

Climate Change and Transport: A Robust Infrastructure for 2050

Posted on Tuesday 28th April 2009

A team of scientists from the University of Birmingham have secured £1.5 million for a four year project to examine how to make the UK's transport systems resilient to climate change.

With project partners the British Geological Survey, Hydraulics Research, the Transport Research Laboratory and the universities of Nottingham and Loughborough the team will look at what will be the nature of the UK's transport systems by the year 2050, making recommendations to ensure that it will be able to cope with the effects of climate change.

Civil engineers at Birmingham will investigate how our transport and its infrastructure will change over the coming decades and assess its resilience, taking into account the likely technological changes that will need to be built into the design of future systems in order to make them more robust for weather events such as strong winds and storms, heavy rain and high temperatures.

Researchers at the University's School of Geography, Earth and Environmental Sciences will be devising future weather models to identify the kind of meteorological impacts that will affect the transport infrastructure. Dr Lee Chapman said, 'Our transport is continuously subject to weather impacts, causing delays, injuries and even fatalities. Weather events such as heavy snow in 2009, high winds in 2008 and extreme heat in 2003 have resulted in severe disruption as networks become impassable, be it due to ice, blown-over trees or buckled railway lines. The ongoing cost of maintaining our transport systems as a result of such episodes is considerable.'

He continues, 'While it is difficult to accurately predict exactly what will happen in the future in terms of weather, it is possible to produce a range of plausible scenarios so that we can adapt our transport infrastructure to be more resilient to climate effects.'

Professor Chris Baker, lead investigator of the project from the University's School of Civil Engineering, says, 'We will need to discover first how transport is used, how it is embedded in people's lives and social relationships, and how this is likely to shift under changing environmental conditions.'

He continues, 'Our research will impact on the decision making of government, transport planners and managers as well as professional engineers. It will provide them with the knowledge which will improve their decision making with regards to anticipated changes in climate, technology and economies. This will impact on the public and business community and thereby on the health, quality of life and wealth of the UK.'

The project spans governments, research councils, businesses and transport users, and will give decision makers the best information to effectively manage and protect vital services, to build resilience into systems, mitigate problems and to adapt to environmental change.

Ends

Notes to Editors

1. The funding has been awarded by the Engineering and Physical Sciences Research Council and the Economic and Social Research Council.
2. Collaborating partners in this project include Network Rail, the Highways Agency, WSP and the Institution of Mechanical Engineers.

For further media information

Kate Chapple, Press Officer, University of Birmingham, tel 0121 414 2772 or 07789 921164.

[Privacy](#) | [Legal](#) | [Cookies and cookie policy](#) | [Accessibility](#) | [Site map](#) | [Website feedback](#) | [Charitable information](#)

© University of Birmingham 2015

