

TACKLING OVERHEATING IN HOMES

Incentivising action

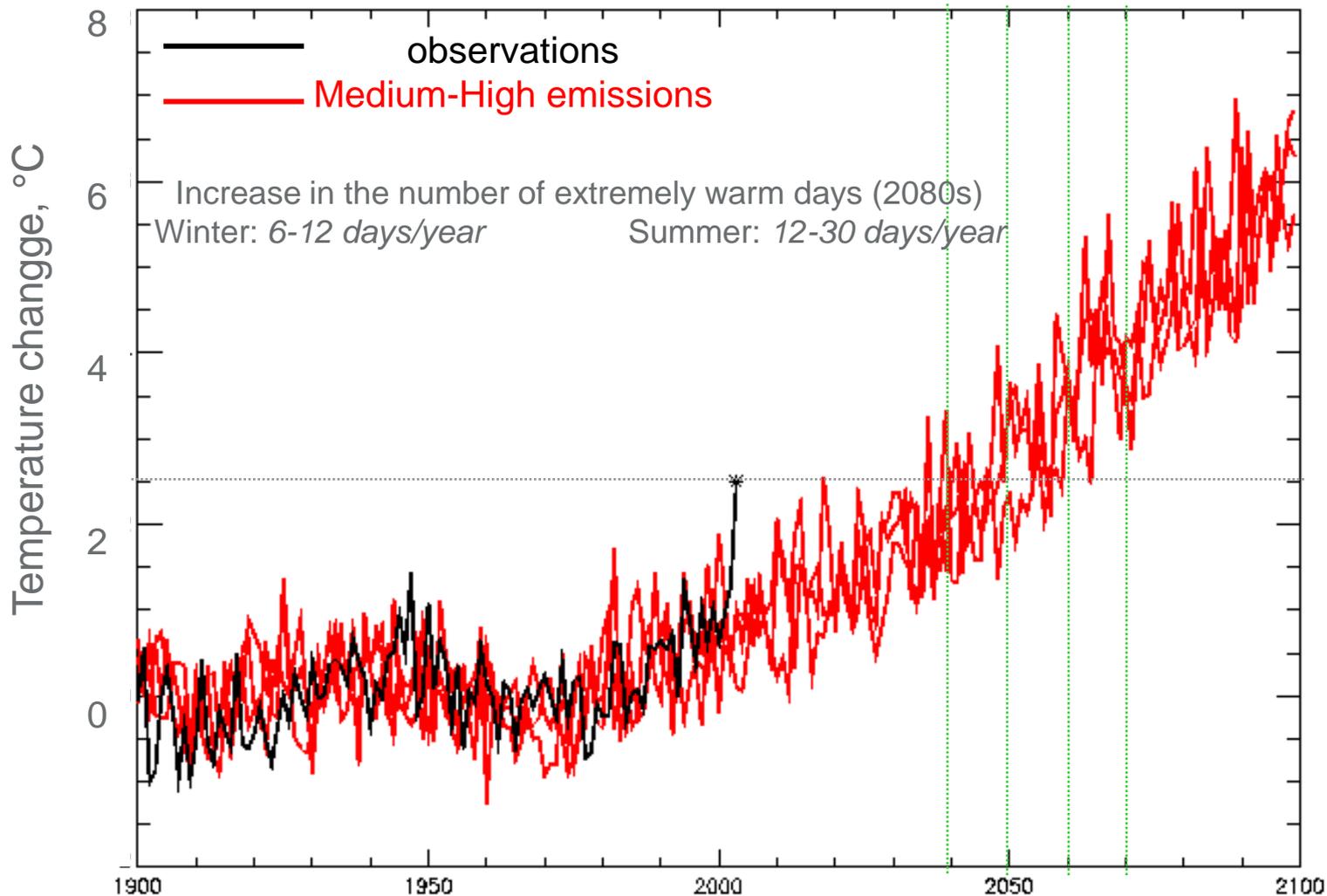
The Plan



WHY TACKLE OVERHEATING?



THE EFFECTS OF CLIMATE CHANGE



The outlook

- Overheating in homes is **happening now**.
- The **health impacts** can be very serious.
- There could be **three-fold increase** in heat-related mortality by the 2050s from a baseline of around 1,100 annually – mainly among the elderly in poor health.
- Cold related deaths are projected to reduce by 30%** from a baseline of 26,000 – 57,000 currently.

The challenge for the sector (industry and government)

We must consistency provide homes which are warm and cosy in the winter, and also cool and comfortable in the summer

- The technical solutions exist to do both – we can be clever – but needs thought
- Lack of incentives (carrots or sticks) and lack of awareness

Incentives – what would motivate you?

- Occupants expecting healthy homes?
- Recognition in industry sustainability benchmarks?
- Avoiding health issues and costly medical care?
- Avoid costly remedial works if things go wrong?
- The threat of legal action?
- Avoiding unnecessary energy use for cooling?
- Mandatory legislation?

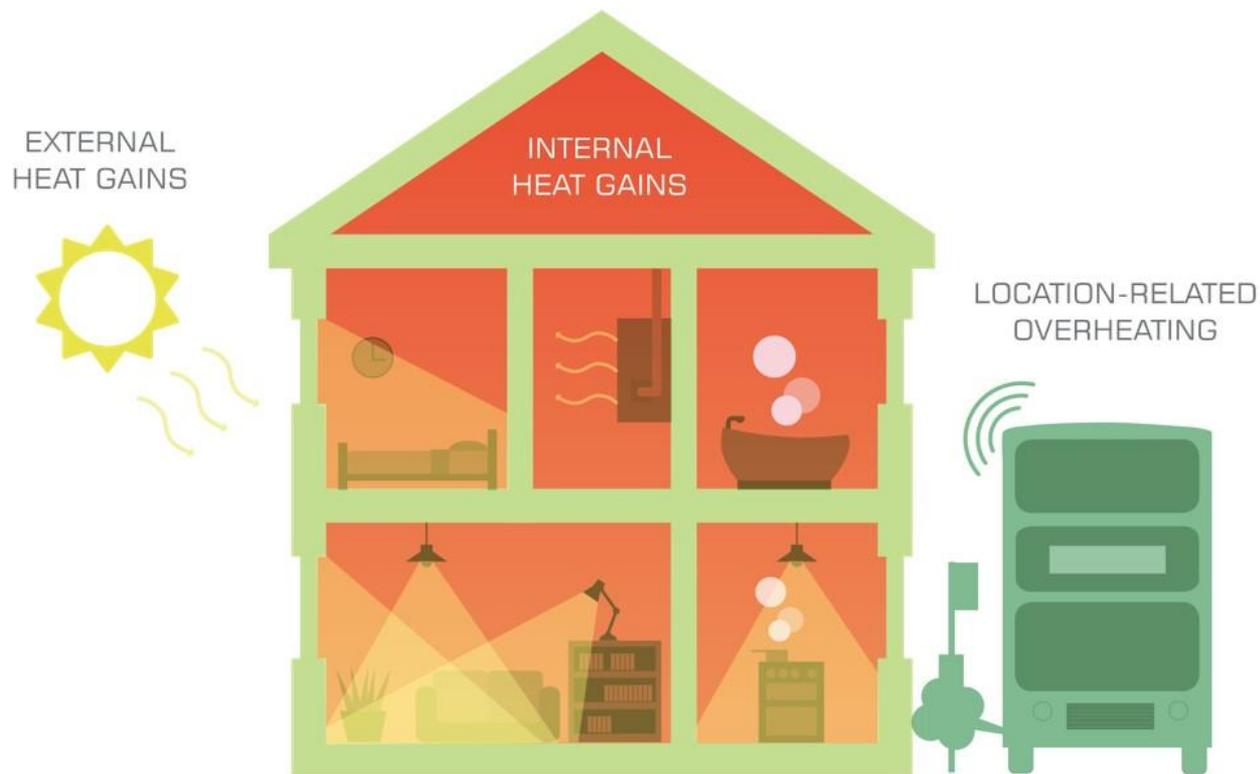
ZCH OVERHEATING PROJECT



HOW BAD IS THE PROBLEM OF OVERHEATING

- Current experiences?
- Which buildings most at risk?
- Where?
- Who?
- Why?
- Impacts?
- Governance?
- Future risk?
- Other countries?

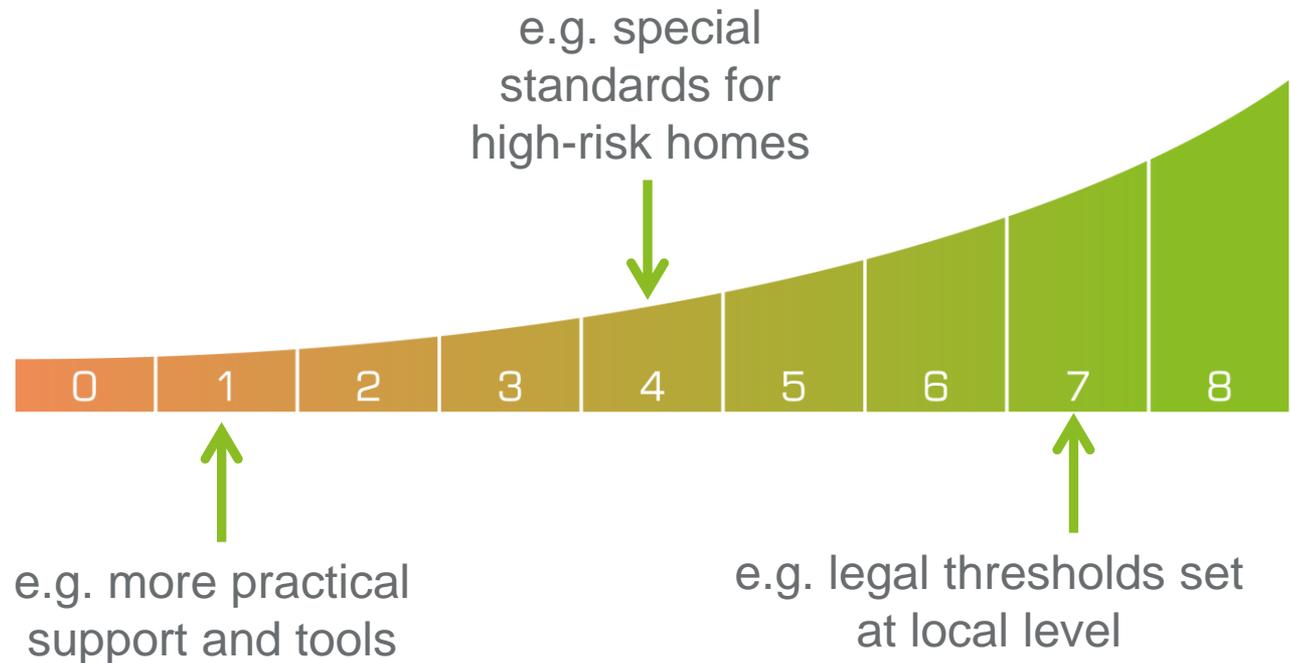
Objective 1 – We will review research and work with experts to provide an overarching ‘statement’ on the extent, severity, and impact of overheating in homes now, and how this could change over time. This includes assessing our level of ‘preparedness’. This will help us understand the scale of the problem and the possible impacts of ‘business as usual’.



OPTIONS FOR INCENTIVISING ACTION

- Imagine ourselves in a policymaker or industry body's shoes
- What are our options for incentivising action?
- Imagine implementing them – do they work?
- What evidence would be needed?
- Are they deliverable?
- Are they cost-effective?
- What difference do they make to people's lives?

Objective 2 - We will analyse in detail a set of approximately eight hypothetical options/scenarios for incentivising action to prevent or treat overheating in homes. This is intended to assist decision-makers with the difficult job of deciding how to respond to the problem.



*Scenarios go from light-touch through to mandatory options.
Options to be determined in consultation with government and industry.*

HYPOTHETICAL OPTION

- Examples of considerations
- 20-30 page report (quant and qual)
- Thinking through the practicalities, costs and benefits
- Industry and government
- New build and existing
- We can make useful and sensible observations across the scenarios to guide decision-makers

Hypothetical Option 4 – Set special new standards for high-risk homes (rather than all homes)

Describe the proposed approach in detail

Issue 1: How to define which properties are most at risk (and why)?

Issue 2: How to locate existing high-risk homes?

Issue 3: How does a house builder/building manager know if homes are high risk?

Issue 4: Who sets the standard or the requirements?

Issue 5: What types of action would be required – how prescriptive?

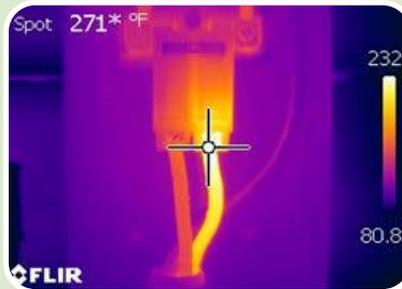
Issue 6: Demonstrate action taken to avoid overheating or require checks?

Issue 7: What are the additional costs to industry/avoided costs?

Issue 8: What difference could this approach make for occupants?



Evidence gathering



Review
literature and
gather expert
opinion

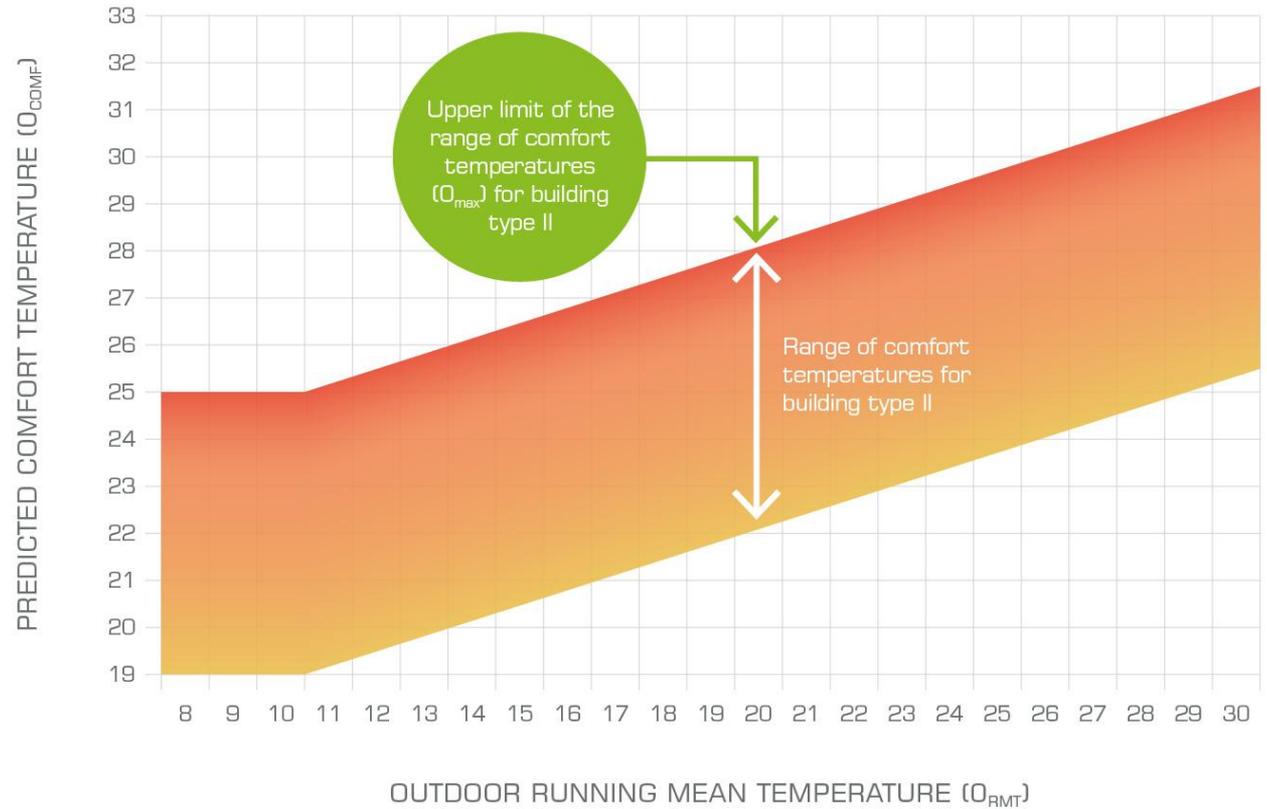
Detailed
reviews e.g.
definitions

New
monitoring
and testing
data

EXAMPLE OF A DETAILED REVIEW

- Complicated
- Temperatures reached
- Duration
- Humidity
- Susceptibility
- Subjective
- Expert technical assistance
- Feeds into projects objectives e.g. how to set and enforce a threshold/target

Defining overheating and the limits of thermal comfort



Source: Adapted from CIBSE's TM52: The limits of thermal comfort



Summary of high-level outputs

Description	Timing
Baseline – how bad is the overheating problem	By spring 2015
Options appraisal – what can realistically be done	By end of 2015
Dissemination – raising awareness and capacity to act	Ongoing

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