

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

SUBJECT: TFL CLIMATE CHANGE ADAPTATION

DATE: 5 OCTOBER 2011

1 PURPOSE AND DECISION REQUIRED

- 1.1 TfL has received positive feedback from the Department for Environment, Food and Rural Affairs (Defra) to a report on TfL's approach to identifying and managing weather related risks to its services, in order to comply with the requirements of the Government's Adaptation Reporting Power and the Mayor's draft Climate Change Adaptation Strategy.
- 1.2 The Committee is asked to note the paper and the Defra response.

2 BACKGROUND

- 2.1 The Climate Change Act 2008 and the Mayor's draft Climate Change Adaptation Strategy requires TfL to demonstrate its approach to assessing and planning for the impacts of the changing climate. The Act gave the Secretary of State for the Environment the power to direct key private (regulated) and public organisations to report on their assessment of the impacts of the changing climate on their assets and services.
- 2.2 TfL was directed to report by May 2011. The report was submitted and reviewed by Defra, who also asked Cranfield University Risk Management Department to review it, and also by the Department for Transport. The Parliamentary Under Secretary for the Environment sent the response (attached at Appendix 1) to the Commissioner in August 2011.

3 REVIEW OF TFL'S CLIMATE CHANGE ADAPATION RISKS

TfL process to review adaptation

- 3.1 TfL has long experience of managing climate related risks to its services. It has also worked closely with the GLA on the transport element of the Mayor's Climate Change Adaptation Strategy for London. In addition, there is an element of climate change adaptation in the Mayor's Transport Strategy.
- 3.2 The report has been prepared according to the Government's Statutory Guidelines for the Adaptation Reporting Power. These ask TfL to address, in both its cover sheet summary and in the main report, a series of points about its risk management system and readiness to adapt to climate change. The questions follow a somewhat academic view of good practice risk assessment and mitigation for climate change adaptation.

- 3.3 TfL provided assurance about its approach to operational management of weather related events, its risk management process, resilience, emergency preparedness and interdependencies with other organisations on this issue. The report involved work across all TfL's businesses and was approved by the resilience steering team.
- 3.4 The report sets out a snapshot of TfL's current position relating to climate change adaptation and outlines future work. TfL's work on this front will be progressively developed as part of the risk management system.

Key elements of TfL's Adaptation Report

- 3.5 The report presents TfL's approach to assessing climate related risks on its assets and services and how these are likely to change over time. There are a number of elements of London's transport network that have the potential to be affected by weather related events, which can become more frequent or of higher consequence in the longer term.
- 3.6 The principal risks that have been identified are from flooding, high temperatures, low temperatures and drought. The report provides a full summary and some of the examples include:
- (a) TfL has identified a risk from pluvial flooding impacting on the TfL Road and bus network. Pluvial flooding can also impact on TfL's rail and tram network, and Tube tracks, stations and signals. TfL is undertaking a drainage hotspot improvement programme to address this.
 - (b) High temperatures have been identified as a potential risk for a diverse range of services and assets across TfL. TfL has been aware of this risk for a long time and has put in place mitigation to prevent, where possible, the stalling of trains in tunnels and to introduce air conditioned trains on the sub surface lines and Overground, and ventilation in the deep tunnels, for example, the current work on the Victoria line. In addition, London Underground has comprehensive detrainment plans for stalled trains and its Network Operating Centre has threshold triggers for initiating well drilled plans to deal with extreme weather related events. Work is ongoing to reduce the heat at source through plans to introduce more energy efficient trains. Another key mitigation measure is the planned communication programme that is put in place when TfL receives notification of periods of high temperatures.
 - (c) TfL has proven plans for dealing with low temperatures and associated ice and snow. In the longer term, climate change is likely to mean that extreme cold weather events may not increase in frequency but could become more severe when they do occur. Plans are reviewed systematically to ensure that they are robust.
 - (d) TfL's cold weather arrangements for the road network, footpaths and pavement surfaces around the transport network deal with the risk from freeze/thaw conditions where the temperature fluctuates above and below zero degrees centigrade. This can exacerbate the degradation of surface materials, causing issues such as potholes or moved slabs which require rapid treatment.

- (e) The main weather related impacts for Crossrail, once it is operational, stem from the risks of increased flooding and extreme weather events and are essentially the same as for any other overland railway on its surface sections, and for the London Underground tube system in its tunnelled section.

3.7 TfL has identified various interdependencies, where climate related risks to its services or assets are owned by other organisation such as its contractors, Network Rail, EDF Energy, UK Power Networks and Thames Water. Discussions with these organisations have compared approaches and key areas where their issues align with TfL's and mutual beneficial action is possible.

4 DEFRA'S RESPONSE TO TFL

4.1 Defra wrote to the Commissioner in August 2011 with its review of the report. Defra said that TfL's report fulfilled the direction and that it was excellent to see that consideration of these issues was being embedded into business practices. It said that TfL showed good practice in the inclusion of climate change in its risk assessments, at the same time as moving beyond risk mitigation to consider opportunities and further research. TfL's report, along with reports from other key transport infrastructure operators, will be published¹ on the Defra website following a press launch with the Parliamentary Under Secretary, Lord Henley.

5 RECOMMENDATION

5.1 The Committee is asked to NOTE this paper and the Defra response to TfL's Climate Change Adaption Report.

6 CONTACT

6.1 Contact: Helen Woolston, Group Environment and Climate Change Co-ordinator
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¹ It was not published on 24 August as suggested in Appendix 1.

Appendix 1

Copy of letter from Lord Henley

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21 August 2011

From Lord Henley

Parliamentary Under Secretary

Thank you for Transport for London's (TfL) report into the potential impacts of climate change on its functions and operations.

The report fulfils the direction to report issued under the Climate Change Act 2008 and I can confirm that I am content to publish it on Defra's website on 24 August, when I will be launching reports from across the transport sector.

The aim of the Adaptation Reporting Power is for statutory organisations to present the degree to which they are preparing for climate change. TfL clearly considers climate change to be a key issue for long term planning and it is excellent to see that consideration of the issues is being embedded into business practices. This good quality report clearly demonstrates actions being taken to prepare both TfL's infrastructure and operations for the impacts of climate change.

I am pleased that your organisation is developing a good understanding of the challenges that climate change could pose to its operations as well as monitoring and assessing climate risks to inform future adaptation actions.

An important aspect of the Adaptation Reporting Power is for organisations to use the information collected to take forward the actions proposed through the reporting process. TfL's report demonstrates your organisation's commitment to do this by embedding the management of climate risks within your business and evaluation of TfL's high priority adaptation measures.

Similarly your organisation's decision to ensure that climate change is being actively considered in investment decisions, such as Crossrail and the specification for new London buses is good practice that I hope other organisations replicate as appropriate.

The feedback included with this letter is based on feedback from our delivery contractor Cranfield University and the Department for Transport. I hope this will be of use as TfL continues to take forward its work to adapt to the impacts of climate change.

If you would like to discuss this feedback further please contact Will Lochhead, head of the Adaptation Reporting Power Team in Defra on 020 7238 6059, or at Will.Lochhead@Defra.gsi.gov.uk.

I am copying this letter to Helen Woolston, Environment and Climate Change Coordinator at Transport for London.

Sour rina
Oliver Henry

LORD HENLEY

Annex

Feedback on Transport for London's Climate Change Adaptation report

Summary

The report demonstrates Transport for London's (TfL) recognition that the impacts of climate change could pose a risk to the organisation. The report shows the organisation has a good understanding of how its functions, mission, aims and objectives could be affected.

The report clearly shows that TfL is prepared to address climate change challenges as they develop and has incorporated adaptation into its existing business practices.

The report fulfils the direction to report issued to TfL by Government in March 2010.

Examples of good practice within the report

Good practice is demonstrated through the report's risk assessment which uses TfL's standard risk assessment methodology. This means climate change risks have been embedded into on-going risk management and allows their comparison with other corporate risks. This process uses clear criteria for assessing likelihood and impact, which have been provided as separate documents to accompany the report. It is excellent to see that all of TfL's business areas have been assessed and mapped at a very local level and across the whole spectrum of business modes for impacts from climate change.

TfL's report identifies a number of potential opportunities that may arise from future climate change. It also notes TfL's engagement with researchers to explore specific potential benefits which is good to see as the focus should move beyond risks.

The report outlines a number of potential barriers that may affect TfL's ability to adapt to climate change, although no plans for overcoming them are presented. The report also contains details of TfL's interdependencies and how they are engaging with a number of organisations (extensive engagement has taken place with Network Rail and EDF Energy as key stakeholders) to discuss their climate change risks and adaptation strategies.

Potential areas for further work

In future TfL could benefit from conducting further work to identify specific climate change risks that may be of concern such as pluvial flood risks. Such studies might wish to consider the potential impact of climate change uncertainties on TfL's risks and adaptation actions.

TfL might wish to identify and develop longer term climate adaptation strategies as opposed to shorter term weather risks. These should focus on both mitigating risks and realisation of benefits and opportunities. It could also usefully include an assessment of the potential costs and benefits of adaptation measures.

Next Steps

Your report will shortly be made publicly available on the Defra website at <http://www.defra.gov.uk/environment/climate/sectors/reporting-authorities/> along with many of the other reporting authorities in the transport sector.

If you would like to discuss this further please contact Will Lochhead, head of the Adaptation Reporting Power Team in Defra on 020 7238 6059 or by email at Will.Lochhead@Defra.gsi.gov.uk.

Defra's Reporting Power team will be drafting 'sector summary' reports based on key findings from all reports. These sector reports will include an overall review of this, the first round of the Climate Change Act Reporting Power. Draft copies of the summary reports will be circulated to all organisations included in each sector. Workshops will be held so organisations can comment on the draft reports and contribute to the development of the overarching review of the first reporting round.

We intend to hold the road and rail transport sector workshop on the 26th of September 2011. We will be in touch nearer the time to confirm the date and hope your organisation will be able to attend.