



Accelerator Cities Pathfinder Project



Climate-KIC is supported by the
EIT, a body of the European Union



UKGBC - Together for a better built environment

UK Green Building Council Mission:

To radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated.



Industry task group



Net zero carbon framework

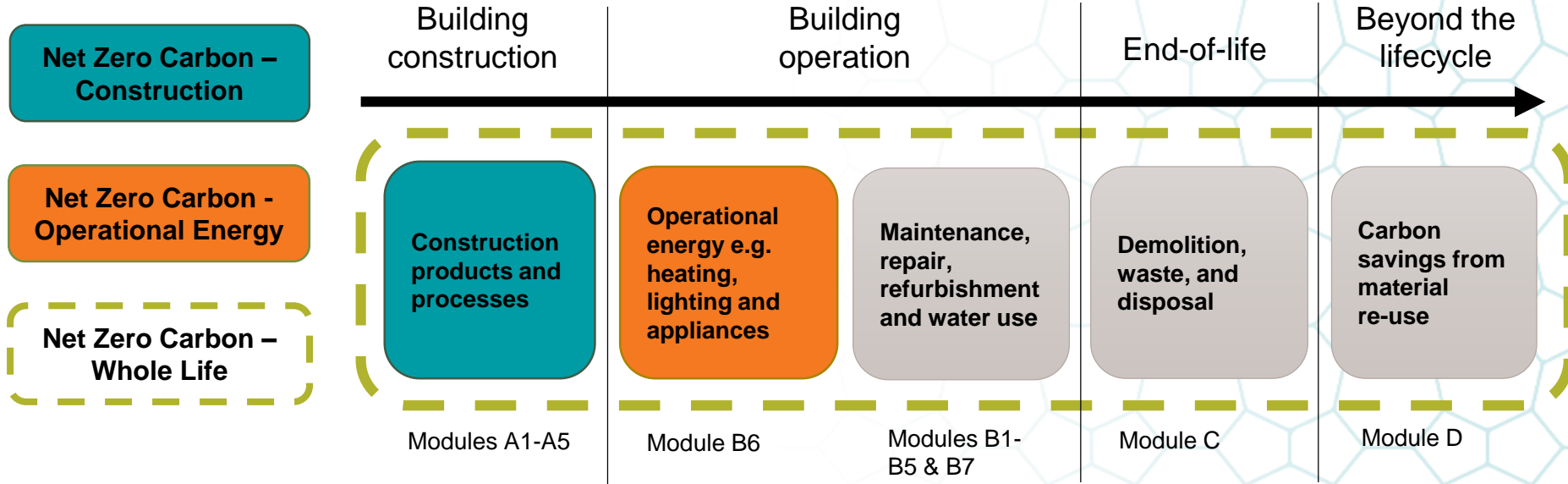


Overarching principles:

1. Polluter pays
2. Improve measurement and transparency
3. Encourage action today and tighten requirements over time



Net zero carbon scopes



Framework

New buildings/
major renovations

Buildings in
operation



Reduce construction impacts



Reduce operational energy use



Increase renewable energy supply



Offset any remaining carbon



Public disclosure



= Achieve net zero carbon balance for construction

= Achieve net zero carbon balance for operational energy

Accelerator Cities is funded by EIT Climate-KIC:

“A knowledge and innovation community working to accelerate transition to a zero carbon economy. They support innovation that helps society to mitigate and adapt to climate change”

What is the purpose of Accelerator Cities?

To co-create a proposal for a long-term city-led home retrofit programme

A programme which meets the local needs of the UK's most ambitious city-regions, and benefits from collaboration between those cities

Accelerator Cities: our partners



West Midlands
Combined Authority

**GREATER
LONDON**
AUTHORITY



♦ **EDINBURGH** ♦
THE CITY OF EDINBURGH COUNCIL

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY



Project Timeline

Activity	When
Literature review and interviews	July/Aug
Regional Workshops	Sept/Oct
Draft programme proposal and consult	Oct/Nov
Finalise proposal and submit to Climate Kic	Dec

Why home retrofit?



HOUSEHOLD

£8.61 billion

could be saved in energy bills annually if all homes were improved to EPC rating **C**⁽¹⁾



Acoustic insulation

reduces external noise transfer and improves occupant health and wellbeing

Properties in EPC bands **E, F, G** require

48% more damp and mould-related maintenance and repairs

compared to **A-D** rated properties⁽²⁾



Physical and mental health of residents is improved by **retrofitting** cold, damp homes



11% of English households are in fuel poverty.

The most cost effective solution is to improve home energy efficiency⁽³⁾



COMMUNITY

A home rated EPC **A** sells for

14% more

than an EPC **G**-rated equivalent⁽⁴⁾



Emissions from gas heating and cooking



contribute to **20%** of NO_x emissions in urban areas⁽⁵⁾

Investments in home improvements

BOOSTS spending in the local economy⁽⁶⁾

Retrofitting properties



the number of void days for rental and mortgage defaults for owner occupiers⁽⁷⁾

Retrofit provides an opportunity to make homes more resilient, such as integrating flood defence measures



CITY

Reducing energy demand is the most cost effective way to **reduce emissions**



Natural gas imports could be reduced by **26%**

using a national energy efficiency programme⁽⁸⁾

For every **£1** invested in retrofit an estimated **£1.27** would be returned in **tax revenues**⁽⁹⁾

Local energy systems benefit from reduced demand, especially during peak times, **and make the local grid more resilient**

For every **£1** spent on reducing fuel poverty

42p

is expected in **annual NHS savings**⁽¹⁰⁾



23

person years of employment could be created for every **£1 million** invested in retrofit⁽¹¹⁾

Infographic developed for UKGBC by PRP

Barriers to Retrofit

Lack of coherent national policy

- Brexit – uncertainty
- No clear strategy to get to net zero homes
- Start/stop policy – e.g. Green Deal
- Some sectors being addressed – e.g. PRS, others not at all
- No consequential improvements through Building Regs
- NPPF gives little weight to refurb

City level

- Lack of risk-taking
- Lack of long-term strategy
- Lack of capacity

Lack of coherent offering to householders

- Hassle factor
- Expense
- Lack of knowledge
- Lack of trusted installers/ third party advice

Lack of supply chain

- Industry decimated post Green Deal/CERT
- Skills and capacity lost
- Fragmented industry
- Loss of confidence in long term policy direction

Technical

- Complexity in getting whole house deep retrofit right
- Heritage buildings issues

Tenure issues

- Landlord/tenant split
- Social housing has particular challenges – e.g. capped rents?
- Challenge of multi tenure blocks/streets/areas

Cost

- High upfront costs
- Lack of finance mechanisms
- Lack of coherent offering for institutional investors
- No fiscal incentives (VAT, stamp duty, council tax)
- Slow return on investment

Stock-take of existing homes in city/region

- Type
- Condition
- Tenure
- EPC performance
- In use performance? Smart meter data?
- Strains on the local grid
- Stock data; deprivation, health, performance

Technology

- Certified approaches
- House type specific
- Area based approaches?
- Insurance – NHBC type?
- Measurement of successful retrofit
- Academia – research and innovation

Incentives

- Council tax
- Grants
- Competitions

Tenure type

- Social housing – revolving fund – (Salix?), RHI, ECO
- Able to pay – green mortgages, PAYS loans, RHI, ECO, upfront grant?
- Private rented – green buy to let mortgages, PAYS loans, RHI, Enhanced Capital Allowances, ECO, upfront grant?
- MEEs

Pilots/case studies

- Test of approaches: finance, tech, skills, householder package
- De-risk private investment
- Hearts and minds
- Exemplars to showcase

Skills

- Local training
- Local employment opportunities
- Installers kitemark
- Local supply chain/necessity of upskilling?
- Apprenticeships
- Work from community interest groups
- Academia – skills training

City-Led Retrofit Programme

Policy

- Level of ambition? Climate Emergency Net Zero by 2050
- What this means for existing homes
- EPC C by 2030?
- Consequential improvements?
- RE planning policy/Allowable Solutions
- Existing initiatives
- Importance of a joined up programme to exert pressure at a national level and create supply chains

Finance

Engagement with householders

- Trigger points
- Deep retrofit plan – stages of retrofit, costed/timed
- Tenure specific approach
- Area based?
- Start with social housing, and/or 'willing able to pay'
- Assurance of tradespeople/technology – compensation scheme in case of issues?
- Occupier enthusiasm e.g. holiday offers

LA sources of finance

- ECO?
- Section 106?
- Allowable solutions
- Private finance
- Green Finance Institute?
- Joining up health/social care/other budgets
- Revolving funds
- EIAH/ URBIS

Making the case for investment

- Cost/benefit tools
- Measurement of co-benefits – 'good homes'
- Procurement policy – retrofit at scale bringing cost down

Next steps

- Continue to develop proposal for 'Retrofit Accelerator'
- Further consultation workshops:

London 14th November

Newcastle 21st November

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- Submit proposal and implementation plan in Dec





Thank you



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