

**closing the
energy “performance gap” in housing
making partnerships work...**

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Building a low-carbon economy – the UK's contribution to tackling climate change



Committee on Climate Change
December 2008

- emissions 21-31% below 2005 levels by 2020
- 80% reduction in UK emissions by 2050
- but, CCC recommendations not consistent with avoiding dangerous climate change

a mountain to climb

- emissions 21-31% below 2005 levels by 2020
- 80% reduction in UK emissions by 2050
- but, Commission on Climate Change recommendations not enough to avoid dangerous climate change

Commission recommendations

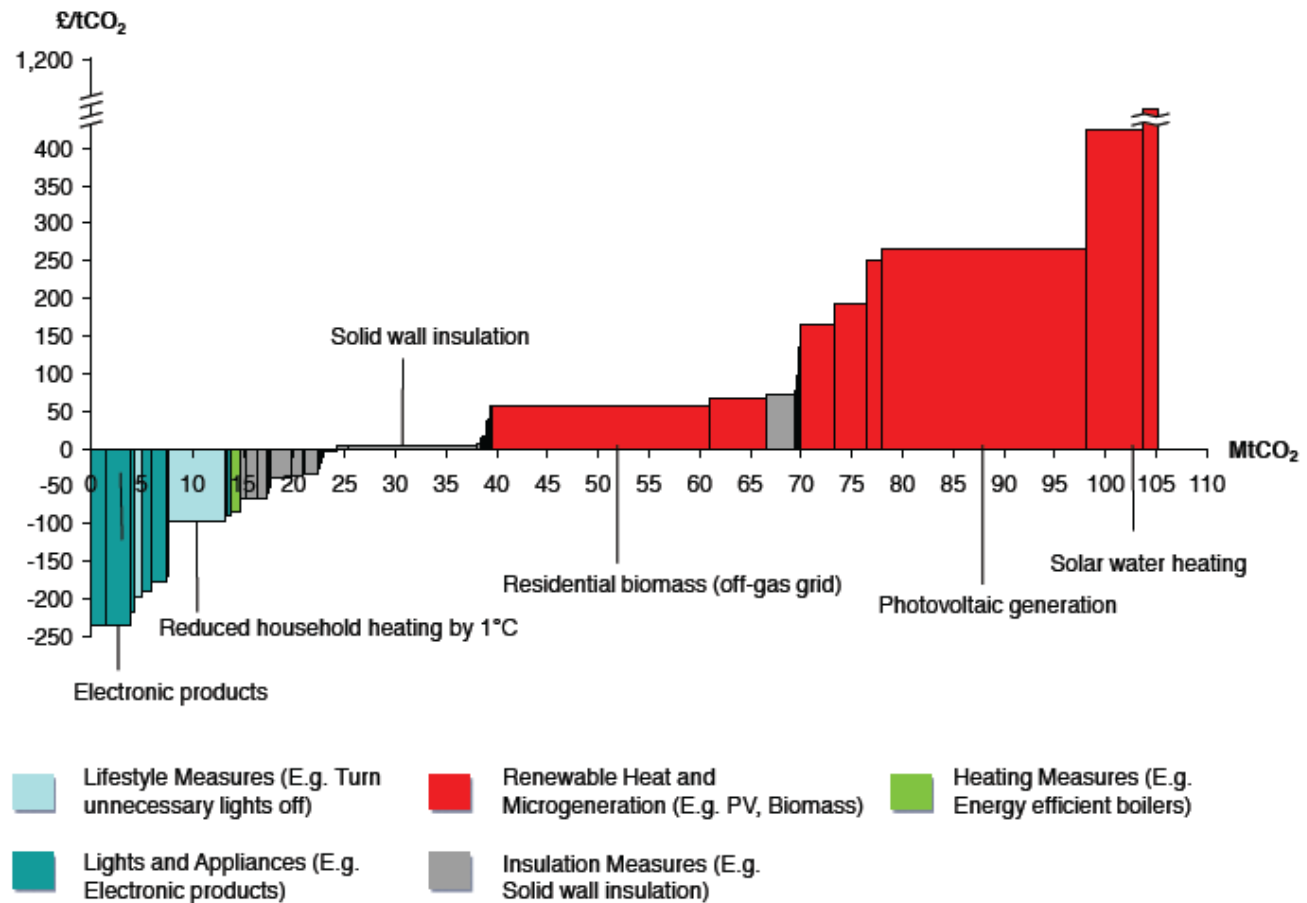
by 2020:

- 9-18 MtCO₂ reduction from existing housing
- 4 MtCO₂ from new housing
- carbon content of electricity to fall by ≈40%
(and by ≈90% by 2030)

the projects

- LowCarb4Real – new housing
- Low Energy Victorian House – the existing stock

Figure 6.10 Residential sector MACC – technical potential in 2020



Source: CCC

the goal:

- zero carbon new build by 2016
- significant reductions in heat loss in existing dwellings including older solid walled houses



Low Energy Victorian House

target - 80%
reduction in CO₂
emissions

WINNER of the
2008 Sustainable
Housing Award



insulation going in...

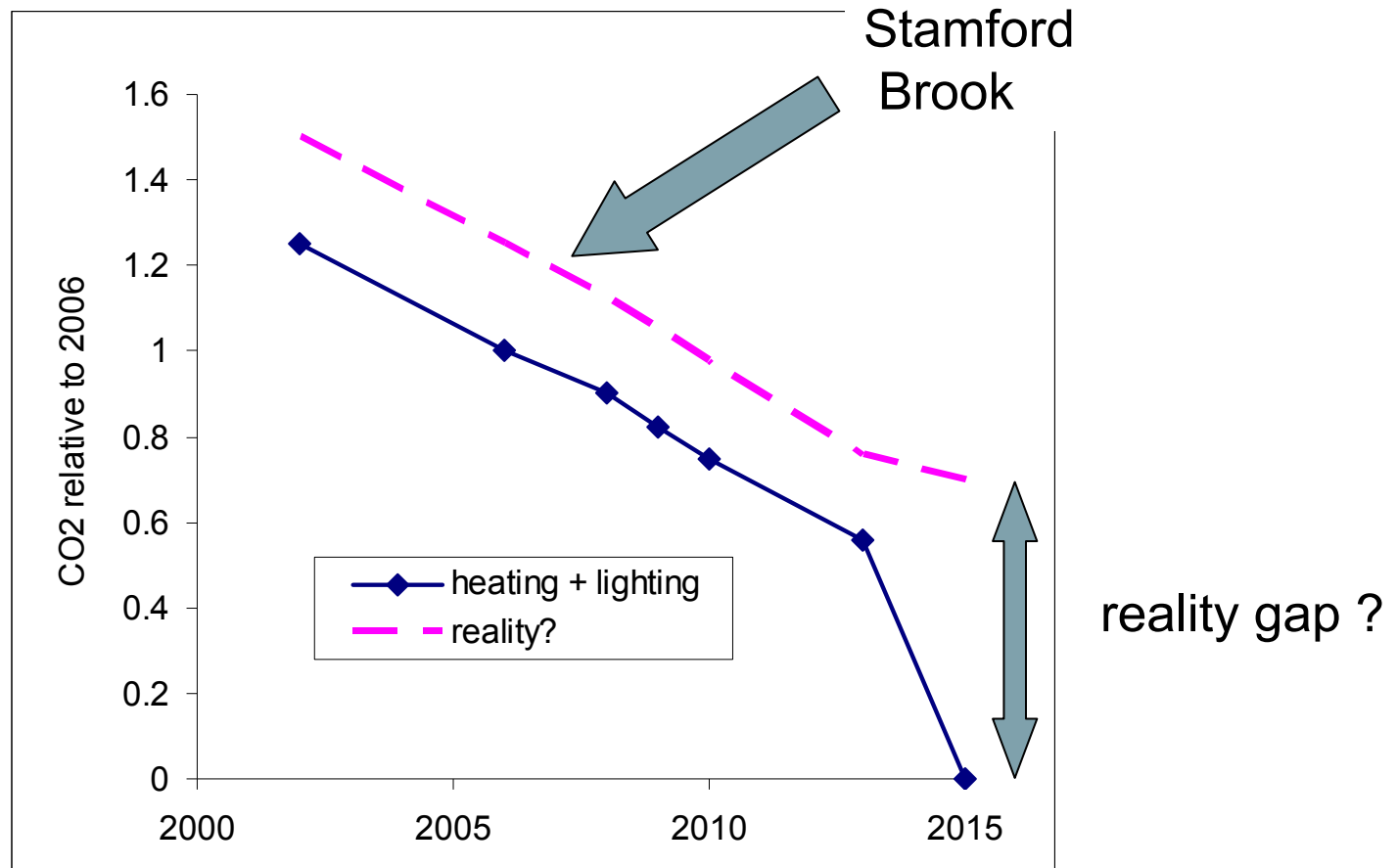


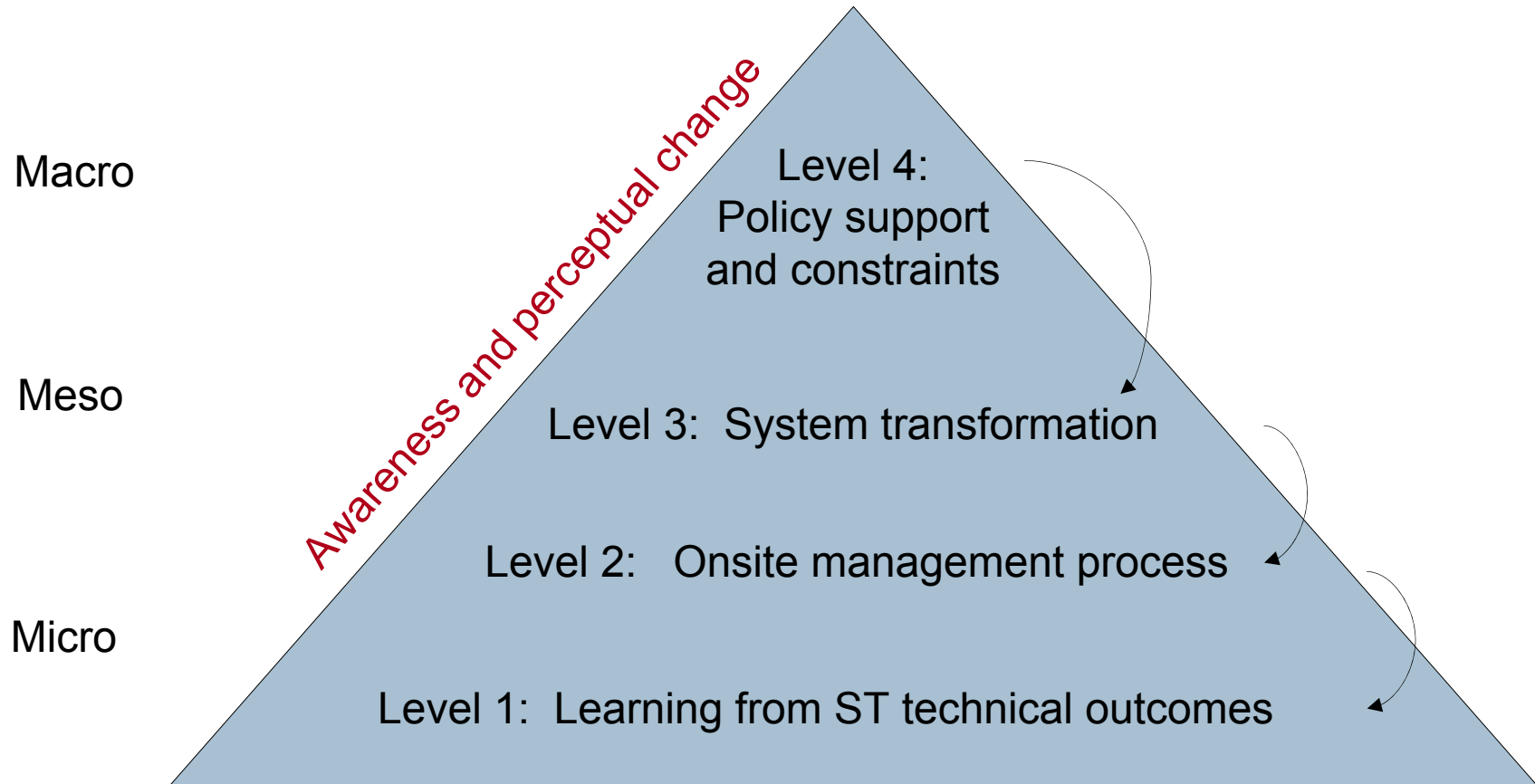
lots of insulation and training...

(courtesy Chit Chong, Camden Council)

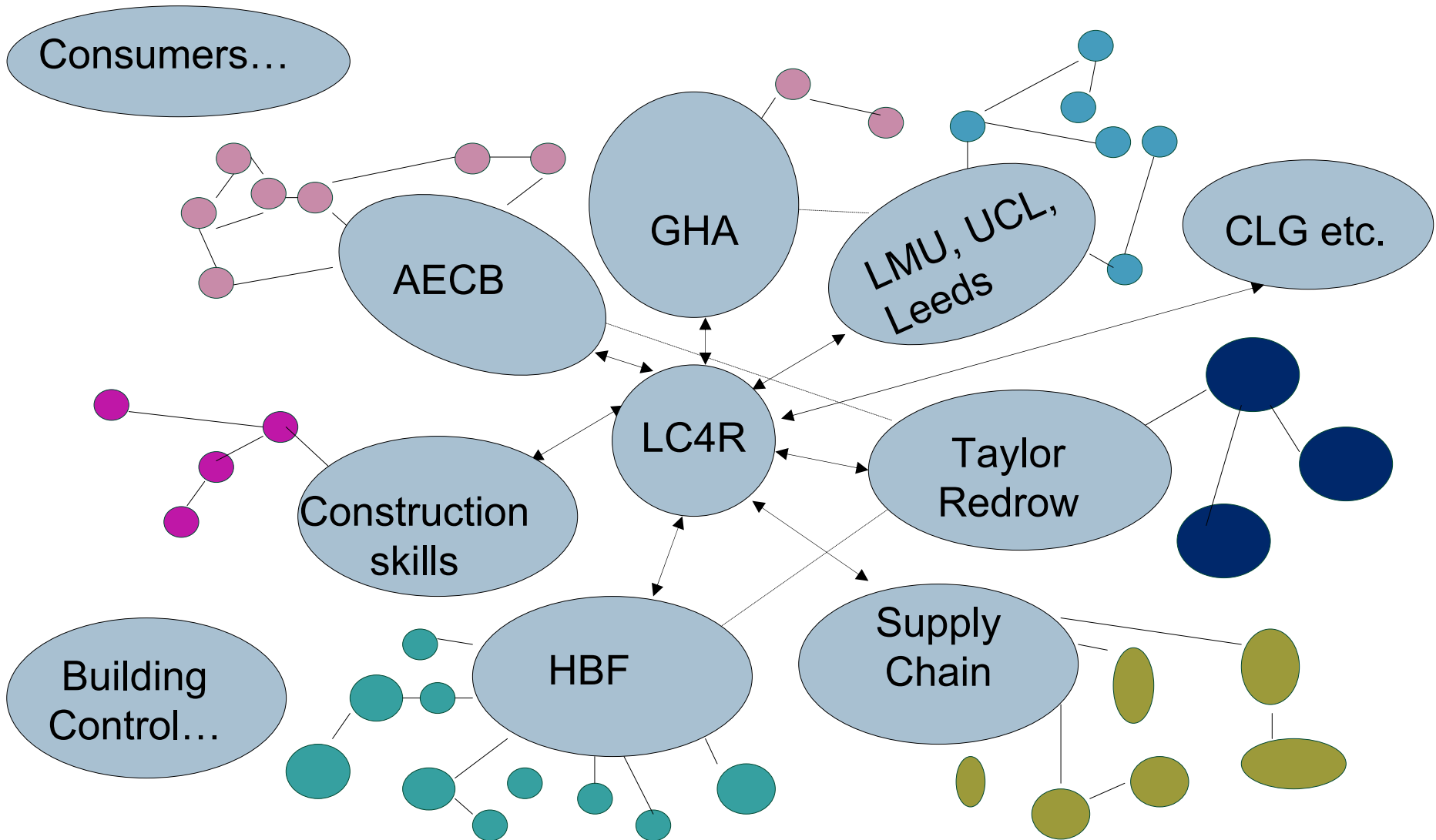
- problem definition
- discussion
- solution generation
- measurement
- evaluation







stakeholder constellation...



what have we done?

run 5 workshops with:

- large and small housebuilders
- senior management, site management, trades
- architects, building services engineers
- building control
- client organisations
- training organisations

total of >125 attenders altogether

our strategy

- transferring technical knowledge and insights from Stamford Brook and GHA
- reflecting on the “gap”
- discussing the feasibility of the House Building Industry meeting ever tougher carbon targets
- teasing open the reasons *why things are as they are* and *what might be done to change them*
- feeding these back to decision makers and key stakeholders as a guide to action

the outcome

the Lowcarb4real project has given us the opportunity to look at this from the bottom-up, through the eyes, opinions and insights of people who work in the construction industry, as they are confronted with empirical evidence on the performance of new housing.

partnerships

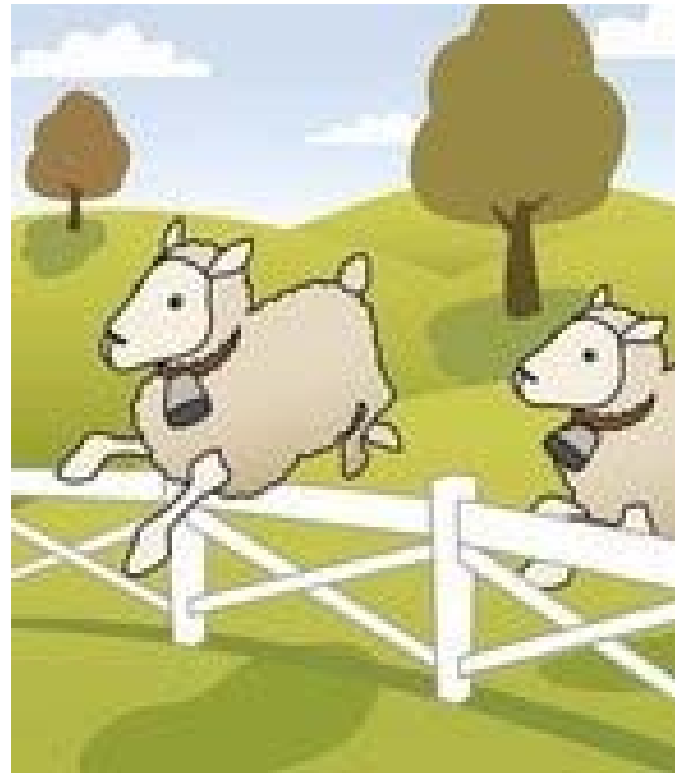
are essential to tackling the process and context-bound problems of technology deployment
 take time and care to construct and maintain
 can be challenging for all partners

Energy Efficiency

Follow me....

...it's easy

(courtesy of Joe Isle,
Taylor Wimpey)



Help

- its more complicated than you said



partnerships

CO₂ emissions in housing cannot be reduced just by better hardware

needs:

- feedback on performance

- commitment to quality

- development of human capital

- systems that foster learning and retention and application of learning

www.cbcs.ucl.ac.uk

<http://www.leedsmet.ac.uk/as/cebe/projects/lowcarb4real/>

www.levh.org.uk

Thank You