



**‘Teach in’ on Energy and Existing Homes  
– restoring neighbourhoods and slowing climate change**

**Friday 6<sup>th</sup> June, London School of Economics**

**Thursday 26<sup>th</sup> June, National Communities Resource Centre**

**Seminar Report**

**CASereport 56**

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Sponsored by HOME

The logo for HOME, with the word 'home' in a lowercase, pink, rounded, sans-serif font.

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- **Roy Alexander:** Professor of Geography, University of Chester / Technical Adviser to the Ashton Hayes Going Carbon Neutral project
- **Brian Berry:** Director of External Affairs, Federation of Master Builders
- **Jonathan Brearley:** Director, Office of Climate Change
- **Lizzie Chatterjee:** Senior Policy Adviser on Sustainable Buildings, Sustainable Development Commission
- **David Clough:** Contract Manager, Incommunities
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- **Carl Henderson:** Project Manager, Riverside Housing (Regeneration)
- **Matt Leach:** Director of Policy and Communication, Housing Corporation
- **Jo Lewis:** Energy Officer, Incommunities
- **Nick Johnson:** Deputy Chief Executive, Urban Splash
- **Nicole Pillen:** Head of the Low Energy Standards in Existing Buildings project, German Energy Agency (DENA)
- **Olivia Powis:** Project Manager for Environmental Sustainability / Regional Manager for London, National Housing Federation
- **Ian Robinson:** Chief Executive of the Affordable Housing Development Company
- **Russell Smith:** founder of Parity Projects and Parity Eco Solutions
- **Joey Tabone:** Senior Advisor for Climate Change, The Prince's Foundation for the Built Environment
- **Derek Watters:** Sustainable Development Manager, Places for People
- **Phil Webber:** Head of the Environment Unit, Kirklees Council
- **Rebecca Willis:** Independent Researcher and Vice-Chair of the UK Sustainable Development Commission
- **Tim Yates:** Technical Director - Heritage and Stone, BRE

## 1. Introduction

Homes that have already been built account for 99% of our total housing stock. We estimate that 86% of the current stock will still be in use in 2050. Building new homes is carbon intensive and implies many wider environmental impacts. But the existing stock can be made more efficient, at a reasonable cost, to realise many environmental and social gains. Homes are responsible for 27% of our total CO<sub>2</sub> emissions through their energy use, for half of public water use, and they generate large amounts of total UK waste. Large savings can be achieved using technologies that are readily available, cost effective and cheaper than many alternatives. In addition, construction waste contributes to 33% of the total UK waste stream.

LSE Housing held two workshops in June 2008 to explore how to retrofit the existing stock. The workshops specifically looked at demonstrating the links between neighbourhood renewal, social cohesion and energy conservation. Participants included managers of existing homes, regeneration companies, local authorities, and housing associations as well as policy makers. The aim of the workshop was to share experience on how to make the existing stock both more attractive and more energy efficient with big gains for the environment and communities.

The seminars included:

- state of the art advice on how to upgrade existing buildings and homes;
- animated case studies to inspire participants and shed light on the problems;
- networking opportunities with people who are trying to tackle this difficult, but vitally important issue;
- top ideas on where to go next.

Tackling resource efficiency in existing homes requires a comprehensive package of measures to deliver a step change. But the payback from implementing these changes will be great.

This report summarises the aims of the workshops, together with the views of participants on the main barriers to retrofitting the existing stock, and key ideas on 'where to start'.

## 2. Aims

The seminar workshops had 3 specific aims:

- To reach a wide body of practitioners and policy makers in order to inspire change in the way renovation and upgrading is approached to maximise energy efficiency gains.
- To showcase the most successful, inspiring and doable examples of housing upgrading.
- To brainstorm with participants on what can be achieved, what the barriers are, and what next steps should be adopted.

### 3. Summary of the seminar workshops

The workshops attracted 140 participants ranging from practitioners to policy makers from all over the country. A full list of participants is given in Appendix 6. The seminars were based on the Sustainable Development Commission's report 'Stock Take'<sup>1</sup> which argued that it would be possible to; reduce energy use in existing homes by 60%; halve water use; reduce waste in materials by at least 30%; and, overall, to reduce environmental impact by renewing the existing stock and reusing existing buildings and infrastructure. Many path-breaking case-studies were presented, including;

- **DENA (Deutsche Energie Agentur)** the German Energy Agency which has a programme of reducing the energy use in all pre-1980s housing in Germany by 60%.
- The **Affordable Housing Development Company**<sup>2</sup>, which restores derelict terraces in the Anfield area of Liverpool, previously designated for demolition. These homes have all been sold and reoccupied.
- **Kirklees Council** which is using its own special financing mechanisms to support energy reductions and upgrading across all households.
- **Parity Projects**<sup>3</sup>, focusing on a demonstration project in South London – a whole-house renovation of a 3-bedroom semidetached home aiming to prove that energy and water use can be reduced to the lowest levels possible whilst maintaining the expected comfort levels and routines for the occupants, using tools and materials that are readily available to all householders.
- **ZEDFactory**<sup>4</sup> which focuses on design and realisation of energy efficient buildings of all types and sizes, and is promoting the zero carbon mechanisms trialled in BedZED, from which a huge amount has been learnt, and is now applying them to existing areas and blocks of flats.
- **Urban Splash**<sup>5</sup> which is restoring a large area of old, abandoned terrace housing in inner Salford, close to the centre of Manchester, to great acclaim and interestingly finds that this is the one housing type that is continuing to sell well in the current climate.
- **Ashton Hayes**<sup>6</sup>, a village in Cheshire which has set itself the goal of becoming the first small community in England to achieve carbon neutral status.
- The **Building Research Establishment (BRE)**<sup>7</sup> which has looked at a range of case study evidence on how retrofitting can save energy

We also heard presentations from:

- **Federation of Master Builders (FMB)** which represents 12,000 small builders and has become deeply committed to contributing to the carbon reduction programme.
- **Princes Foundation for the Built Environment** which is looking at design principles and the importance of urban design and connectivity in relation to climate change. They have found in particular that engaging with the community and individuals at an early stage achieves much better results.
- **Riverside Group** who are turning around failing stock in difficult areas to restore confidence, through initiatives such as partnership working, stock swaps, de-conversions and shared ownership schemes.

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<sup>1</sup> SDC (2006) *Stock Take: Delivering improvements in existing housing* London: Sustainable Development Commission

<sup>2</sup> [www.ahdc.co.uk](http://www.ahdc.co.uk)

<sup>3</sup> [www.parityprojects.com/](http://www.parityprojects.com/)

<sup>4</sup> [www.zedfactory.com/](http://www.zedfactory.com/)

<sup>5</sup> [www.urbansplash.co.uk/](http://www.urbansplash.co.uk/)

<sup>6</sup> [www.goingcarbonneutral.co.uk/](http://www.goingcarbonneutral.co.uk/)

<sup>7</sup> [www.bre.co.uk/](http://www.bre.co.uk/)

- **Incommunities**, formerly Bradford Community Housing Trust, which has been trialling new initiatives such as wind turbines on a block of flats in partnership with the Carbon Trust.
- **Places for People**, who have a big investment programme in energy efficient measures and are confronting this issue through a variety of initiatives including education, creating and managing communities that people want to stay in.

All presentations can be downloaded from <http://sticerd.lse.ac.uk/LSEhousing/>

Responses from the Office of Climate Change in DEFRA, the Department for Communities and Local Government, the Housing Corporation and the National Housing Federation confirmed the commitment of government and social landlords to changing the way we tackle our existing stock. All these bodies are committed to 'getting our act together', showing what different partners can do and making retrofit work.

#### 4. Interactive Sessions on 'Top Barriers to Retrofitting' and 'Where to Start'

The following tables sum up the findings from participants on the easy wins and major barriers to retrofitting existing housing. Appendix 1 and 2 show the ideas people wrote down in full during the 'brainstorm'.

**Table 1: Interactive session: '3 top barriers-we all have to do it' – Participant responses from LSE workshop, Friday 6<sup>th</sup> June**

| Main issues raised                           | Frequency with which the issue was raised |
|--|---|
| Financial disincentives                      | 52  |
| Skills capacity and information availability | 40  |
| Engagement of public                         | 24  |
| Standards and legislation                    | 18  |
| Government role                              | 12  |
| Diversity of stock                           | 2   |

In both workshops finance was identified as the biggest barrier, with participants calling on Government to play a bigger role in financial incentives, promoting the ideas and developing skills.

**Table 2a: Interactive session: ‘Where to start’ – Doorstep proposals for easy wins – Participant responses from LSE workshop, Friday 6<sup>th</sup> June**

| <b>Main issues raised</b>                                  | <b>Frequency with which the issue was raised</b> |
|--|--|
| Funding  | 35   |
| Legislation and standards                                  | 24   |
| Awareness of public  | 15   |
| Informing practitioners                                    | 11   |
| Skills/training/capacity building in construction industry | 6  |
| Improving partnerships and joined-up working               | 5  |
| Stopping new build   | 3  |

**Table 2b: Interactive session: ‘Where to start’ – Doorstep proposals for easy wins – Participant responses from Trafford Hall workshop, Thursday 26<sup>th</sup> June**

| <b>Main issues raised</b>             | <b>Frequency with which the issue was raised</b> |
|---------------------------------------|--|
| Information, education and support    | 13   |
| Finance                               | 7  |
| Scale of intervention-community level | 7  |
| Legislation and regulations           | 4  |
| Government role                       | 4  |
| Capacity                              | 2  |

Again funding and finance were identified as major factors in tackling the difficult issue of making the existing stock more energy efficient. However, practitioners also want clearer legislation and standards, together with more information and support.

## **5. Outcomes**

Some follow-through measures have already emerged as a result of the workshops including:

- a) a major commitment from the National Communities Resource Centre to become carbon neutral with offers of help from two of the presenters concerning energy efficiency advice and renewable energy installation;
- b) an action oriented site visit provided free by the Affordable Housing Development Company taking participants after the Trafford Hall seminar to visit their dramatic renovation site in Anfield, Liverpool;
- c) commitment from government, housing associations and local authorities to learn more about the German energy efficiency programme that was presented in the workshop held at LSE.

LSE Housing is now planning two follow through events for which we are seeking new funding:

- an event at LSE with the Deutsche Energy Agentur (DENA) in November;
- a follow through hands-on workshop at Trafford Hall with housing associations, local authorities, and other practitioners to explore in more detail how to develop and apply this approach in their own stock.

## **6. Conclusion / next steps**

The seminars generated a high level of enthusiasm for action and provided much information about the difficulties surrounding retrofitting existing buildings together with some outstanding examples of how much can be achieved at a basic level with manageable costs and how a higher level of upgrading can be tackled. We identified the following key messages:

- Organisations need clearer government legislation and standards for energy efficiency.
- Energy efficiency measures should be required whenever refurbishment is undertaken. This provides landlords and owners with a relatively easy opportunity to install additional energy efficiency measures.
- Gradual refurbishment where there are existing residents, as opposed to a 'whole-hit' approach, is easier and can be cheaper and less disruptive to those living in the properties.
- Funding measures and tax incentives must be put in place for both individual home owners and landlords to enable change, modelled on the German programme.
- More information on local and national suppliers and installers, sources of help, DIY and grant information is needed. There is a lack of skilled people to implement new energy saving measures. Some wider form of accreditation is necessary.
- It is vital to get people on board if we are to change energy use behaviour, at the same time as introducing physical upgrading. Communicating with communities, residents and individuals about the techniques and their benefits is key.



## Appendix 1: Interactive session: 3 top barriers – We all have to do it (Participant responses from LSE workshop, Friday 6<sup>th</sup> June)

### a. Financial disincentives

- Funding-identifying **funds to upgrade** existing stock
- High capital costs/**long term pay back**-an issue if people don't want to stay in their house for a long period. People also don't perceive an increase in the value of their home
- Nonsense of **demolition funding/subsidy**
- Lack of actual **war fund** as this is war! Wars have funding and cabinets
- Lack of **perceived value** in bringing homes up to higher standards linked to how to recover lost savings from energy bills to fund upfront capital expenditure.
- Little incentive for house holders, particularly the **early adopters**
- **Payback info** remains scarce and unconvincing
- Capital investors may not necessarily **feel the financial rewards**-i.e. landlords vs. tenants
- **Upfront costs** put off individual households and lead to apathy-'wait and see' approach
- **Perverse incentives**
- **Hidden costs** of change-risk
- **Too few resources** for a crowded policy agenda and too little clarity
- Making the **intangible benefits** count, particularly for elderly home owners
- **Competing** for priorities for public funding
- **Unfair prices** paid to micro-generators-early adopters need to be rewarded
- Lack of stable, **long term** central government incentives
- **Costs of materials and labour**
- VAT- £20million pa development programme-wouldn't want to pay VAT on it
- **Energy is too damn cheap!** (focus on fuel-rather than heat or cooling. Poverty doesn't help)
- Funding-finding the correct level of funding or assistance when grants are being reduced in other areas. **Affordable housing grant cut** when we now have to achieve level 3
- Funding good quality **advice and results**
- No **grants** available-grants need to be 100%
- Lack of comprehensive and centralised funding to allow **housing associations** to undertake large-scale retrofit including VAT offers
- RSLs bear the increased capital costs-the tenant gets the revenue benefit. As rents cannot increase, how can extra costs be limited? RSL **funding of refurbishments** where rents cannot increase to fund energy efficiency works is problematic
- Tenants don't see the incentive for saving energy sometimes because of the '**service charge**'

### b. Skills capacity and information availability

- **Lack of information** about costs for individual householders and small landlords-how much do different measures cost and what are the payback periods?
- Lack of **capacity in construction** and skills sector
- Delivery-even if individuals' interest and desire to undertake improvements increases and policy supports this, there is an **absence of skills** across range of trades, with knowledge and skills on low carbon opportunities and solutions to meet demand if/when it starts to increase
- Fear of having to try to find a **good quality, understanding, builder**
- Lack of capacity and can't exploit **economies of scale**
- Lack of capacity of **builders' knowledge** and skills
- Knowledge about what **technologies** to implement
- Greater support and information
- Easily **accredited**
- **Lack of trained people** to install the numbers of measures required to achieve 80% reduction in CO<sub>2</sub> levels by 2050
- Future **commitment to R&D**-affordable technology is required
- Lack of **competence** in the architecture sector
- Lack of **competence** in building trades
- Lack of knowledge and concerns about making **mistakes**-can we 'future proof' what we do now
- No **centralised place** to collect data on product performance, tenant satisfaction/feedback, lessons learnt and for exemplars

- Well proven tested examples of the capacity for **eco-efficient refurbishment** of different housing block types
- Insufficient sharing of **best practice**
- Equivalent needed of **Zero Carbon Hub** for new homes
- Unknown lifestyle **cost** and unknown true running costs

#### c. Engagement of public

- The will-even the well educated still lagging on action due to **conflicting** and **changing messages** about climate change and importance of style (4x4s, patio heaters etc)
- Lack of **understanding** and awareness of this complex issue partly due to absence of **centralised information**-what, where and how-is still not obvious
- **Hassle** to tenants and lack of knowledge of *how* to make homes more energy efficient and no incentives to drive this
- Little engagement with homeowners to make it '**easy**' to retrofit their homes
- No **demonstrative** opportunities-to see is to believe
- Tailored advice-lack of '**green time**' service
- **No mass movement** for change being mobilised-need big consumer brands, local schools and authorities, central government, print and other media/celebrities behind one big push-linked to regulation/incentives programme.
- Consumer **apathy**-turning off lights etc is seen as being 'adequate' and so no need to go to more significant measures.
- People are only **prepared to pay a very small premium** for EE/Green Home (less than £500) and any fuel savings are spent on having foreign holidays
- Residents' **acceptance** of measures. We find if you reduce water pressure we get complaints-its very unpopular
- Concerns over long-term **risk** of not **recouping of costs** especially if people move every few years and fear not seeing a return on their investment
- Lack of **will** from householders, who have the money to do the work but **don't know what the end result** will be

#### d. Standards and legislation

- Setting **standards** for various types and age of property
- No **code** or standard guidelines **for existing homes**, can't compare to code for sustainable homes and **no specific time** applied to when people should look at this...e.g. on moving, or every x years
- Need new **standards for refurbishment** for the entire building's energy performance-a collaborative effort involving government/research institutions/builders etc and a linkage to a 'code for sustainable refurbishment'
- Lots of systems/research around etc and it would be useful to have a comprehensive standard to aim for e.g. **Code for Existing Buildings** and a very easy 'how to' guide which would also hopefully incentivise suppliers
- Existing appraisal/methods will deem work **unjustifiable**
- **Normal valuation** pays little or no regard to eco works
- Even **minimum building regulation** requirements not widely known or enforced
- Need **better legislation**-but also having resources and expertise
- Assumption that traditional buildings are inherently energy inefficient compared to new build which is now enforced by **government SAP**
- **Level playing field** to judge results against i.e. CSH for refurbishment or percentage improvement standard
- No real extensive regulatory requirement means **low priority**

#### e. Government role

- Capacity-**competing priorities** from government drive RSLs to focus attention on other agendas
- **Lack of interest/knowledge** by decision makers
- Lack of political **leadership** and of **coordinated response**
- **Conflicting** priorities and too many messages, from too many players.
- **Duplication** of activity, policy contradictions.
- Government-they **do not mean** what they say
- The '**someone else can do it**' mentality

- Government **policy**-wholesale demolition, no funding for refurbishments, no incentives for DIY
- **Circle of blame**-government-industry-consumers. A lot of chicken and egg waiting for others to act. Need far more co-ordinated strategy and effort.
- Policy level-key: failure to **maximise the potential of EPCs**. Overall-a failure to develop a coherent suite of policies to address this challenge and to provide a framework for caution
- Poor **local authority** approvals and involvement
- Exclusive government focus on **new build housing** (with implications for policy, planning, regional housing pot etc)
- **Prevarication** by Government saying it needs new technology, that no-one's done it before and that we can't afford it-all of these are untrue

**f. Diversity of stock**

- On a mass scale: diversity of stock means a range of solutions is required and this **reduces the cost-effectiveness**
- **Ownership structure** of stock; owner-occupiers are not a consolidated homogenous group- each household has their own drivers, priorities, etc.

## Appendix 2a: Interactive session: 'Where to start' – Doorstep proposals for easy wins (Participant responses LSE workshop, Friday 6<sup>th</sup> June)

### a. Funding

- Reverse the **perverse incentives**
- **Loft and cavity insulation** should be funded through CERT-we are already running a programme but the funding is not there for other items
- We need a programme of **replacing old boilers** with new A rated condensing boilers with incentives for doing this
- Free **draught proofing**
- Grant-aided centrally run programme to **install solar panels** on all properties that have max insulation and draught proofing by 2050 (using the Leicester model if it works). Maybe means-test a limit to lower council tax band houses.
- Set up a national **housing refurbishment fund**. A small percentage of tax collected over next 50 years to go into a housing refurbishment pot. We can decide mechanism for spending later (the war fund idea)
- Sort out a way of incentivising **private landlords** to make these changes. Tenants are often the most interested, but have no incentive to apply measures!
- Grass-roots incentives are important-homeowners also need to see **early benefits through financial subsidies** etc
- Give financial incentives to the early adopters. Use **tax breaks**: 60% tax back in first 2 years, 40% in next 2 years, then 25% and 15%
- Financial incentives (e.g. lower or **0% VAT** on refurbishments); guaranteed payment on **electricity exported** to grid by households; reductions in **stamp duty** for highly EPC rated homes
- Provide funding through a **cash mechanism**
- Implementation and fiscal incentives e.g.:
  - **Stamp duty rebate** on properties improved within the first year of moving in
  - National **Council Tax rebate** scheme
- Increased financial incentives for home owners i.e.
  - **Low interest** rate loans (similar to German scheme maybe)
  - Reduced **VAT** on materials and Green Building initiatives
- Invest in energy efficiency measures, LZC **technologies** and the **skills** and capacity to be able to deliver the aims
- Adjust CERT/S.O. to encourage investment in **direct heating**, or an alternative incentive
- Regulate/incentivise lenders to give extended **Green mortgages** and invest in renewables in the short and longer term
- Present the solutions as a **business opportunity** and tap money from economic development budgets (e.g. RDAs), training (Learning and Skills Council, Sector Skills Councils), Higher Education research
- Stimulate the market with **information** and **market transparency**
- Review **tax system** to discourage large/oversize housing developments
- Engage more effectively with builders-incentivise the **building industry**
- Hypothecation of **green taxes**-distributed to grants/incentives for energy efficiency
- **Make it clear** what the costs are of the different options and payback periods. Compare it to some other (more typical) housing improvement works that go on, and add it to the HIP/EPC
- Plug into money available in **research council** programme-living with environmental change, local authorities, research council
- Look at what they do in **Germany** and be realistic about the need to fund this improvement and not rely on energy companies to give out pithy bits of funding here and there
- Engage private sector landlords to invest in energy efficiency-**tax breaks**?
- **Fixed rental incomes** have to pay for increased standards and customer expectations. Can only make our money stretch so far-something has to give, so **modify rent system**
- Persuading our board to invest in more expensive to install, but cheaper cost-in-use methods of heating would **benefit tenants, not the association**-both need to benefit
- Need **resources**-money and time to work with other practitioners

## b. Legislation and standards

- 1% of our housing stock is added each year in the form of new housing. A simple cost-free Government decision could be to **add to the building regulations** so that every new build has to have at least one type of renewable energy component e.g. solar collectors.
- Commit to regulation to be developed in close consultation with industry reps i.e. CIC, Constructing Excellence, etc. Put into place legislation with **realistic do-able measures**, however small and phase in other measures.
- Having joined-up and **universal standards/targets** across the whole construction/maintenance/etc sector, both private and public.
- Clear, **simple regulatory framework**.
- Minimum green **standards** at point of sale-using EPCs
- **CSH-expand to all homes**, EPC good start but needs to go further-exterior sign of EPC/CSH standard (window sticker?)
- Set a **decent homes plus** target
- Make it mandatory (linked to EPCs) for every property, when it changes hands, to reach a higher grade (Do EPCs every 3 years, irrespective of changes to a) keep track of this and b) to get aggregate picture)
- **Ban**: stand-by button/patio heaters/air conditioning/conservatories etc also ban cold-fill on washing machines
- Better **joined-up thinking**-too many different initiatives with the same goal-decent homes/code for sustainable homes/EPC/EcohomesXB/ etc
- Get AECB/Carbon Lite to develop a **refurbishment standard** and publicise it as a voluntary standard at first. Regulation can come later
- Legislate like the **Australian example**:
  - Ban incandescent light bulbs in 5 years
  - Grant **performance certificates** for minimum standards in energy saving
- **Decent Homes** standard-something to aim at
- **Smart meters** in all homes
- Develop **new standards for refurbishment**
- Increase **building regulations** so all new homes and refurbished (major ones) must improve energy efficiency
- **Common agreement** on the scale and nature of the issues
- **Top-down** support
- Genuine **commitment** from all parties
- Less **bureaucracy!**

## c. Awareness of public

- Raise awareness that energy efficiency measures are **simple** and can be **cost effective**
- Highlight-**quick wins** that affect residents and homeowners. Improve door-step information
- Clear, easy '**one stop shop**', perhaps a single agency like DENA to identify and source funding for projects
- Greater **clarity** on the true carbon savings of different technologies: in-built carbon/shorter life-cycles
- **Community-level** change (street/small area)
- Focus on an **area**-make it easy for people through bulk buy savings/contracts/arranging the work/identifying contractors e.g. 'we have this special deal for you'
- **People on the ground** to advise:
  - Widen remit of AST and provide resources
  - Go to homes and advise
- Lots of **publicity on dangers of not** e.g. infra-red ads showing homes leaking
- Make it **stupidly clear** to everyone what measures can be taken by home-owners to increase energy efficiency. Maybe even train estate agents to advise on how to increase value of houses in this way?
- Encourage **exemplars, formal demonstration homes** in each local authority and RSL, then suburbs
- Increase public understanding of **building physics, fuel supply and security**
- Do the people, not just the kit. **Behaviour** is as important as changes to buildings (and can destroy perceived wins)
- Consider where the real energy use comes from i.e. need to change **how people live** in their homes and how that impacts energy consumption

- Greater public education on **broader climate change** impacts. Should be ongoing and easily understood/accessible information
  - How do we tap into **private landlords** who a) don't even live in the area of the property or even the country in some cases, b) don't care who lives in it or what it looks like, c) don't even know who lives in the property!
  - Increase **understanding** of the topic
  - Need widespread **education**
- d. Informing practitioners**
- Make **expert knowledge** and best practice more widely available. Out-reach through road-shows with network of **local exemplars**
  - Share **best practice**. Let people see, hear and touch the improvements that can be made. Coordinate through regional development agencies
  - Gather evidence of **impact of EPC** ratings on value of homes, e.g. international.
  - **More refurbishment examples**-some 'sexy', some 'real world', with proof that c-based refurbishment adds value
  - Use university halls of residence, MOD and NHS estates as **test beds for retrofit** possibilities
  - **One-stop shop** for energy efficiency information that homebuilders can access and understand
  - Get **pilot programmes** by local authorities (e.g. Kirklees, Uttlesford) evaluated properly and messages fed back to government so they understand what *can* be done
  - Get officials and ministers to **visit case studies** around UK and abroad. Best form of inspiration
- e. Skills/training/capacity building in construction industry**
- Build capacity in **maintaining craft skills**
  - Build capacity in dealing with **new technologies** and retrofitting
  - **Training** for builders and planners because a building that has refurbished in a bad quality is killing the whole activity
  - **Build knowledge and construction capacity** with seminars and courses. Reinforce this by a rating system for builders- [www.mygreenbuilder.com](http://www.mygreenbuilder.com)
  - Training all **contractors** on big impact items they can fit within standard projects (eventually backed up by regulation on existing home CO2 emissions). Make an inspirational target for 7-10 years time
  - Mobilise the **DIY enthusiasts**. Measure the market and train people
  - Bring **experience from Germany**- civil servants and professionals
- f. Improving partnerships and joined-up working**
- Better **partnerships** between local government, RSLs and private sector to deliver measures in low carbon zones
  - Build **regional partnerships/networks** to coordinate action, disseminate information, provide demonstrations
  - Increase level of **cohesion** in the housing association sector to guide refurbishments
  - All (or most) actors like government, builders, companies must work together, not millions of different activities, that confuses
  - **Local government** engagement and buy-in of regulation
- g. Stopping new build**
- **Limit existing new build** agenda
  - Get government to **do more thorough, inclusive economic assessment** of bulldoze and build series regenerate. Alarming figures quotes
  - **Forget Eco-towns**: focus on making our existing towns and cities more efficient

## Appendix 2b: Interactive session: 'Where to start' – Doorstep proposals for easy wins (Participant responses from Trafford Hall workshop, Thursday 26<sup>th</sup> June)

### a. Information, education and support

- Access to information-**mass TV advertising** and internet-offering access to information e.g. What is a **carbon footprint**? Can we measure it in our community? What **works best**-solar panels? Air sourced heat pumps?
- Free follow-up **support** to EPC e.g. How to access cheapest insulation/cavity wall insulation etc
- **Encourage** and **educate tenants** to turn down heating controls/switch off standby
- **Insulate** don't generate
- Honesty and openness with the public-**make the facts clear**-no spin or politics
- Education in **schools** on climate change, children can influence parents.
- Get business community engaged through **RDAs**
- Making the **technology understandable** at local level
- Introduce **Car Clubs**-everywhere such as the BedZED Car Club which can bring about a 11% decrease in emissions.

### b. Finance

- Organise ways to **bulk purchase** for energy efficiency products to give groups of RSLs economies of scale
- Use some of the massive **tax** generation to fund energy efficiency **grants**
- For social housing-introduce a **financial mechanism** to encourage sharing of savings as part of investment costs
- Reform **housing association rent restructuring guidance** to create the additional financial capacity for retro-fit investment over and above insulation measures in existing stock. This will help make affordable housing genuinely affordable
- Reform of the **Local Authority Housing Subsidy Scheme** so that we can invest £10million pa into our housing instead of paying it to central government where there is a £190million surplus in the fund in 2008/09
- Remove **VAT** from energy efficiency measures
- Make **mortgages conditional** on energy efficiency measures

### c. Scale of intervention-community level

- Look at it as a **community issue** not house by house
- Encourage communities to take **collective ownership**
- Community **involvement** cannot just be a buzzword. Fusion 21 SHPs combine refurbishment construction activity with a training and employment programme
- **People** are the key: communities like Ashton Hayes need to be replicated in low income communities
- Promote the concepts to **BME** communities

### d. Legislation and regulations

- Hold **supermarkets to account**, including through energy comparisons
- There is pressure on the individual to change their energy usage, where is the **pressure on the corporate world** and providers?
- Renew **planning laws**
- More teeth for the **EPCs**

### e. Government role

- **More action** less talk
- Government **put their money** where their mouth is! Genuine will to conserve energy rather than just talk
- Stop depending on '**cheap oil**'
- Maybe fewer **grand gestures**. More about smaller measures which will help more people

### f. Capacity

- Provide match funding for specific fixed-term posts within organisations to **map out energy efficiency plans** for properties
- Develop and roll out cutting edge **technology**

### Appendix 3: Programme of event held at LSE – Friday 6<sup>th</sup> June

- 08.30 Breakfast
- 09.00 Welcome & introduction from the Chair, **Anne Power**, LSE and Sustainable Development Commission
- 09.05 Presentation: Stock Take – delivering resource efficiency improvements in existing homes, **Lizzie Chatterjee**, Sustainable Development Commission
- 09.30 Response: What government can do to help, **Jonathan Brearley**, Office for Climate Change  
Discussion
- 10.00 Case study 1: Germany can do it – why can't we? The new 60% programme for all pre-1980s housing, **Nicole Pillen**, DENA (Deutsche Energie-Agentur GmbH)  
Discussion  
Round up comments
- 10.45 Refreshments
- 11.00 **It must be done – so how?**  
Case study 2: Eco-renovation projects, **Russell Smith**, Parity Projects  
Case study 3: Rescuing the worst property, **Ian Robinson**, Affordable Housing Development Company  
Case study 4: Can retrofitting save energy?, **Tim Yates**, BRE  
Questions & answers
- 11.55 Interactive session: 3 top barriers – we all have to do it
- 12.15 **Powerful organisations are driving the retrofit agenda**  
Provocation 1: Design in existing spaces: remodelling and retrofit, **Joey Tabone**, Prince's Foundation  
Provocation 2: Why small builders are big news, **Brian Berry**, Federation of Master Builders  
Provocation 3: Housing associations have a massive stock to upgrade, **Matt Leach**, Housing Corporation  
Provocation 4: Housing associations are making retrofit work, **Olivia Powis**, NHF  
Questions & answers
- 13.00 Response: Getting the act together, **Mark Davis**, CLG
- 13.15 Where to start – our doorstep proposals for easy wins, **Anne Power**
- 13.30 End / lunch



## Appendix 4: Programme of event held at Trafford Hall – Thursday 26<sup>th</sup> June

- 09.00** Tour of Trafford Hall: *Scrutinising energy saving in listed building and the zero carbon rebuilt stable*, **Chris Locker**, Social Enterprise Manager, Trafford Hall
- 09.45** Registration with refreshments
- 10.15** Welcome from the Chair, **Anne Power**, LSE and the Sustainable Development Commission (SDC)
- 10.20** Presentation: *Stock Take – delivering resource efficiency improvements in existing Homes*, **Lizzie Chatterjee**, SDC
- 10.40** Response: **Becky Willis**, Independent Researcher / Vice-Chair of the SDC
- 10.50** Discussion
- 11.05** Case study 1: *Can we save more old homes? Should we?* **Ian Robinson**, AHDC
- 11.20** Questions and Answers
- 11.30** Break with refreshments
- 11.45** Case Study 2: *Local councils can help existing homes and communities save energy*, **Phil Webber**, Kirklees Council (TBC)
- 12.00** Case Study 3: *Eco-renovation projects*, **Russell Smith**, Parity Projects
- 12.15** Questions and Answers
- 12.30** **Provocations**
- Provocation 1: *It's our job to tackle the existing stock*  
**Carl Henderson**, Riverside Group
  - Provocation 2: *It's easy to get it wrong. How do we know what works?*  
**Jo Lewis & David Clough**, Incommunities
  - Provocation 3: *It can be done if we treat housing and communities as assets*  
**Derek Watters**, Places for People
- 13.00** Questions and answers
- 13.15** Lunch
- 14.00** **It must be done – so how?**
- Case study 4: *Are zero emission refurbishments possible?*  
**Steve Harris**, Zed Factory
  - Case study 5: *What do Chimney Pot Park and Park Hill show?*  
**Nick Johnson**, Urban Splash
  - Case study 6: *How will Ashton Hayes help to save the world?*  
**Roy Alexander**, Ashton Hayes
- 14.45** Questions and answers
- 15.00** Where to start – our doorstep proposals for easy wins  
**Anne Power**
- 15.15** Depart
- Optional trip to Liverpool, Anfield area to view AHDC development – transportation to and from Trafford Hall provided

## Appendix 5: Speaker biographies

### ROY ALEXANDER

The Cheshire village of Ashton Hayes (pop. 1000 approx.) is aiming to become the first small community in England to achieve carbon neutral status. We want our children and future generations to know that we tried to do our bit to stem global warming and we encourage other communities to follow suit. Our project began in January 2006 and by July 2007 we calculated that the community's domestic carbon footprint had been reduced by 20%. We are now investigating a series of initiatives to reduce this further. These include increasing recycling and levels of insulation, localised waste treatment for energy production and the development of a renewables-powered microgrid. The film that we made about the first year of our project, *Our Footprint, Our Journey*, won a Clarion Award for climate change communication in September 2007 and the project as a whole won the Energy Institute's Community Initiative Award in November 2007. See our website ([www.goingcarbonneutral.co.uk](http://www.goingcarbonneutral.co.uk)) for further details.

Roy Alexander has been a Geography lecturer for almost three decades, working at the Universities of Liverpool, Dublin and currently, Chester. His research has been broadly concerned with environment and landscape (pollution, erosion, plant distribution patterns) and currently focuses on aspects of climate change in Cheshire and south east Spain. He has edited two books and published more than 40 research articles and other items. He is technical adviser to the Ashton Hayes Going Carbon Neutral project where he oversees data collection and analysis in order to assess the carbon budget for the parish. He is also a member of the steering group for CRed Chester, a web-based community carbon reduction system, with responsibility for administration, analysis and reporting. He became RSK Professor of Environmental Sustainability in August 2007.

### BRIAN BERRY BA(Hons) MSc

Brian Berry has been Director of External Affairs at the Federation of Master Builders (FMB) since May 2007, where he has responsibility for UK and EU policy, public affairs, and media relations. He is a frequent commentator in the media on issues affecting the building sector. Prior to his current appointment Brian was Head of UK Public Policy at the Royal Institution of Chartered Surveyors (RICS) based in London. During his time at the RICS Brian was seconded to Brussels to set up the RICS European Policy Unit. Brian was born and educated in Devon and has two degrees in history and European policy. He started his career as a teacher at The Charterhouse Square School in central London and was made a Freeman of the City of London in 1989.

### JONATHAN BREARLEY

Jonathan Brearley is currently the Director of the Office of Climate Change (OCC)

- The OCC is a cross-Departmental climate change strategy and co-ordination unit. It is a shared resource for *all* Ministers, providing consolidated advice on climate change.
- The OCC aim is to find where it can add value to cross-Governmental work and use a consensus-building approach at every stage.

Within the government, Jonathan previously worked for four years at the Prime Minister's Strategy Unit, working on policy projects ranging from local government to prisons and probation. More recently he worked at (what was) the Office of the Deputy Prime Minister, developing the Local Government White Paper.

### LIZZIE CHATTERJEE

Lizzie Chatterjee is the senior policy adviser on sustainable buildings at the Sustainable Development Commission. She previously worked at Arup's integrated design office as a building services and environmental design engineer on building and master-planning projects. In her current role, she leads on the SDC's advice to government departments on sustainable buildings policy. This role involves co-developing policy with government on an 'inside track' basis as well as auditing government progress towards sustainable development in key policy areas. Current areas of focus are housing, construction, schools and health buildings.

### DAVID CLOUGH

David is one of three Contract Manager's employed by Incommunities (formally known as Bradford Community Housing Trust) from its inception in 2003. Prior to this he worked for the Bradford Council Housing department for 18 years.

### **MARK DAVIS**

Mark Davis works in the Climate Change & Sustainable Development team at Communities and Local Government. Among other things this team co-ordinates the Department's overall interests and responsibilities in climate change, with a particular focus on the built environment. Mark's responsibilities include CLG's zero carbon new homes policy and policy development in relation to climate change and existing buildings. Mark joined the Department in 2003, after a career in infrastructure finance in the City.

### **STEVE HARRIS, BSC Hons DipArch (UCL) RIBA**

Steve has worked at ZEDfactory (the Architects of BedZED) since 2000 and has been working with Bill Dunster since 1994. He heads the practice's involvement in the Government's T-ZERO project as well as having cross-office input on construction detail, renewable energy systems and energy economics. He is the Technical Director of ZEDfabric, ZEDfactory's renewable energy equipment import and sales company. He recently co-authored a number of studies looking at renewable energy payback and building physics. Between 2002 and 2005 he was also a Senior Lecturer in Environment and Energy at East London University. As well as working at ZEDfactory, he is currently building his own Zero Carbon home.

### **CARL HENDERSON**

Carl is currently Project Manager for Riverside Housing (Regeneration). He has responsibility for asset management and is leading on the procurement of Energy Performance certificates through Fusion 21 amongst other things. Previously Carl was Property Services Manager for Riverside Housing Cheshire Division. He has a passion for the construction industry and is a member of the Chartered Institute of Building. Carl is also external examiner to John Moores University.

### **MATT LEACH**

Matt Leach joined the Housing Corporation as Director of Policy and Communication in January 2005. Prior to that he was responsible for the establishment of the London Thames Gateway Development Agency, and has previously held a range of senior posts in central government, ranging from planning reform to management of Cabinet committee business. From 2000-2001 he was private secretary to Rt Hon Nick Raynsford MP, then Minister for Housing. His role at the Housing Corporation encompasses strategic policy development, communications, research and analysis and the promotion of best practice within the affordable housing sector.

### **JO LEWIS**

Jo is the Energy Officer for Incommunities (formerly Bradford Community Housing trust). Previously she was Energy Officer at Wakefield and District Housing

### **NICK JOHNSON**

Nick Johnson is Deputy Chief Executive at urban regeneration company Urban Splash. A chartered surveyor by profession, Nick has always been involved in design in the built environment.

Nick has worked with Urban Splash for over 12 years, first as a consultant and latterly as a director. Nick is currently responsible for over £300m of development projects including the 3<sup>rd</sup> Millennium Community project and with various architects from Alsops and Foster and Partners to new practices who have never before built in the UK.

Nick is the Edward P. Bass Distinguished Visiting Architecture fellow at Yale University in New Haven, USA and has recently been appointed a commissioner for the Commission for Architecture and the Built Environment (CABE) following 5 years as a regional representative.

Nick is Chairman of Marketing Manchester, the agency with responsibility for promotion of Manchester and its region around the world, he is a director of Castlefield Gallery – one of Manchester's leading contemporary galleries and sits on a number of advisory groups both within and outside the arena of the built environment.

### **NICOLE PILLEN**

Nicole Pillen is head of the Low Energy Standards in Existing Buildings project at the German Energy Agency (DENA). The project involves 143 buildings and proves that energy-efficient methods of construction can reduce the energy requirements of a building by up to 80% on average. The

Agency's many objectives include the rational and thus environmentally friendly production, conversion and use of energy, and the development of sustainable energy systems with a greater emphasis on renewable energy sources. Nicole has worked at the agency since 2003. Prior to this, she worked in building services management systems as an engineer. She graduated in 1997 from the Technical University of Berlin with an engineering diploma in building services.

#### **OLIVIA POWIS**

Olivia Powis is project manager (since May 2008) for the National Housing Federation's work on Environmental Sustainability. She is also Regional Manager for London at the National Housing Federation working on a range of policy issues for London housing associations including low cost home ownership, social regeneration, community cohesion and refugee housing. She was a graduate trainee, on Local Government's fast-track programme for Local Government at the London Borough of Newham for two years. Following graduation from Manchester University in Linguistics and Social Anthropology, she completed a Post Graduate in International Business and French at Manchester Business School, and later a Post-Graduate in Local Government Management at the University of Warwick.

#### **IAN ROBINSON MCIEH, MCIH, T.ENG. CEI**

Ian is the Chief Executive of the Affordable Housing Development Company (AHDC), who specialise in refurbishing abandoned and unpopular housing into very high standard accommodation and rebuilding local communities by delivering "Market Lift". This is achieved without direct financial input from either Local or Central Government. AHDC's latest Multi-Million Pound project in Liverpool received the prestigious Regeneration Award from New Heartlands (Pathfinder) at their "Strictly Regeneration" event on the 8<sup>th</sup> May 2008, following being selected as the 'preferred partner' by Arena HA and Liverpool CC. The results are always 'way' above usual standards and drive confidence back into the market by providing 2050 standards of insulation, heating, conservatories and en-suite facilities

Ian is qualified in Housing, Environmental Health and Fuel and Energy Engineering. His career in Housing/Health started in 1966 and he became one of the youngest Local Government Directors of his professions' in 1982. He Retired from Local Government in 2003, as Director of Community Services in Cambridgeshire and set up his own successful Company, specialising in Renewable Energy Projects and Housing Consultancy.

Ian's aim now is simply to drive forward projects that will dramatically improve the environment that we all share especially Housing. Ian fervently believes that AHDC's model is "The most exciting development in Housing in Fifty years!" and celebrates the fact that the AHDC model is being replicated in Towns and Cities all over the UK where there is Housing Market dysfunction.

#### **RUSSELL SMITH**

Russell Smith is a Chartered Civil Engineer with experience in a range of managerial and technical roles in construction and consulting companies. He was switched on to the colossal untackled issue of the existing building stock following a stint with Forum for the Future's Engineers for the 21st Century scheme on 1999 and has worked ever since towards tackling change from the 'bottom up'. The first task was to renovate a 'hard-to-treat' building to thoroughly understand the issues, to gain knowledge and experience of the materials, techniques, design approaches, and crucially, the in-situ performance of the installed measures. The award winning Carshalton Grove Eco-Renovation Demonstration Project was born, which has achieved a +70% reduction in CO2 emissions and regularly opens its doors to visitors to provide inspiration and practical advice. He is founder of Parity Projects, a company specialising in the delivery of both single and multiple dwelling eco-renovations, for private individuals and owners of property portfolios, and now also Parity Eco Solutions a consultancy providing feasibility, design and training in eco-refurbishment.

#### **JOEY TABONE**

Joey Tabone is Senior Advisor for Climate Change at The Prince's Foundation for the Built Environment. He is responsible for advising on impacts of and adaptation to climate change within cities and other places where people live. He focuses on how neighbourhood design characteristics and building type hold one of the keys to a reduced carbon future. He comes to The Foundation from the former Australian Greenhouse Office now the Australian Government Department of Climate Change where he led on a variety of industry and community programmes including the Australian

Government flagship programme the \$AUS400 million Greenhouse Gas Abatement Programme and the Coal-mine Methane Reduction Programme for the energy and mining sector. He preferred mode of transport is a bicycle.

### **DEREK WATTERS**

Derek is the Sustainable Development Manager for Places for People

### **PHIL WEBBER**

Philip Webber is Head of the Kirklees Environment Unit. He has been leading Kirklees environmental initiatives since 1990. Current programmes of work in Kirklees (which amount to over \*6m direct investment per annum) include a district wide warm Zone home improvement scheme, town wide district heating, a renewable energy loan scheme and carbon budgeting. Prior to working in local government Philip worked in scientific research at Imperial College London, where he gained his PhD, and as a policy analyst. He is a member of the Institute of Environmental Management and Assessment (MIEMA).

### **REBECCA WILLIS**

Rebecca Willis is an independent researcher and Vice-Chair of the UK Sustainable Development Commission. Her work focuses on environmental politics and policymaking at both a national and regional level. She has researched and written on issues such as climate change, energy policy, public attitudes to the environment, government spending and taxation, and the environmental and social impact of new technologies.

As Vice-Chair for Whitehall, Rebecca represents the Sustainable Development Commission in central government, working with government ministers, advisers and officials to ensure that government policy reflects sustainability goals. Her freelance portfolio involves work with a range of organisations including DEFRA, Greenpeace, The Lake District National Park Authority and Creative Concern.

Recent projects include:

- *The Disrupters: Lessons for low-carbon innovation from the new wave of environmental pioneers*, a profile of eight innovators - The Disrupters - who are pioneering solutions to climate change.
- *A Green Living Initiative*, co-authored with Professor Paul Ekins and published by the Policy Studies Institute, analysing the role of tax incentives in promoting sustainable households.
- Strategic advice to the West Midlands Development Agency and Forum for the Future, as part of the development of their low-carbon economic strategy.

Rebecca is a regular speaker at conferences and seminars, and has written for *The Guardian*, *New Statesman* and the journal *Renewal*. She is an Associate of the think-tank Demos, and of environmental group Green Alliance. From 2001-4 she was Green Alliance's Director. Previously, Rebecca spent two years as a policy adviser at the European Parliament in Brussels, specialising in international environmental issues.

Rebecca has a degree in Social and Political Sciences from the University of Cambridge, and a masters degree in Environment, Development and Policy from the University of Sussex. She lives in Cumbria with her husband and two young sons, and divides her time between London and the Lake District.

### **TIM YATES**

Dr Yates has more than 30 years involvement in the built heritage. He started as a field archaeologist in Northampton and then moved through the analysis of materials, particularly medieval glass, through the geochemistry of recent carbonate deposits to the weathering of buildings. He has been at BRE since 1986, working initially on the effect of acid rain and air pollution on buildings and building materials, then looking at climate change and buildings, and many years of work on the drafting of British and European Standards for the construction industry.

He is currently responsible for projects relating to the long term performance of buildings and including the selection and testing of stone and mortar for new and heritage buildings, the assessment of building defects, and the sustainable refurbishment of older houses.

## Appendix 6: Participant List

### A: Workshop 1. LSE – 6<sup>th</sup> June 2008

|                         |                                      |
|-------------------------|--------------------------------------|
| Adebayo, Mary           | Central & Cecil Housing              |
| Alker, John             | UK Green Building Company            |
| Andryszewski, Stanislaw | Leicester Regeneration               |
| Ball, Malcolm           | Olympic Legacy                       |
| Berry, Brian            | Federation of Master Builders        |
| Bhogal, Hardial         | Renew North Staffordshire            |
| Boow, Jared             | London Councils                      |
| Brearley, Jonathan      | Office for Climate Change            |
| Brookes, Katy           | DCLG                                 |
| Carl, Kevin             | Demontfort Housing Society           |
| Chatterjee, Lizzie      | Sustainable Development Commission   |
| Chun, Julian            | Downland Housing Association         |
| Clark, Linda            | Home Group                           |
| Cousins, Ron            | Housing Partnership                  |
| Cunion, Karl            | CLG                                  |
| Davey, Adrian           | Cambridge Housing Society            |
| Davies, Andrea          | CPRE National Office                 |
| Davies, Ceri            | Welsh Assembly                       |
| Davis, Jonathan         | CABE                                 |
| Davis, Mark             | CLG                                  |
| Doggart, John           | Sustainable Energy Academy           |
| Dye, Anne               | CABE                                 |
| Evans, Nigel            | Richmond Housing Partnership         |
| Evans, Peter            | Radian Technical Services            |
| Farmer, Malcolm         | Radian Technical Services            |
| Ford, Roger             | Demontfort Housing Society           |
| Francis, Anita          | West Kent Housing Association        |
| Gardner Nicholas        | SQW Consulting                       |
| Gasharov, Assen         | SQW Consulting                       |
| Hapgood, Jason          | Southern Housing Group Ltd           |
| Hartless, Richard       | Building Research Establishment      |
| Harvey, John            | IRIS Consulting                      |
| Heathfield, Helen       | Happy Heat and Power                 |
| Heywood, John           | Government Office for the North East |
| Honour, James           | BRE                                  |
| Howells, Dilys          | Welsh Assembly                       |
| Hudson, Ross            | London Energy Partnership            |
| Kennedy, Angus          | Community Regeneration Partnership   |
| Khatri, Hema            | Southern Housing Group Ltd           |
| Killip, Gavin           | University of Oxford                 |
| King, Nick              | SEEDA                                |
| Lane, Laura             | LSE                                  |
| Lawal, Christopher      | Housing for Women                    |
| Leach, Matt             | Housing Corporation                  |
| Leader, Zoe             | One Planet Homes                     |
| Lindsay, Sophie         | One Planet Homes                     |

|                   |                                   |
|-------------------|-----------------------------------|
| Lines, Kate       | Southern Housing Group Ltd        |
| Lonergan, Angela  | MHS Homes                         |
| Lonergan, Angela  | MNS Homes                         |
| Matthias, Alison  | Housing Corporation               |
| McWhirter, Simon  | One Planet Homes                  |
| Mind, Philip      | Local Government Association      |
| Mohammed, Farooq  | Home Group                        |
| North, Peter      | LDA                               |
| Oliver, Henry     | Empty Homes                       |
| O'Neill, Lyn      | London Councils                   |
| Pillen, Nicole    | DENA                              |
| Powell, Martin    | London Development Agency         |
| Power, Anne       | LSE                               |
| Powis, Olivia     | NHF                               |
| Read, Katy        | London Remade                     |
| Rhee, Seok-joo    | English Heritage                  |
| Robinson, Ian     | Affordable Housing Development    |
| Scott, Faye       | Green Alliance                    |
| Scott, Julian     | South Somerset Homes              |
| Serle, Nicola     | LSE                               |
| Sharp, Emma       | AHDC                              |
| Shivji, Shan      | West Kent Housing Association     |
| Silverman, Robert | London Development Agency         |
| Slater, Greg      | PRP Architects Ltd                |
| Smith, Russell    | Parity Projects                   |
| Sweeting, Tim     | West London WMCA                  |
| Tabone, Joey      | Prince's Foundation               |
| Tebbit, John      | Construction Products Association |
| Timms, Dave       | Friends of the Earth              |
| Walsh, Joann      | Housing Corporation               |
| Werner, Goar      | Construction Polymers             |
| Yates, Tim        | BRE                               |

**B: Workshop 2. Trafford Hall – 26<sup>th</sup> June 2008**

|            |           |  |
|------------|-----------|--|
| Ahmed      | Bashir    | Advantage West Midlands                        |
| Alexander  | Roy       | Ashton Hayes                                   |
| Baron      | Peter     | Twin Valley Homes                              |
| Bartlett   | Paul      | Birmingham City Council                        |
| Beaumont   | Derek     | Milton Keynes Council                          |
| Boote      | Chris     | Marches Housing Association                    |
| Bowen      | Alan      | Epic Housing Limited                           |
| Chatterjee | Lizzie    | Sustainable Development Commission             |
| Clough     | David     | Incommunities                                  |
| Crook      | Peter     | Accent Foundation Ltd                          |
| Daggett    | Owen      | Wakefield and District Housing                 |
| Donaldson  | Jenny     | Islington & Shoreditch Housing Ass             |
| Fagg       | Christine | Creative Support                               |
| Grayson    | Paul      | Sheffield Homes                                |
| Hale       | Colin     | Salvation Army                                 |
| Hankey     | Malcolm   | The Civic Trust                                |
| Harris     | Steve     | Zed Factory                                    |
| Hawson     | Richard   | Sheffield Homes                                |
| Haydon     | Liz       | Twin Valley Homes                              |
| Henderson  | Carl      | Riverside Group                                |
| Hodgson    | Kenneth   | City of Bradford Metropolitan District Council |
| Home       | Graham    | Contour Housing Group                          |
| Howarth    | Graham    | Westfield Housing Association                  |
| Hulme      | Andy      | Arena Housing Group Ltd                        |
| Jackson    | Ruth      | Ove Arup & Partners                            |
| Johnson    | Nick      | Urban Splash                                   |
| Kiely      | Tony      | The Dane Housing Group                         |
| Lane       | Laura     | LSE  |
| Lewis      | Jo        | Incommunities                                  |
| Little     | Karen     | Progress Housing Group                         |
| Locker     | Chris     | National Communities Resource Centre           |
| Lupton     | Alan      | Ellesmere Port & Neston Borough Council        |
| Maddison   | Michael   | Housing Hartlepool                             |
| Marling    | Jeanette  | Milton Keynes Council                          |
| McClelland | Sarah     | Great Places Housing Group                     |
| McKune     | Colette   | Fusion21 Ltd                                   |
| McMahon    | Stephen   | Progress Housing Group                         |
| McMillan   | James     | Great Places Housing Group                     |
| Moore      | John      | South Yorkshire Housing Association            |
| Owen       | Peter     | Energy Project Plus                            |
| Partner    | Steven    | Contour Housing Group                          |
| Pennington | Adrian    | The Dane Housing Group                         |
| Power      | Anne      | LSE  |
| Quirke     | Andrew    | Fusion21 Ltd                                   |
| Rae        | Sheila    | Spotland and Falinge Housing Association       |



|           |           |                                    |
|-----------|-----------|------------------------------------|
| Robinson  | Brian     | Housing Hartlepool                 |
| Robinson  | Ian       | Affordable Housing Development     |
| Savage    | Vicky     | Crosby Housing Association         |
| Schofield | Jon       | Twin Valley Homes                  |
| Serle     | Nicola    | LSE                                |
| Sharp     | Emma      | AHDC                               |
| Shea      | Bernard   | St Vincents Housing Association    |
| Sinn,     | Christoph | Chartered Institute of Housing     |
| Smith,    | Russell   | Parity Projects                    |
| Stanfield | Gary      | Contour Housing Group              |
| Threlfall | Mary      | Crosby Housing Association         |
| Thubron   | Sylvia    | Housing Hartlepool                 |
| Watters,  | Derek     | Places for People                  |
| Webber    | Phil      | Kirklees Council                   |
| Webster   | Dave      | Knowsley Housing Trust             |
| Wheatley  | Linda     | Creative Support                   |
| Whinnerah | Joy       | North Star Housing Groups          |
| Whitehead | Graham    | Bridging Newcastle Gateshead       |
| Wilkinson | Paul      | Progress Housing Group             |
| Willis    | Becky     | Sustainable Development Commission |
| Woolley   | Matthew   | Weaver Vale Housing Trust          |