Job Description – Ref. CH10007

Post Title: Willis Chair in Climate and Weather Risk for Insurance

Grade: Professorial

Faculty/Department: Meteorology, School of Mathematics, Meteorology & Physics

Reports to: Professor Stephen Belcher, Head of School

Responsible for: Researchers in the Reading Risk Initiative

Main duties and responsibilities

The aim of this position is to lead research into the risks of weather and climate hazard, and deliver science that helps to reduce the exposure to risk through the transformation of quantitative instruments for financial decision-making.

This mission will be undertaken through the monitoring, quantification and prediction of risks linked to weather and climate hazards, their variability and change. We expect the WCRI chair to forge partnerships with business in order to identify key aspects of vulnerability and exposure. The Chair will develop and lead a team that will quantify the variation, change and uncertainties in the weather and climate risks through close collaboration with the climate hazards team. The Chair will lead on developing appropriate quantitative tools for communicating the risks. There are exciting prospects for delivering the new scientific techniques to business in collaboration with the Met Office, under the framework of Climate Services.

The Chair will:

- Develop integrated scientific and financial tools to enable businesses and society to assess the comparative costs of exposure to the spectrum of weather and climate drivers, and optimise their practice
- Engage with industry, for example through the Willis Research Network, to bridge existing gaps between industry needs and research capabilities in observation, modelling and prediction of weather and climate hazards
- Develop effective means of translating and communicating science and impacts research for industry and society
- Engage risk analysts, for example in the insurance sector, to extend the capability of current risk assessment models
- Capture funding from research councils and industry to develop our programme in weather and climate risks for insurance
- Play a leading role in the definition, development and dissemination of Climate Services
- Contribute to our internationally-recognised teaching programme
Anticipated outcomes of these roles will be:

- A transformation of socio-economic decision making, capable of absorbing and exploiting the richness of dynamic climate system information
- Fairer and more efficient risk-sharing, based on accurate understanding of risk
- More integrated relationship between industry and academia
- Market and society relevant, dynamic definition of Climate Services

Essential qualities:

- Outstanding ability in the quantification of weather and climate risk in either an academic or industrial setting
- Ability to develop the theory of weather and climate risk
- Understanding of vulnerabilities and exposure to atmospheric risks
- Knowledge and experience of an application of weather and climate risk
- Proven ability to engage with a relevant business sector, preferably insurance

**The Walker Institute for Climate System Science**

The Walker Institute for Climate System Science has a broad range of expertise in climate science drawn from across the University of Reading, including the world-famous Department of Meteorology. The Institute aims to improve understanding of our future climate and its impacts for the benefit of society. We work with business, governments and research organisations across the world to provide advice on the risks and opportunities from climate change over the coming seasons and decades.

The Institute integrates a range of disciplines crucial for understanding our changing climate and its impacts, including climate and weather processes and modelling, water resources and quality, biodiversity, agriculture, soils and the urban environment. We are UK leaders in the development of new climate models that will give us more detailed information about regional climate change and the risks from extreme events, like storms and flooding. As well as innovative research, training in climate change and its impacts is also a priority – for students, researchers and businesses alike.

Walker Institute staff have been involved in all the IPCC Assessments, the Stern Review of the Economics of Climate Change, and many national and international research initiatives. We have over 100 researchers and research income of around £5 million per year. The Walker Institute is a key player in the Willis Research Network - the largest existing collaboration between the insurance industry and academia.

The Walker Institute - through the Department of Meteorology and the National Centre for Atmospheric Science Climate Programme will be involved in research relating to the risks from storms, floods and other hazardous weather - including improving our understanding of the way climate change might change the frequency, severity and regional distribution of such events.

**Supervision received**

The Willis Chair will report to the Head of the School of Mathematics, Meteorology & Physics, currently Professor Stephen Belcher. An annual staff development review will be held to encourage progress and to facilitate opportunities in both research and teaching.

**Supervision given**
The Willis Chair will supervise junior postdoctoral staff affiliated to his or her research group, and may share some supervisory responsibilities where there are strong collaborations between groups. The Willis Chair will also be expected to supervise PhD students and contribute to leadership within the School of Mathematics, Meteorology and Physics.

**Terms and conditions**

Informal enquiries are welcomed and should be made to Professor Stephen Belcher (tel 0118 378 6646), e-mail (s.e.belcher@reading.ac.uk). The position is full time and permanent.

This document outlines the duties required for the time being of the post to indicate the level of responsibility. It is not a comprehensive or exhaustive list and the line manager may vary duties from time to time which do not change the general character of the job or the level of responsibility entailed.

**Date assessed: 11/03/2010**
# Person Specification – Ref. CH10007

**Job Title:** Willis Chair in Climate and Weather Risk for Insurance  
**School/Department:** School of Mathematics, Meteorology & Physics  
**Walker Institute**

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<th>Criteria</th>
<th>Essential</th>
<th>Desirable</th>
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| **Skills Required** | • Outstanding ability in the quantification of weather and climate risk in either an academic or industrial setting  
• Ability to develop the theory of weather and climate risk  
• Knowledge and experience of an application of weather and climate risk |                                                                                |
| **Attainment**    | • PhD degree in a relevant area, or equivalent experience, with strong level of attainment consistent with a senior appointment at professorial level |                                                                                |
| **Knowledge**     | • The quantitative theory of risk  
• Excellent knowledge of one or more disciplines in Earth System Science  
• Understanding of the vulnerabilities and exposure to atmospheric risk | • Experience of teaching UG and PG students  
• Experience of supervising PhD students.  
• Operating in academic, public or business sectors at international level |
| **Relevant Experience** | • Outstanding research reputation in the theory or application of quantitative risk  
• Proven success in securing funding |                                                                                |
| **Disposition**   | • The ability to build and lead a research group  
• The ability to collaborate with other academic and industrial research teams  
• First-class skills as an educator and communicator |                                                                                |

Completed by: Professor Stephen Belcher  
Date: 11/03/2010