs climate impacts has concentrated on impacts on natural resources and physical assets. Many of the other areas have seldom been investigated, yet climate change could result in considerable costs in these areas. To provide two simple examples:

- The productivity of workers in office buildings is affected by ambient conditions; when temperatures are too high (as may well be the case in many UK offices with climate change), productivity is adversely affected¹.
- 'Just-in-time' systems are particularly vulnerable to delays to supply chains, which can be caused by extreme climatic events.

Acclimatise considers that the range of impacts listed above will result in a wide range of knock-on risks including:

- damage to reputation
- regulatory non-compliance
- litigation
- lower investor confidence
- reduced market share
- damaged credit rating
- affected financial performance.

These risks will also incur costs. For instance, research by the Carbon Trust² suggests that the damage to brand value in the banking sector from climate change may amount to 1-2% of market value.

Acclimatise is currently researching climate risks to PPP/PFI projects. We consider that climate change poses major risks to these projects, and we believe these risks are not yet been addressed by those involved. Significant amounts of public and private sector money are being invested, for instance through the 'Building Schools for the Future' programme. Since these projects do not take account of climate change, some of the buildings, particularly those in the south of the UK, will not perform as expected over their lifetimes. As a result, maintenance costs will rise, asset values will fall, etc. An extract from our briefing note, which provides further insight on this topic, can be downloaded from our website at www.climaterisk.co.uk/Publications.htm. We are further developing this research and would be pleased to come and discuss it with the Stern review team if that would be helpful.

The threat – and hence cost – of litigation is now beginning to be seen in relation to the impacts of climate change. Writing in the Estates Gazette in July 2005, Malcolm Dowden of Charles Russell Solicitors said: *"The effects of climate change can now be regarded as being reasonably foreseeable at every stage – from initial instruction, through the design and planning process to construction and beyond – it must be incumbent upon professional advisors to ensure that appropriate steps have been taken."*

In later Estates Gazette article, (November 2005), Malcolm Dowden reports that: *"From a legal perspective, the key questions are whether the nature and extent of climate change are sufficiently understood, and whether there is a sufficient consensus of expert opinion regarding their effects, to give rise to potential liability for a failure to adapt. In other words, is*

¹ Professor Derek Clements-Croome at the School of Construction Management and Engineering, Reading University, has particular expertise in this area.

² Carbon Trust (2004). Brand value at risk from climate change.



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damage or loss from climate change now reasonably foreseeable, whatever steps might now be taken to cut greenhouse gas emissions?.... So, have we progressed beyond divination to foresight? John Firth, of climate risk-management consultancy Acclimatise, certainly thinks so. In his view: 'We can calculate the potential costs in sufficient detail to show the effects climate change will have on business. Businesses need to integrate climate risks into their strategic decision-making processes to begin taking into account the costs of adaptation.'"

We would be pleased to discuss any of these issues in further detail with the review team if that was considered useful.

Yours sincerely

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