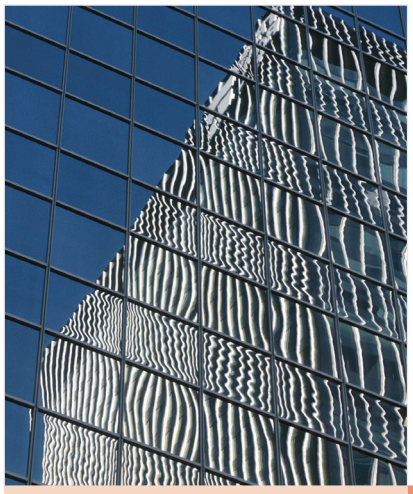

Chartered Institution of Building Services Engineers

SUMMARY

INTRODUCTION

CIBSE have been taking steps to take climate change into consideration within their technical guidance and advice in order to build the capacity of their members' profession.

> "The issue of expertise in relation to climate change is now embedded within the organisation's strategic plan and we are in a better position to act as a well informed and trusted source of information and guidance to our members." Vic Crisp, CIBSE.

KEY MESSAGES

- **Climate change will impact on building performance, particularly with regard to cooling and ventilation, with implications for the quality of the indoor environment, energy consumption and carbon emissions.**
- **The design of cooling and ventilation strategies using computer simulations made up of historical weather data are fundamentally limited in their ability to provide a true picture of future performance.**

ABOUT THE ORGANISATION

CIBSE is a professional institution that supports the science, art and practice of building services engineering.

IN DETAIL

BUSINESS DRIVERS

CIBSE members are increasingly aware of the need to design with the future climate in mind, in particular in relation to overheating in buildings. Therefore, CIBSE recognise that climate change will have implications for their guidance and advice.

METHODS & RESOURCES

CIBSE funded a research project on climate change and the indoor environment.

They took part in UKCIP's A Changing Climate for Business partnership, which helped raise awareness and highlight a range of risk areas for the profession.

They set up a Knowledge Transfer Partnership in collaboration with UKCIP. This created a post for a Knowledge Transfer Associate to look at how climate change adaptation and climate projections could be incorporated into CIBSE guidance.

This individual is now fully employed by CIBSE to further develop the CIBSE guidance and resources.

A second 2 year Knowledge Transfer Partnership project has been undertaken by CIBSE in collaboration with UKCIP to develop specifications for the refurbishment of building services and fabric in response to climate change.

KEY PLAYERS

Internal:

- Knowledge Transfer Partnership Associate who is now Environmental Data Coordinator at CIBSE.
- A new Knowledge Transfer Partnership Associate who is currently based at CIBSE.

External:

- UKCIP
- ARUP

OUTPUT

CIBSE have now published 'The Use of Climate Change Scenarios for Building Simulation: The CIBSE Future Weather Years' in collaboration with ARUP, which is the second publication which provides guidance and tools for considering climate change adaptation in building design.

FURTHER ACTION/PROPOSED FURTHER ACTION

Above knowledge needs to be updated to the new probabilistic UKCP09 information and incorporate risk-based decision making in the design of buildings.

CONSTRAINTS

- The global financial crisis and its impact on the construction industry.
- The current building regulations don't address the climate change adaptation issue.
- Licensing the use of observed data from the Met Office presented some challenges.

ENABLERS

- Government funding for relevant research.
- Legal and insurance sectors introducing climate change risk in their practices.

TRANSFERABLE LESSONS LEARNED

The building industry is reluctant to embrace adaptation because:

- In some cases it creates conflict with the current building regulations compliance requirements to minimise carbon emissions;
- It introduces extra costs without immediate benefits;
- There is no previous evidence of solutions that worked and those that didn't.

CASE STUDY PROFILE

LOCATION	UK wide
SCOPE	Sector
SECTOR	Membership organisations
	Specialised construction activities
DATE	August 2010
BUSINESS AREAS	Premises
	People
RISK OR OPPORTUNITIES FOCUS	Risk
CLIMATE CHANGE/ weather event focus	HOTTER, DRIER SUMMERS
	MILDER, WETTER WINTERS
	Heat wave
BUILDING ADAPTIVE CAPACITY OR DELIVERING ADAPTATION ACTION	BAC
CONTACT DETAILS	Anastasia Mylona, 020 8772 3690 amylona@cibse.org
REFERENCES, WEB LINK	http://www.cibse.org/index.cfm?go=publications.view&item=449