

BUROHAPPOLD ENGINEERING

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TREVOR KEELING

'Associate in Sustainability team with over 12 years' experience designing for people and planet'

- In depth experience of Sustainability requirements for London and the World
- Leading Wellbeing focus group
- Policy work understanding implications of future changes



Residential buildings

Managing sustainability during design and construction



Commercial buildings

Leading design for wellbeing and sustainability in offices and public realm



Policy Work

Climate Change Strategy for London Borough of Waltham Forest

UK AND LONDON POLICY TIMELINE

2015 – 5p plastic bag charge introduced	2020 – Ban on plastic straws, drink stirrers and cotton buds	2030 – First low carbon Hydrogen c with carbon Capture and Storage operational	lusters		
2016 – Wind power overtakes Coal power	2022 – Peak gas fired power generation	2035 – Doubling of re	newable energy		
in the UK Grid		supply in the UK electri			
2018 – Ban on microbeads in cosm and personal care products	etics 2023 – First year without Coal f power stations	red 2040 – Only Vehicles sol	y Zero Emission ready d as new		
2018 – Minimum energy		pilers to be installed in	2050 – Eliminate avoidable waste of all kinds	5	
performance standards fo properties	or all rented new homes			2050 – 12 millions homes retrofit; 6 million cavity walls, 6 million solid walls and 21,000 loft insulation	
2010 Carbon fr	actor of electric grid	0 – Decision point for UK wide role out of	measures		
averaged lower th	nea natural das	heat pump /electrification or Hydrogen for buildings		2050 – Afforestation target of 750,000 million hectares additional trees	
2005 Now	2025	2030	2040	2050	
2019 – The Ult		1GW solar PV installations with 15% of Lor demand met by renewable and district en	Idon s	2 Million homes across e retrofit	
(ULEZ) came ir	nto force		2050 – 2GW solar PV ir	nstallations	
2018 – 139,000 homes a retrofit through the RE:t (since 2009) 2016 – Introduction of Zero Carb Homes Policy, requiring carbon o for new developments 2015 – 10% of houses in London pop.	across condon	nsulate all remaining cavity walls	2050 – Increase in area of urba	n forest by 10%	
	2026 – Zero biodegradable or		2041 – capacity of rail based services across be increased by at least 80%	London to	
		e should be 2037 – al	I TfL buses to be zero emission		
	2021 – ULEZ expanded to inner London f vehicles	or light 2033 – all taxis and p emission capable	rivate hire vehicles to be zero		
living in fuel poverty		2030 – 1 million homes to be	retrofit across London		
	2020 – 50% of Construction, Demolition and Excavation waste to be recycled as aggregate for re-use in London	2030 – all newly registered road vehicle zero emission	s driven in London to be		

THE FUTURE IS NOT A RESULT OF TECHNOLOGY ALONE





STREETS WITHOUT CARS WILL PROVIDE MORE SPACE AND HAVE LESS AIR AND NOISE POLLUTION



Marlbrough Road 1952



Marlbrough road today

Natural driveways to conserve bees and nature

Less cars will mean you can play in the streets

Less traffic means greater energy independence. The UK relies heavily on oil, gas and coal from Russia and the Middle East.

THE FUTURE OF CAR PARKING

Hackney







THE FUTURE OF STREETS

Hong Kong

Barcelona





REDUCED AIR POLLUTION FROM ELECTRIC VEHICLES

Particulate matter



NOx emissions

Trimmers 2016

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POTENTIAL TO NATURALLY VENTILATE

Kentish Town road

Modern fully sealed office



CHANGING DRESS CODES





ENGINEERING



London today and 150 years ago

South California today and 500 years ago

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MYCOOLBIZ

COOL

www.team-6.jp

THE INCREASING ELECTRIFICATION OF TRANSPORT AND POSSIBLY HEAT

Vehicle charging infrastructure



Smart grids that share power



NEW TYPES OF SKILLS AND JOBS

Vehicle mechanic / electrician

Trained energy efficiency installers





www.trustmark.org.uk

THREE ACTIONS FOR CAMDEN

- 1. Encourage the infrastructure that enables car sharing and electric vehicles;
- 2. Don't install cooling in any council buildings and encourage relaxed clothing in summer and extra layers in winter;
- 3. Encourage local businesses to plan for the risks and opportunities around climate change.