

Remaking Suburbia

INDUSTRY AND POLICY DIMENSIONS

Keynote address

Gavin Killip

Environmental Change Institute,
Oxford University, UK



www.rmit.edu.au



Making low-carbon mainstream

**The need for a wholesale re-think of
energy policy for UK housing**

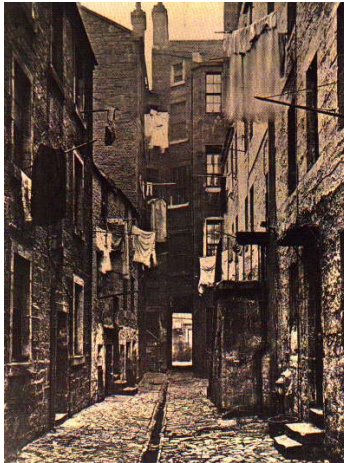
Gavin Killip
Environmental Change Institute
University of Oxford



ENVIRONMENTAL
CHANGE INSTITUTE

Re-making Suburbia, RMIT, 12 March 2009

The legacy of housing policy



Gavin Killip



Re-making Suburbia, RMIT, 12 March 2009

UK housing – facts & figures



Gavin Killip



Re-making Suburbia, RMIT, 12 March 2009

Existing policies & programmes

- Eradicate fuel poverty by 2016
- Boost economy, improve energy security
- -80% CO₂ emissions by 2050 (over 1990)
- 'Consequential improvements' for major renovation under Building Regulations
- Programmes for 'cost-effective' measures paid by an obligation on suppliers ~ \$875m per year
- Upto \$26m/year grants for micro-generation

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Theories for energy-related decision-making

(Bounded) economic rationality

- Prime issue is cost/payback
- Energy-related decisions are 'start-stop' decisions
- Imperfect information
- Imperfect market
- 'one-stop' shop approach of government-backed advice and grants

KEEP IT SIMPLE

Socio-technical systems

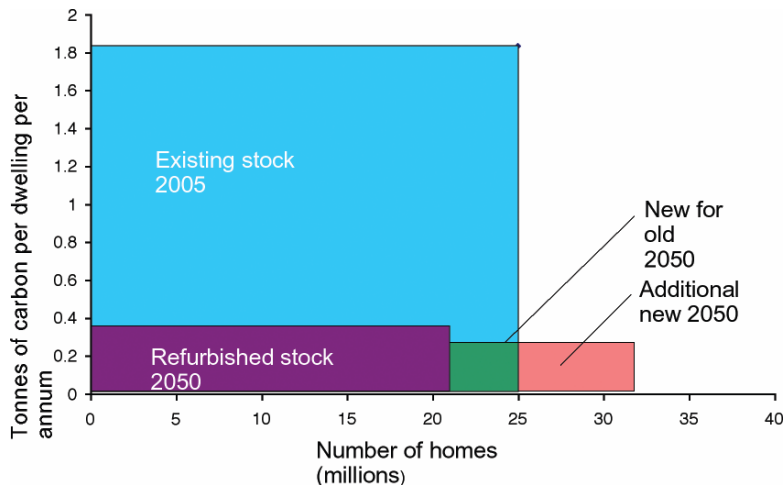
- Complex set of barriers: cost, trust, opportunity, hassle, information
- Energy-related decisions are mixed with other decisions
- Information from many sources; inconsistency
- Multiple-agent approach

KEEP IT REAL

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

The future is retro-fit



Source: RCEP (2007) *The Urban Environment*

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

A few inconvenient truths

- UK spends ~\$53bn/year on repair, maintenance & improvement of housing
- Housing refurbishment involves millions of small-scale decisions by non-experts
- Specification of refurbishment work is often down to the tradespeople on site
- We have a few low-carbon demonstration projects but no market for replication

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Custom & Practice in SME construction

- Fragmented; fluid contractual relationships
- Key role of clients (good and bad)
- Strategies for avoiding problem clients
- Discounts = retail mark-up = bias towards established products and manufacturers
- Inherently conservative – ‘if it ain’t broke ...’
- Trusted sources of information = trade bodies, trade press, trade counters, trade fairs, tradespeople, building inspectors

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Lessons from elsewhere

Standards, metrics, programmes

- PassivHaus, Minergie
- Everyone else uses kWh/m²/year
- Tough but achievable
- German loan scheme
- ... better than us but still not mainstream

Future standards for new-build homes

- ‘Zero-carbon new homes by 2016’
- Has focused industry minds like nothing before
- Hot debate: definition of ‘zero-carbon’

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Pros & cons of relying on SME construction firms

Pros

- Engagement with mainstream refurbishment
- Economic opportunity ~ \$10bn/year
- Long-term, local jobs
- Well-resourced training infrastructure

Cons

- Compliance issues
- Low knowledge base
- Hard to achieve well integrated systems with fragmented roles
- Culture gap between SMEs and policy-makers

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

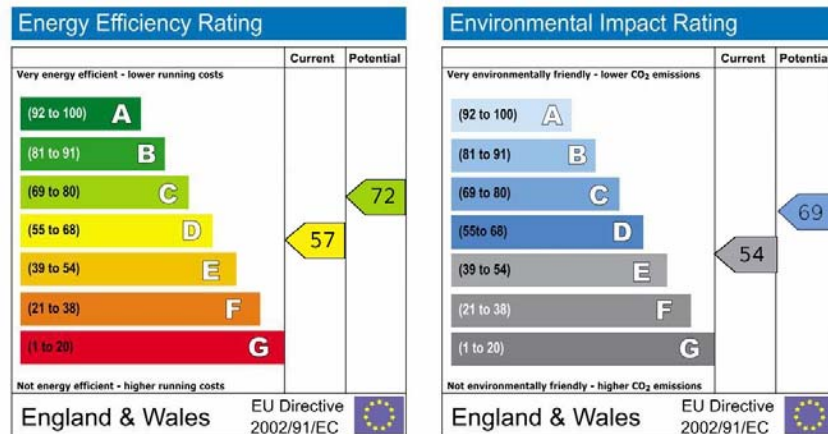
Market Transformation: what can we learn from product policy?

- Buildings aren't products – but can we apply any lessons from product policy?
- Three pillars of **Market Transformation**:
 - **Information** – accuracy, visibility, need to communicate potential for improvement
 - **Incentives for innovation** – innovation of what? Which incentive(s) for what result?
 - **Mandatory minimum standard** – at which point in the process? Start low and revise regularly or make it ambitious from day one?

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Energy Performance Certificates



Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Possible incentives

- Not (primarily) about new technology
- Mainly about new service delivery – whole home audit and refurbishment
- Sweeteners
 - GST (VAT) down from 15% to 5%
 - Rebates on local services tax
- Making capital available
 - Loans or mortgage top-ups
- New innovation fund for demo projects?
 - Only needs to top up existing budgets, ie extra ~15%

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

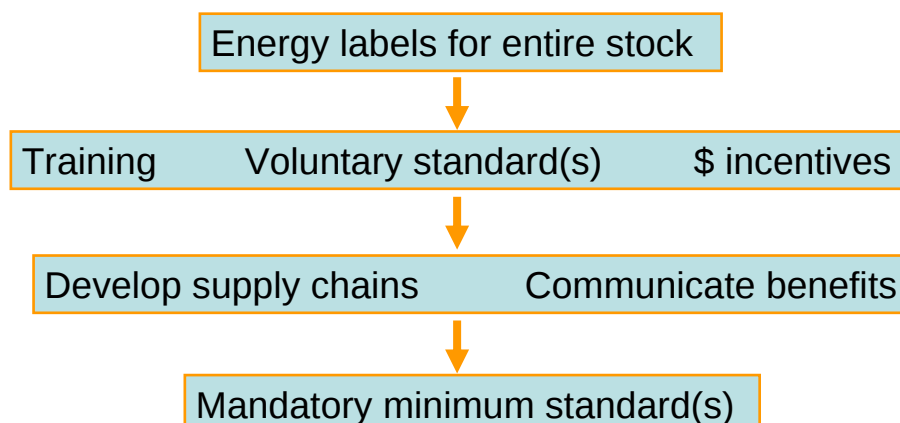
Standards & service innovation

- Work with industry on demonstration projects to achieve voluntary standards
- Monitor & evaluate demonstration projects
- Accreditation & rewards for participating firms
- Random checks – loss of accreditation for non-compliance
- Communicate benefits for clients
- Reform EPCs to be accurate & ambitious

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Towards a strategy for the whole housing stock



Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Thoughts & provocations

- Climate policy can deliver social housing goals but social housing policy cannot deliver CO₂ reduction targets
- In the short-term, the aim should be innovation in service delivery to meet a tough (voluntary) standard
- The market we need to transform is the market for refurbishment
- Regulating property transactions is politically high-risk but is also key to creating demand

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009

Thanks. Any comments?

gavin.killip@eci.ox.ac.uk

Gavin Killip

Re-making Suburbia, RMIT, 12 March 2009