

**Heat Risk in London Group**  
February 6, 2018 13:00-16:00  
Small Auditorium 2, TfL, Stratford



## **Meeting notes**

### **In attendance:**

Briony Turner, IEA Space4Climate  
Fergus Worthy, TfL  
Kelly Dallen, London Resilience  
Anna Sexton, PHE  
Kristen Guida, London Climate Change Partnership  
Nick Jackson, Defra  
Helen MacIntyre, PHE  
Victoria Tink, MHCLG  
Tim Reeder, LCCP  
Nicola Branch, Islington Council  
Penny Murage, LSHTM  
Abby Crisostomo, GLA  
Marialena Nikolopoulou, Kent University  
Isabelle Capel-Timms, Reading University  
Candice Howarth, Surrey University  
Chit Chong, Peabody Housing

### **Apologies:**

Anna Mavrogianni, UCL  
Annette Figueiredo, GLA  
Anastasia Mylona, CIBSE  
Giridharan Renganathan, University of Kent  
Rajat Gupta – Oxford Brookes University

## **Welcome and Introductions**

Kristen welcomed attendees and led introductions.

## **Minutes of the last meeting**

The group approved the minutes of the last meeting (February 6). Actions have been completed. Kristen to change Briony's affiliation in the minutes.

## **Surrey University Fellowship – Improving responses to hot weather events**

Candice told the group about her current project, a proposal for a program of research at Surrey University.

### **Context**

- The fact that people often perceive heat as a positive thing provides an opportunity to better tailor and target responses to heat risk.
- Guidance on responding to hot weather events often focuses on infrastructure and lacks consideration of social responses

- Failure to consider how social responses to such climate risks are created and evolve may put further people at risk and undermine any existing or future policy or guidance on how to improve resilience to hot weather events
- We assume that providing more information on a risk or an issue can lead to better decisions and aligned behaviour. However this does not fully incorporate people's responses, perceptions and behaviours, it can lead to little or no action.

#### Aim of research

- Improve responses to hot weather events
- Explore the impact of hot weather events on every day running of practices across selected case studies.
- Assess the extent to which these personal experiences can more effectively portray social responses to hot weather events and encourage sustainable everyday practices

#### Activities

- Ran a workshop with LCCP on 31<sup>st</sup> May exploring different impacts and responses to hot weather events and how to improve this. A Summary of this will be produced and circulated for those who are interested. Key themes included:
  - How do people experience hot temperatures? How does this impact their quality of life, health and well-being?
  - How resilient are key services to hot weather events?
  - What should be the key priorities in improving behavioural responses to hot weather events?
  - What should be key priorities in improving responses, policy and guidance to hot weather events?
  - What can UK learn from responses to hot weather events in other countries?
- Putting together programme of research to explore the above & submitting bid in September 2018
- We are looking for a non-academic partner to work with us to explore and improve practices in response to hot weather events and how this can be used to better inform policy making

#### **Urban Albedo project update**

Marielena presented about the project, which aims to inform urban planning and design with better understanding of albedo. The project will build scale models of three London areas to test building materials and geometrical configuration and their impact on albedo. Ultimately, the aim is to produce a catalogue of materials and geometrical configurations, and a model that predicts albedo based on these factors, along with solar altitude. The model will be for northern regions.

So far, the project team has faced many challenges in building the scale models. The models will enable data collection over two years.

There will be a dissemination event in October at City Hall; details will be circulated.

#### Discussion:

Relationship with Part L? Part L is for individual buildings but possibly still could be useful, as this will look at translating outside temperatures into inside temperatures, or how we take outdoor temperatures into account.

Could look at what happens if someone puts up a glass building in a dense area, or if a reflective roof reflects into another home.

Project will be useful in informing adaptation pathways. Will be useful to promote.

As findings emerge, would be useful to consider linking with Candice's project to share information

Evidence that albedo effect significant? There is good evidence but more difficult to say for larger geographical areas. There are significant differences in color and geometry.

How to reconcile with solar PV? Possible conflict with albedo? Could approach PV companies to obtain samples to test in this project. Find out effects of PV on heat – does it shade a roof?

Also brings up the question of changing materials v. adapting facades to create shading.

This project not looking directly at indoor temperatures, but indirectly; heat transfer through walls.

### **TfL Adaptation and Heat**

Fergus gave a brief summary of the background and context of TfL's adaptation work programme. He and colleagues in TfL have been working hard to secure higher level commitment to adaptation, with some success—there is now a strong basis for adaptation in the new Mayor's Transport Strategy and London Environment Strategy. Still, a strong business case for adaptation is needed, as adaptive measures tend to be cut out of projects between design and implementation, usually due to cost.

The work programme includes research on impacts, a new sector adaptation steering group, better incorporation of adaptation into TfL processes and projects, and the development of metrics to assess climate resilience.

Fergus also presented the findings of research by an MSc student, Sarah Greenham, into the relationship between outdoor temperature and delays on the London Underground. The study found a definite correlation between high and low temperatures and delays, although causation has not been established. More research into this and into weather impacts on other modes of transport are among the items in TfL's work programme.

#### **Discussion**

Might be interesting to look at impacts on heat and passenger volume due to new cycle superhighways.

Also, potential for people to change their journeys or modes of travel depending on hot weather or availability of air conditioning on tube lines

Road surface contributes to urban heat island. Could use earth observation, albedo, and other research to understand this better. Also, where purging heat, can it be done without increasing UHI? Islington is using waste heat from the tube to heat homes, schools, and other buildings.

### **Green Infrastructure Focus Map**

Abby provided some context about green infrastructure, the range of benefits it is known to provide, and the policy levers for providing it in the London Environment Strategy and London Plan.

The GI Focus Map is meant to show the areas of London with environmental and social challenges that could be addressed with GI, and so to help those who would invest in GI to target it in an intelligent way. This means understanding where the greatest need is, but also selecting the best green options to meet particular challenges.

The map includes a wide range of variables, from water and air quality to noise, to mood and anxiety indicators and urban heat. Abby demonstrated the different scales of data used and how to select for different types of data and geographical areas. She will send a link to the beta version later this month so that people can test it out. A final version is expected to be released in August.

Discussion:

There is also some mapping of London's green cover happening, in order to create a new baseline that provides greater detail than what we currently have. This will also become a context layer for the GI Focus Map.

Could be helpful to developers in making design statements more attractive.

A distinction between public and private could be important, and making the economic case for green space.

Need to consider the impacts of heat and water stress on GI, remember it requires water to work.

Interesting to consider seasonal changes in GI, for example, when there is canopy cover and when not.

### **Roundtable update**

Nick reported that the National Adaptation Programme is in its final stages and should be published before the summer recess. There has been input from the Environmental Audit Committee (heatwave inquiry) and the draft is currently with ministers.

Penny mentioned a project looking at modifiers of heat risk, which would include a database of natural environment, built environment, social and demographic characteristics. There will be a workshop in London in the near future.

Victoria reported that MHCLG research on overheating in new homes is nearly complete and should be published within the next six months.

Briony said that Space4Climate would be organizing a session at Adaptation Futures in Cape Town about risk management and resilience and earth observation.

Kelly said that London Resilience is organizing a workshop for local level resilience officers on 11-12 July to look at heatwave and communities. She would also like to look at air quality and needs someone to help with a 10-minute presentation. Please contact her with any suggestions.

Tim said that it's about time to develop some messages on how to cope with hot weather.

Helen said that PHE is finishing up some research in the West Midlands on cool roofs. Will report back.

Nicola said that she is interested in doing further work with the SHINE project in Islington. Will keep in touch with this group.

### **Actions**

<b>Who:</b>	<b>Action:</b>
Kristen	Circulate presentations
Abby	Circulate beta version of GI map