INFLUENCE! Inspiration and insight to change minds and policy

19 - 20 June 2019 University of Manchester

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# Climate Change Global challenge and Local influence

**Global Influence** 







**CUNDALL** 



## University of Warwick – An Overview

- Ranked 7th overall in the UK (The Times, 2017)
- □ Four departments ranked as the leading in the country
- □ 87% of our research is 'world -leading' or 'internationally excellent'
- □ 19 departments in the top 10 in the UK
- □ WMG (Warwick Manufacturing Group), WBS Global MBAs
- Sciences Park, Conferences
- One of the largest University campus in Europe
- 25,615 students, 6,294 academics, researchers and staff







## Main Campus



### "a 24/7, 365 town of 30,000 people"

- □ More than 150 buildings covering 560,000m<sup>2</sup>
- **7,000 student accommodation rooms**
- □ 3 conference centres
- 2 Sport centres
- □ Retail, cafes and restaurants
- Arts Centre
- Offices & teaching buildings
- □ Industrial & research buildings
- □ 19km heating/cooling network
- □ Self-generate at least 50% of heat and power needs

290 hectares of Research, Teaching, Residential, Conferences and Business



215 hectares of research, business and farming





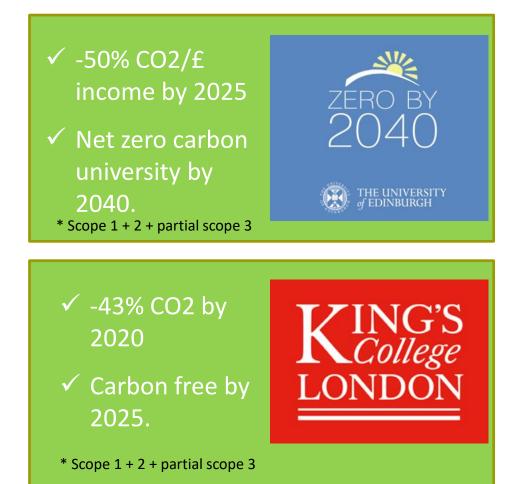
## Zero Carbon Targets – not all FE/HE yet

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- UK signatory of Paris Agreement
- Need to reduce carbon emissions scope 1, 2, 3 by 80-95% by 2050
- Several universities have adopted ambitious targets but not full scope 3 (procurement)
- Universities face challenging times
- "Do more with less" is Good
   Reduce use of natural resources









RF10

## THE CLIMATE GROUP OUR WORK - NEWS & BRIEFINGS ABOUT - CONTACT US - SUPPORT US





THE CLIMATE GROUP WORKS TO ACCELERATE CLIMATE ACTION. WE ACT AS A CATALYST TO TAKE INNOVATION AND SOLUTIONS TO SCALE, BY BRINGING TOGETHER POWERFUL NETWORKS OF **BUSINESSES** AND **GOVERNMENTS** THAT SHIFT GLOBAL MARKETS AND POLICIES.





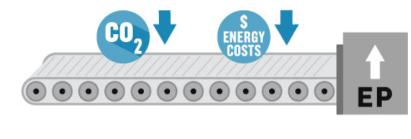
## Climate Group Work



### WHAT IS ENERGY PRODUCTIVITY?

IT'S ABOUT MAXIMIZING EACH UNIT OF ENERGY FOR GREATER ECONOMIC OUTPUT – **OR DOING MORE, WITH LESS.** 

**BUSINESSES** CAN IMPROVE ENERGY PRODUCTIVITY BY INVESTING IN ENERGY EFFICIENT TECHNOLOGIES AND PRACTICES TO REDUCE EMISSIONS AND COSTS...



FOR EXAMPLE

IF COMPANIES GLOBALLY MADE THE SWITCH\* TO **LED LIGHT BULBS**, THEY WOULD SAVE AROUND:







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**EP** 100

BROUGHT TO YOU BY THE CLIMATE GROUP







## Landsec

Joined December 2016 (one of the first & RE100 member)

UK's largest property developer

Double its energy productivity by 2034 compared to 2014

13% energy consumption reduction in 3 years







Joined September 2018 First carbon positive homebuilder Net Zero Carbon Buildings pathway Committing to **owning, occupying** and **developing** only assets that are net zero carbon by 2030.









Joined May 2019 Sustainable architecture, urbanism, and design Net Zero Carbon Buildings pathway Committing to **occupying** assets that are net zero carbon by 2030.









Joined September 2018 Multi-disciplinary consultancy for the built environment. One Planet Company by BioRegional in 2012 Committing to **occupying** assets that are net zero carbon by 2025

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**Foster + Partners** 











## EP100 Member (UK)



## CUNDALL



News Cundall a founding signatory for momentous Net Zero Carbon Buildings Commitment





## EP100 Member (UK)



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#### **Climate Positive** Action ducing whole carbon otprints beyond zero. Zero Carbon Energy **A** and supplying all energy from renewables. 7 UTITIBLE AND CONTRACTOR Materials and CO<sub>2</sub>+ Supply Chain Reducing material consumption and using CD products from sustainable sources with transparent and lealth and Wellbeing ethical supply chains. ... $\Delta \Delta$ **Climate Change** Adaptation Designing buildings and **Ethics and Equity**

### News

Cundall a founding signatory for momentous Net Zero Carbon Buildings Commitment

Knowledge hub

Cundall's Annual Sustainability Reports



## **Betteshanger Visitor Centre**



Betteshanger Visitor Centre Deal, UK

Starting from Passivhaus design principles, the building has optimised glazing orientation and sizes to take advantage of beneficial solar gain in winter while using solar shading devices to limit gain in summer. The majority of the spaces are naturally ventilated utilising the excellent local air quality. The only mechanically ventilated spaces are the changing areas, toilets, kitchen and museum areas where the heat from the exhaust air will be recovered.



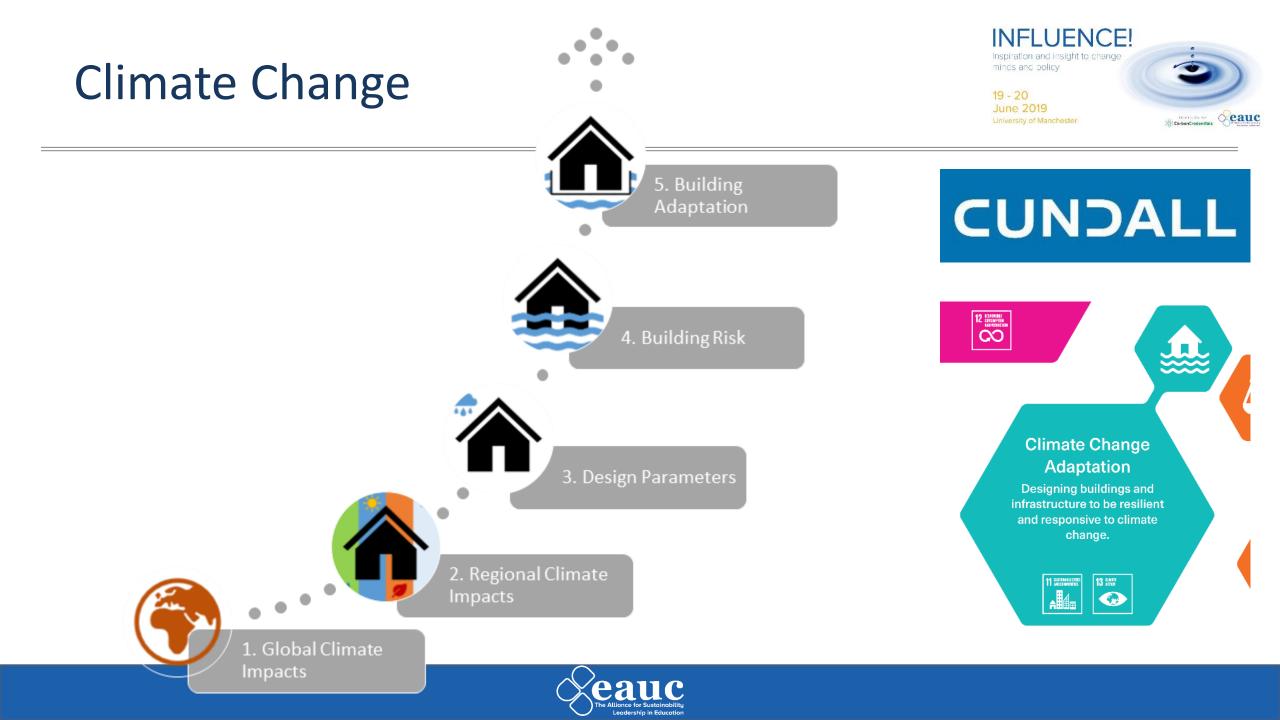






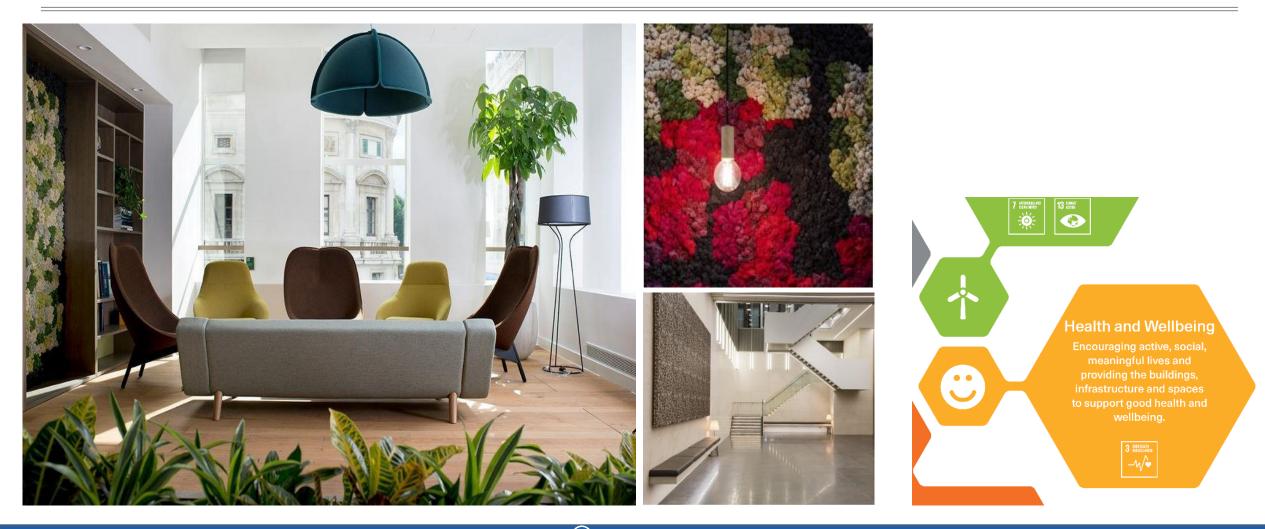
© Studio Evans Lane





## Crown Estates HQ – 1<sup>st</sup> WELL Platinum



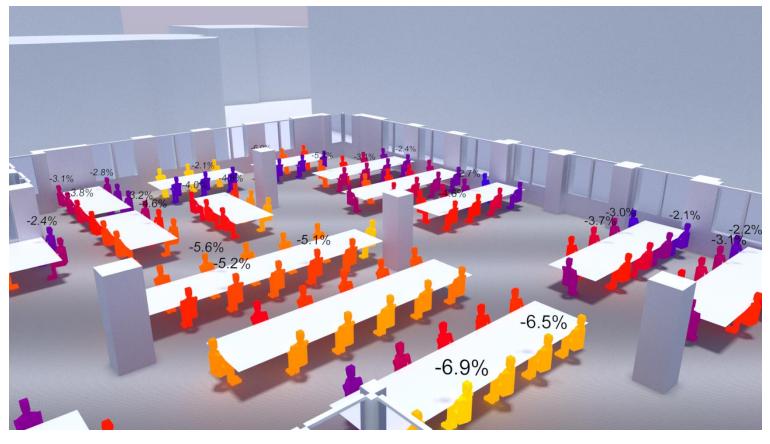




## Crown Estates HQ – 1<sup>st</sup> WELL Platinum



Air temperature Radiant Thermal quality temperature Air velocity CO<sub>2</sub> concentration Perceived air Air quality quality Productivity VOCs concentration Background noise Acoustic quality Distraction noise Daylighting Visual quality Outside views Perceived productivity Biophilia



Predicted views and daylighting productivity loss



## **FE-HE sector Buying Power**



- £2-3bn capital expenditure per year
- Society mind-set is shifting
- Public sector lead by example

Innovate LIK Building Performance Evaluation Programme: Findings from non-domestic projects. Getting the best from buildings January 2016 Opportunity to influence Students, staff & Supply chain

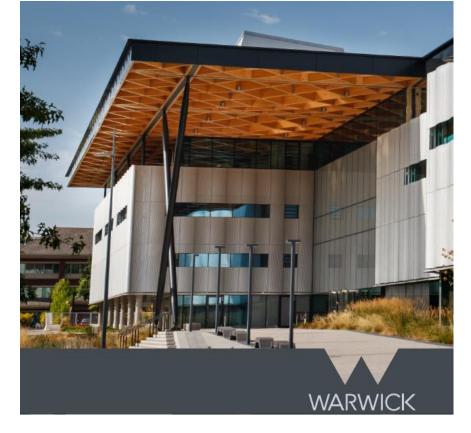






## Building A Sustainable Future Conference

- Director of Estates & Executives
- Forum to share best practices
- Explore challenges of ambitious construction programmes, sustainable development and cost pressures.
- Inspire decision makers to influence future operation and capital expenditure.



HE Conference @ Warwick



## Building A Sustainable Future Conference



A	wareness	<ul> <li>✓ IPCC report, Need for resilience</li> <li>✓ UK Climate Change Act + Paris Climate Change</li> </ul>	
В	uilding Trust	<ul> <li>✓ C40 - International cities and organisations commitment,</li> <li>✓ The Climate Group, NGOs including EAUC, WWF, Greenpeace</li> </ul>	
	ne business ase stacks-up	<ul> <li>UK Industrial strategy – Construction sector deal</li> <li>Building standards - Passivhaus Trust, WELL, BREEAM 2018</li> <li>UK/World Green Building Council – Advancing net zero campaign</li> <li>Building performance and Soft landing</li> <li>AUDE/EAUC Sustainability scorecard</li> </ul>	
Cı	ritical mass	<ul> <li>Construction companies case study and vision,</li> <li>Universities campuses showcase</li> <li>Greater London Authority</li> <li>Greater Manchester</li> <li>Monday 11th &amp; Tuesday Warwick Conferences – T</li> </ul>	WARWICK <b>12th November 2019</b> The Slate, University of Warwick, Coventry



## The SDG Accord





The Alliance for Sustainability Leadership in Education

Joel Cardinal - University of Warwick - J.Cardinal@warwick.ac.uk Paul Chatwin – Cundall - p.chatwin@Cundall.com

End extreme poverty, inequality and climate change www.sdgaccord.org



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