LSE Housing and Communities

FMB The sign of building quality

Anne Power
Laura Lane

CASEreport 63

HOUSING FUTURES
OUR HOMES AND COMMUNITIES

A report for the Federation of Master Builders

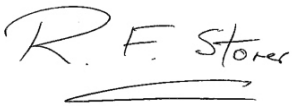
CONTENTS

FOREWORD

The housing system is intrinsically linked to almost every major area of government policy from the economy and taxation to the environment and education. It is driven by a huge range of factors from the behaviour of individuals to global economic forces. It is also in most cases the greatest asset and debt held by a household. There is a wide variation in the amount of money people spend on their housing ranging from those who own their property outright to an estimated one million households who spend more than two thirds of their income on housing costs. And yet despite its importance economically, socially and environmentally the current housing system is in crisis; namely housing supply is failing to meet demand and the current stock is unsuitable without major adaption to meet future needs.

There is now an urgent need to take action to make our existing homes greener and more energy efficient. Given that our homes contribute 27 per cent of the UK's total carbon emissions and that 85 per cent of our homes will be still be in use in 2050 it is imperative if the Government is to meet its legal requirement to cut carbon emissions that a more concerted effort is made to transform our existing housing stock. A large scale programme of retrofitting is required to transform our 26 million homes. Such a programme could have a significant role in helping to reduce fuel poverty, creating new jobs in the construction sector as well as tackling energy saving.

It is against this background that the FMB asked the London School of Economics and Political Science (LSE) to look at housing futures and what this might mean in terms of developing a coherent joined up policy across government and the construction sector to tackle the issue. I'm delighted that Professor Anne Power accepted our challenge and has produced this first class, thought provoking report. The report sets some big challenges for construction and specifically the FMB which we need to address and act on if we are to turn the rhetoric into reality. I believe the FMB can rise to challenge and would like to extend an invitation to everyone else with an interest in our homes and communities to work with us to ensure that we turn these challenges into the opportunities that will deliver the housing that this country deserves.



Ron Storer
President, Federation of Master Builders

THE FEDERATION OF MASTER BUILDERS

The Federation of Master Builders (FMB) is the largest trade association in the UK building industry, representing over 11,000 building companies. Established in 1941 to protect the interests of small and medium-sized building firms, the FMB is independent and non-profit-making, lobbying continuously for members' interests at both national and local levels.

The FMB is a source of knowledge, professional advice and support for its members, providing a range of modern and relevant business building services to save them time and money. The FMB also offers advice to consumers via its 'Find A Builder' and check a builder websites.

For more information please visit:
www.fmb.org.uk

LSE HOUSING AND COMMUNITIES

LSE Housing and Communities is a research and consultancy group within The Centre for Analysis of Social Exclusion (CASE). We aim to develop understanding of the dynamics in disadvantaged neighbourhoods; promote models of housing and neighbourhood management; develop ways to support community and resident self help action, especially in social housing areas; and shape government policy. Our research considers the impact of poor neighbourhood and area conditions on residents and the role of local people in regenerating and improving their communities.

Our areas of expertise and interest are:

- disadvantaged and run-down neighbourhoods;
- social housing;
- housing management and neighbourhood management;
- supply of and demand for housing;
- cities and urban renaissance;
- neighbourhood renewal and regeneration;
- social inclusion;
- mixed communities;
- sustainable communities;
- race relations and community cohesion;
- international and European housing;
- community self help and capacity building;
- community engagement;
- residential training and small grants;
- adult learning and basic skills;
- local and community action on environmental sustainability;
- local cycling projects and sustainable transport; and
- anti-social behaviour, crime and residents' action over local crime.

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EXECUTIVE SUMMARY

Housing Futures is about how we are housed now and how we will house ourselves in the future; how we conserve land, resources and above all energy; how we make where we live now attractive; how we foster stronger community spirit and how we create more equal conditions. We ground this report in the practical experience of housing providers, builders, policy makers and housing users. We try to represent fairly and objectively what we found.

There are four current challenges in our built environment:

- the degree of urban sprawl;
- the age and character of our stock;
- the standard, and levels of repair and maintenance, of our stock;
- the level of energy waste in our built environment.

THE FACTS

- We live in a densely populated country, highly urbanised and extremely built up with over 250 years of industrialisation and intense environmental damage behind us.
- In Britain we have a large supply (around 26 million*) of aging homes, mainly houses, with only one in six in the form of flats – just four million homes. Over half our homes were built before the 1960s and five million are Victorian terraced properties.
- We build between 130,000 and 180,000 new homes a year, far less than the Government sets as a target, adding less than one per cent to our total stock each year. In other words, over 99 per cent of all homes at any one time are already built. These are almost all located within 12,000 or more existing communities. Over 80 per cent are in towns and cities and the vast majority of these are in large cities.
- Our sprawling conurbations are protected by Green Belts because of the risk in the 20th century of them literally sprawling into each other. While most of our land is literally green, at least 75 per cent is under the impact of development of some kind.
- Our population has now topped 60 million and it continues to grow slowly, thanks mainly to new immigration and higher birth-rates among the younger, more recently arrived settlers. Yet the rate of household growth, and therefore housing demand, far outstrips population growth. The number of single person and two person households has raced upwards to form nearly half of all households, even though small households form less than a third of the population.

WHO OWNS OUR HOMES

- Owner occupation has long been the most popular option for people across social classes. This has been supported by all governments since 1919, allowing families on modest incomes to become owners of an extremely valuable asset. But it has also encouraged outward sprawl and still does, consuming land at relatively low density, generating traffic and congestion, making a heavy impact on the countryside everywhere. It is increasingly unaffordable for low income households, largely because of rising pressures on land supply, widening the gap in access.
- Since the First World War, when 90 per cent of the population rented from private landlords, tight rent controls for 70 years drove landlords out, causing disastrous decay of all our inner cities and leading in the 1930s to a massive slum clearance programme, lasting 50 years and blighting many attractive historic areas of towns and cities all over the country.
- Public housing took over and by 1980 one third of homes were rented from councils, only 10 per cent from private landlords, the remaining 60 per cent owner occupied. Council-built large, difficult-to-manage estates, often in harsh concrete, separate from typical streets. about 10,000 estates are still standing today. Governments also funded 28 new and expanded towns outside the city to house 'overspill' populations, making big encroachments into the countryside that were in themselves often not popular or thriving.
- The long run impact of outward building and population movement has been the depletion of existing communities, the loss of local services like shops and the impossibility of creating a stronger public transport infrastructure. This has led to some small neighbourhoods and estates becoming extremely poor and marginal to the mainstream, maybe 3,000 in all. There is an urgent need to tackle these in an ongoing way, reusing existing buildings, retrofitting existing homes and using small neglected spaces to add new homes.

OUR ENVIRONMENT

- We now have high infrastructure blockages, the worst traffic congestion in Europe and conflict around almost all major developments. It is impossible in a long built up country to expand the supply of land without the risk of serious flooding, water and energy shortages further unmanageable congestion and social fragmentation. Land is finite and most remaining land is protected, spoken for, or in a flood plain.
- It has become critical to save energy, as well as to conserve land, because buildings produce over half of CO_2 emissions and generate traffic which produces another 25 per cent of pollution. Homes are the biggest single potential energy saver. By insulating roof spaces, walls (whether cavity or solid walls), windows, doors and floors, we can at least halve our energy use. If we add solar water systems, heat exchanges, ground or air source heat pumps, more efficient heating and hot water systems and appliances we can save up to 75 per cent of our energy. Along the way we can renew existing homes, restore neighbourhoods and create conditions for additional homes.

* Figures for the UK cover England, Scotland, Northern Ireland and Wales. Figures for Britain cover England, Scotland and Wales. Most of our figures are from Communities and Local Government and cover England only.

EXISTING COMMUNITIES

- We have capacity within existing communities to create all the new homes we need. Small available sites of under two hectares within built up areas are rarely counted (this is a lot of new homes) and micro-sites of half an acre of less (one fifth of one hectare) are literally too numerous to count. Yet it is estimated that even in inner London, where population density is highest and land scarcest, there are enough micro-sites to supply all the new homes we need. In towns and villages throughout the country this is also true if we value our green land, our communities, and our rich heritage of buildings at their true worth.
- The combination of renting and converting existing homes, upgrading and remodelling other buildings, and using infill sites offers rich new opportunities to small builders, local suppliers, first time buyers, low income communities and people anxious to conserve energy, the built and natural environment.

THE BUILDERS

- There are over 200,000 building firms in the UK, of which almost 190,000 (93 per cent) employ 13 or fewer staff. Construction represents nearly 10 per cent of our economy and employs over two million workers.
- We need to learn from the experience of small builders, who form the vast majority of all builders in the country, if we are to succeed in producing homes for the future. Based on our conversations with builders and site visits, we see the following challenges as over-riding:
- **How can small builders equip themselves** for rising demand? The Low Carbon Skills Cluster report states that ' ... the potential demand from refurbishment is enormous and could add around 50 per cent to the current domestic building repair and maintenance spend of around £24 million per annum. This level of demand could cause a massive mismatch in the capacity of industry to deliver.'[1]
- **How can builders raise the quality of their work?** Or prove that the quality of their work is high, thereby raising profile and status of the industry?
- **What role can specialist training courses and accreditation systems play** in upping the game? And who can play this role?
- **Who will provide the training** and at what cost for retrofitting existing homes to save 80 per cent of their energy?
- **Where will the money come from** so that householders take the plunge and hire the builder to do the work? And who will make it easy enough?
- **Who will help builders** equip themselves for this task? Who will communicate the collective needs of thousands of individual building firms?
- **What is the role of government** in helping to deliver this?
- Most small and medium sized builders do both repair and some new build (using small sites), but repair and modernisation is the biggest component of their work.
- Recruitment into building trades should require training yet the vast majority of new entrants do not have qualifications and do not go on accredited training. To do the new work required to achieve energy efficiency and attach renewable energy equipment requires both training and accreditation. These are key steps in generating more investment and more jobs.
- Small and medium sized builders are flexible and adaptable by necessity, and understand most aspects of building work, they can fulfil these new roles with short and adapted training. They also often work with specialist contractors who can 'fill the skills gap'.

SKILLS AND TRAINING

- There is a long-established acknowledgement of skills and training gaps within the UK construction industry and while training is acknowledged by most builders as being important, the current system is not always suited to the needs of builders now or in the future. The content of training is not necessarily reflective of future needs of industry and the organisation and delivery of training has to be linked to the needs and working practices of builders.
- There is a wide consensus that clearer guidelines and enforcement of standards would help builders perform better. At the same time, less bureaucracy and easier approval systems would help builders comply.
- Accreditation of builders (including accreditation of energy efficient / renewable technologies installation) could lead to awareness raising, knowledge and demand among both builders and consumers, as happened with CORGI and then Gas Safe gas registration. Something akin to the Code for Sustainable Homes is needed for existing homes in order to really create impetus for change.

OUR RECOMMENDATIONS

On the back of these fairly simple and uncontroversial ideas, we make the following recommendations under five main headings:

Government

- We need a **Code for Sustainable Existing Homes** to give all builders a clear signal of what standards are expected, to be reinforced by tightening building regulation and more vigorous Energy Performance Certificates. We strongly advocate a Code for Sustainable Existing Homes and a commitment to carbon neutral existing buildings as there needs to be a much stronger fit between requirements for new build and for repair. Also, VAT should be equalised for both sectors, possibly at five per cent.

- There are **particular issues for the new Government to address**. These are the most important:
  - VAT on repairs and improvements including energy efficiency measures should move in line with new build and not be subject to higher rates;
  - Enhancing the role of Energy Performance Certificates is crucial and they need to be properly credited and validated;
  - regulation standards need to rise and be enforced;
  - consequential works: all extensions, loft conversions and substantial remodelling requiring planning permission should all conform to the highest enforceable standard.
- **The long term standards** for energy efficiency in homes (an equivalent to 80 per cent reduction in carbon dioxide emissions in homes by 2050 overall) require mandatory standards. These would provide small builders with the confidence to invest in training and the potential for expansion to deliver on this ambitious reinvestment programme. 81 SAP is the proposed standard for energy efficiency in homes.
- We need **strong incentives and ambitious targets for energy efficiency and energy saving measures at the point of sale or purchase of homes**. This would help to transform the pace of retrofit and reassure the construction industry. Potentially over a period of maybe 15-20 years, all the obvious work could be done. In its 2010 Heat and Energy Management Strategy the Labour Government outlined a commitment to working with the Royal Institution of Chartered Surveyors (RICS) to develop recommendations to ensure that the energy performance of properties is better reflected in its market value.[2] This is an obvious incentive to improve energy performance and should receive ongoing support from the new government.
- **Planning** needs to offer more flexibility in remodelling existing buildings, use of small infill sites, sub-divisions and conversions. It also needs to favour higher environmental and energy saving standards for work in existing communities. One way to speed up stronger planning guidance would be to make new and more exacting building and environmental standards enforceable on extant planning permissions after two years rather than the current five.
- There should be a **phasing out** of toxic building materials including UPVC, formaldehyde, toxic glues of all kinds and toxic ingredients in paints, varnishes etc.

Building industry

- **Small builders offer flexible and responsive skills adaptable to market demand**. This will be vital to achieving government objectives in terms of energy efficiency standards of existing homes and renewal of existing communities. But recognition of their potential and value requires both regulation on the government side and higher standards of performance on the part of builders.
- **The reputation of the building industry will only improve when builders earn it**. Generally higher standards in all building trades are vital for builders to acquire a better reputation. Training needs more recognition and stronger incentives to attract new people into the industry, to retrain experienced builders and to help small buildings firms with very few employees.

Training

- **Training and apprenticeship systems** need to gain recognition as the automatic route to a good job with high quality performance. Early steps in this direction could falter due to funding cuts. Increased collaboration by builders and trade associations with further education, training and Government accreditation schemes could build a much stronger training system.
- There need to be **bigger financial and professional incentives for education and stronger requirements for training in the building industry**; particularly to reduce accidents, to improve the reliability of performance, to increase customer confidence, and to squeeze out the 'cowboy builders'.
- **Low-skilled, currently unemployed young workers** aged between 16 and 24 are particularly vulnerable to long term unemployment if not in employment, education or training. With special training they could help clear and insulate lofts and attics. This work could become part of structured work-based training projects linked to retrofit. Health and Safety and insurance are key concerns that must be addressed.[3]
- The new Liberal Conservative government has committed to creating new jobs and targeting the unemployed to deliver energy efficiency and upgrading work. Any job creation programme of this kind needs to be accompanied by well thought out training and accreditation support.

Specialist retrofit skills / training

- **Much clearer structures and guidance** are needed if we are to achieve anything like the energy savings and rate of renewal that we need. This applies to: energy saving advice; energy saving techniques and installations; energy saving finance, payback, incentives and requirements. There have been suggestions that an 'Existing Homes Low Carbon Hub' could be established to provide the leadership for the industry to start planning for delivery. This could link into government proposals for a 'Retrofit Consortium'.[4]
- With a series of short, accredited training courses both **builders and suppliers could promote energy saving ideas** to householders when they are contacted over repairs, for example toilet and tap leaks and water saving

devices. They could advise on doors, windows, wall and under-floor insulation, also types of material and their relative energy saving value. They should obviously pass on these acquired skills to apprentices.

- There will be many new door-to-door energy advisers, through EPCs, CERT and other energy saving programmes. **Training builders and suppliers alongside these new energy advisers** in the field of energy advice, delivery and everything that goes with it will be vital.
- In order to deliver a 'whole house' retrofit where energy use is reduced by over 75 per cent, all parties involved from architects and surveyors, to planners and building control, to suppliers and builders themselves will need to develop **both practical skills and targeted knowledge**.
- More emphasis on learning on-site and sharing learning among the various trades and trainees will be important. Spreading learning across the site and between sites, called 'site diffusion' by some builders, can become an infectious method for encouraging new energy saving materials and technologies with new methods of applying them that are required, for example, air gaps, moisture membrane.
- Experience is accumulating fast among individual householders[5], and among social landlords[6], among local authorities[7], and among building professionals[8]. This experience needs at least to be gathered in a single place as a 'Wikipedia of retrofit'. Suppliers need to be brought into this game and showcased if they are building up their 'green' supplies and retrofit advice, for example with fact sheets being available in builders merchants and suppliers.

Accreditation

- **Accreditation is key** in order to raise awareness of existing accreditation schemes and standard, for example, TrustMark, and adapt card schemes such as the Construction Skills Certification Scheme. Introducing an independently regulated accreditation scheme for energy saving skills, for example, solid wall insulation, could be linked to rising consumer awareness. The CORGI registration in 1991 when gas supplies were privatised has led to 120,000 accredited gas fitters and extremely strict enforcement and adherence to agreed standards.
- Trade Associations like the Federation of Master Builders, the National Federation of Builders, the National House-Building Council and the Construction Products Association need to embrace this opportunity, given that its arrival is inevitable (in our view), has cross-party support and offers exciting new possibilities for jobs, manufacturing, renewable technologies, savings in the long run, and cleaner, greener, more sustainable communities for us all to live in.
- It is vital to act quickly to bring in new standards and to incentivise all parties including builders themselves, customers and funders. This will obviously require strong leadership by Government, local authorities, agencies such as the Homes and Communities Agency and English Heritage, trade bodies across all professions including planners, builders (big and small), suppliers, and funders.

With very big incentives for a steep rise in energy efficiency and renewable energy installations, the army of small builders who do the lion's share of the work on existing homes need to gear up. There are immediate costs such as accreditation and certification. In order to qualify for the Micro-generation Certification Scheme builders have to demonstrate competence (and undergo some training if not familiar with solar water heaters, ground and air source heat pumps, solar PV etc). Given the rich returns, the expected rise in demand, the registration benefits, this is a move that should receive the strong endorsement of bodies like the FMB. It is strongly in the interests of members that it should move ahead of the game and it is an opportunity that is there for the taking. The new Government is committed to the full establishment of Feed-In Tariffs and renewable energy generation. These measures have unusually clear cross-party support, driven by Europe-wide commitments to a level of renewable energy production and use, on which the UK lags far behind. These proposals, costly though they may be, are the low-hanging fruit of renewable energy.

The way we spread knowledge and understanding of the issues around materials conservation, renewal and energy saving is confusing and opaque. There needs to be a much clearer, firmer and more compelling knowledge base, shared by homeowners, small and large builders, suppliers, planners and other specialists. Knowledge, skills and training must be part of the same process; involving both practical experience, learning 'on the job' and real acquisition of new knowledge and skills. Builders, large and small, are part of a very extensive and complex network delivering services and products to every household in the land. For this reason, improved regulation, enforcement, inspection, training and standards would help raise the quality and reliability of building that is expected and delivered across the board. The Government's role is to ensure an even playing field in contracts and procurement, to maximise opportunities for small and medium sized as well as large builders, and to push up standards. The more small builders are involved in openly scrutinised and competitive contracts, the better they will perform. Housing associations, have proved that small is often not just the most beautiful but also the most efficient. Surely the same should be true of small builders who are able to deliver value and tailor made solutions. Without them, it will be difficult to deliver on the important commitments now in place to modernise our housing stock through repair and investment, to improve our energy efficiency through tried and tested methods, and to help communities live more sustainable lives.

INTRODUCTION

The world around us is changing fast. We launch this report with the aim of setting out what our housing futures might look like and how we can help to shape them. With a totally new government only weeks into the job, we are still digesting the signals we have picked up on the possible new directions that will shape housing futures and the environment in which we live.

Three important shifts are clear:

- deep cuts in public spending are likely to hit housing and regeneration particularly hard;
- environmental concerns will play a crucial part in future developments and in job creation;
- new jobs and small businesses will receive more support and encouragement.

These new policy directions, shaped by inescapable economic, environmental and political imperatives, will feed into and help support small and medium sized builders who are equipped and trained to upgrade homes, and make buildings of all kinds more energy efficient. It will also rely on small firms to develop new homes through conversions, remodelling and infill building on small sites within existing communities.

The focus on jobs, particularly green jobs, will direct programmes forward towards the thousands of small enterprises able to take on trainees and apprentices. Our environmental constraints and policies to limit environmental damage will enhance the value of recycling existing buildings and existing places. In other words, Housing Futures, a report on how to respond to housing need and new pressures, within severe economic and environmental limits is timely, tuned to new realities, and topical in linking the environment, jobs, and our biggest emitter of CO_2, our built environment.

Housing Futures looks at the four big pressures affecting all people involved in our homes and communities:

- First, **supply and affordability** underpin where homes are built and where we want them to be; how we build them and at what cost; what homes we need for the 21st century given all our problems of sprawl, fragmented communities, environmental pressures, land supply, costs and affordability.
- Secondly, what are our **environmental limits**, given that we are an island nation with a long history of building on and polluting our land, have the highest congestion levels in Europe, and have to cut our energy use by 80 per cent by 2050. In our existing homes, the target is 29 per cent by 2020.
- Thirdly, **social cohesion** becomes a catchphrase as communities spread out, become older and more worn out. Better off people move on and demand new and better homes, leaving behind depleted, impoverished communities with underused infrastructure, many unused spaces and empty buildings. Unequal conditions become serious when our resources are tied up in building new communities, however ideal those are.
- The final challenge for our housing future is **economic change**, based on services, new skills, higher technology and the green economy. A major retrofit of our huge existing building stock, not just of homes but of schools, hospitals and other public and commercial buildings, is inevitable, given that over 99 per cent of all homes in each year are those already built, and at least 85 per cent of existing homes will still be here in 2050.
- We base this short report on direct evidence in order to try and answer these big questions. We look at:
- where we are now;
- who our housing providers and restorers are;
- what our homes and environments need; and
- what blocks the solutions we need to adopt?

In part two, we explore who our builders are, what their offer is and what skills, standards and accreditation they need in order to meet the amazing challenges that we face. Our proposals are embedded within a **very constrained future**. We are at the limit of resources, and housing is just one part of a much bigger picture. We therefore need to change the way we think about existing places, the way we use and re-use small spaces, the way we organise our major and community-level infrastructure and the way we value small builders, rather than being driven by the large. The vast majority of building work that is done is repair and renovation, and the vast majority of builders are small and medium sized enterprises (SME) rather than large firms. In the end we **will depend on these smaller builders for a more sustainable future**, as compared with our past. We will depend on the vast majority of households who own their own homes, or who want to drive the kind of changes we advocate. Social landlords are in many ways leading the field at the moment. In order to make our futures more secure, more affordable and more sustainable we will need to improve communication and collaboration between the public and private sectors, small and large builders, suppliers, government and individual householders. We hope that this report will make a contribution to current debates about where we build, what we build, how we build and who we build for, and then how we look after and adapt our built environment to new and challenging conditions.

There are many strands that feed into answering these questions:

- land use and planning;
- housing ownership;
- the housing stock;

- history;
- the environment and climate change;
- energy use;
- jobs;
- the building and supply industries.

We do not cover all these strands in detail but we touch on them and refer readers to further evidence. Our principal tasks are to examine: the capacity and value of existing places; communities and homes; the nature of housing shortages and access problems and potential for meeting them within existing communities; the environmental and energy constraints within which we must work; and the role and potential of small and medium size builders who provide the majority of new homes on small sites.

Our target audience ranges from politicians, planners and housing experts; to socially concerned students and practitioners; and to builders and chartered surveyors, architects and related professionals. We hope it will shed some light on a clouded and contentious area.

CHAPTER 1: WHERE ARE WE NOW?

The UK is the oldest urbanised, industrialised country in the world. Everything we try to do to our built environment today must fit within the boundaries created by 240 years of rapid and intense growth in cities, towns, and villages. Dense infrastructure and transport connections criss-cross the country. Even villages and remote settlements are caught up in this race for development. It will not be easy to fit in all the new homes we say we need or want, along with everything else land is used for.[9]

There are **four current challenges in our built environment**:

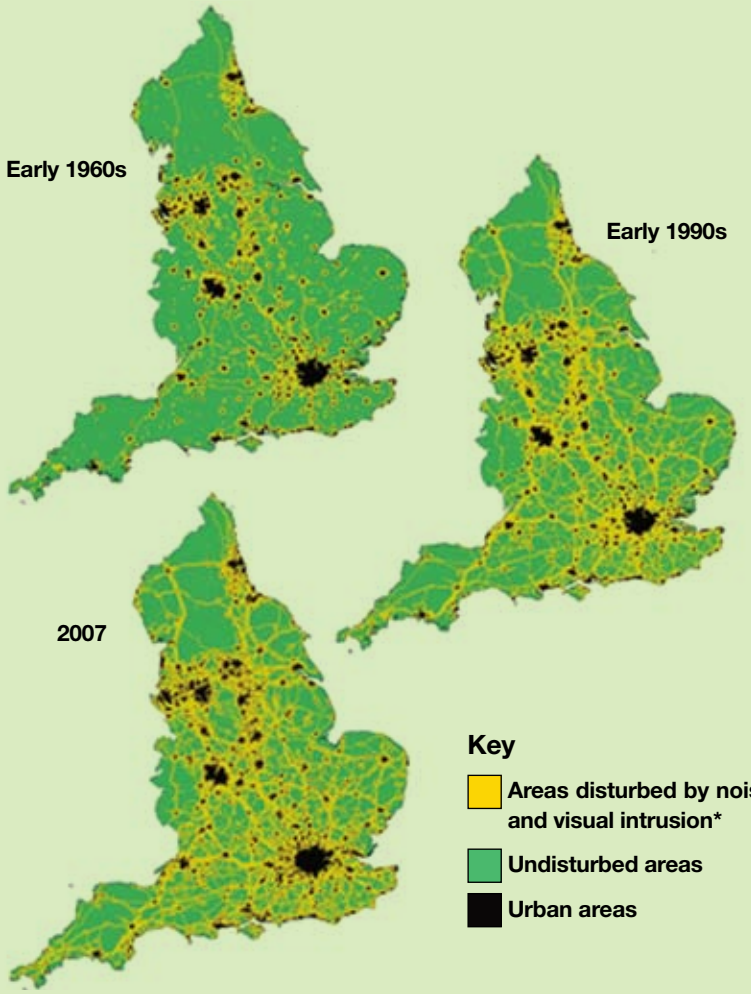
- the degree of urban sprawl;
- the age and character of our stock;
- the standard, and levels of repair or maintenance; and
- the level of energy and materials waste in our built environment.

Three major drivers underpin our housing problems:

- the system of ownership and its accompanying social consequences;
- the interconnected issues of supply, demand and affordability; and
- the location and density of where we live.

These three drivers constantly interact with the four challenges; they are strongly related to each other and we try to understand the interactions as well as each challenge and drivers.

Chart 1: CPRE Map on development impact in England



*Areas disturbed by urban development, major infrastructure projects and other noise and visual intrusion.
Source: CPRE, 2007 Developing an Intrusion Map of England, August 2007, Prepared for CPRE by Land Use Consultants

Land use and sprawl

Very few truly untouched places remain in the UK. England is the sixth most densely populated major country in the world, about level with Holland. If we include Scotland and Wales, population density falls a little, to somewhere near Germany, the third densest in Europe. This overall density belies a high level of sprawl building around all our built-up areas, even in villages, in spite of stringent green belts around cities since the late 1940s. As a result, very large areas of land, far larger than the land we have actually built on, suffer from the impact of development through roads; power supplies out-of-town warehouses, airports and other activities, leading to many devastating social and environmental consequences. This development pressure has grown much worse in recent decades.[10]

An important consequence of this development pressure is difficulty in supplying enough land in the right places, which we discuss in more detail later.

Houses not flats

Our cities and towns tend to be quite spread out, because we have built houses rather than flats during our industrial hey-day, reflecting our great industrial and colonial wealth.[11] Over four out of five of all homes are in the form of houses, of which bungalows form a surprisingly large share. Today, most of us live in suburbs, a cross between dense, compact urban proximity and individual, separated single family homes surrounded by green spaces, gardens, trees, and eventually open country.

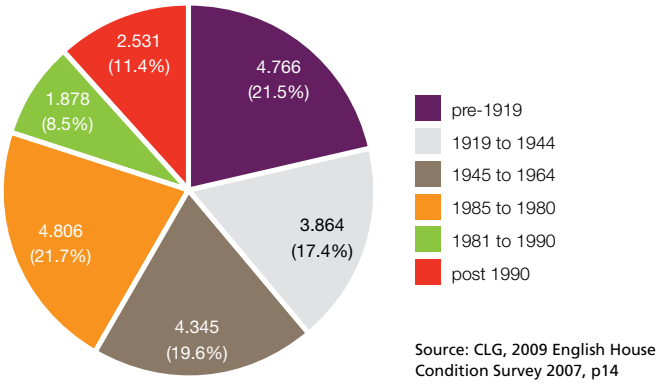
Because we moved to cities *en masse* nearly two centuries ago, most of our homes are old. Out of nearly 23 million homes in England, over 18 million were built before 1980, 13 million before 1965, and 9 million before the Second World War. We still have over 5 million pre-1914 properties, almost all of which are in brick-built terraces in the inner areas of older towns and cities. Charts 3 and 4 show the age, tenure and type of homes. Even today, less than 20 per cent of our homes are in flats.

Chart 2: Percentage of housing stock in England in suburbs

Housing location	Population
Urban cores	9%
Suburban/urban	23%
Suburban	43%
Suburban/ rural	20%
Rural	5%

Source: Based on analysis from Living in Urban England: Attitudes and Aspirations, DETR, 2000

Chart 3: Number and percentage of homes by age, 2007



Source: CLG, 2009 English House Condition Survey 2007, p14

Chart 4: Housing stock characteristics (tenure, type and location) by dwelling age, 2007 (000s)

	Pre 1919	1919-1944	1945-1964	1965-1980	Post 1980	All dwellings
Tenure						
Owner occupied	3,366	2,937	2,776	3,309	3,172	15,560
Private rented	1,132	383	311	425	487	2,738
Local Authority	81	351	791	631	133	1,987
RSL	187	193	466	440	617	1,904
Type						
Small terraced house	757	407	271	279	470	2,185
Med / large terraced house	1,740	613	592	759	351	4,056
Semi-detached house	764	1,871	1,780	1,030	657	6,103
Detached house	586	440	453	922	1,572	3,973
Bungalow	64	219	606	723	489	2,102
Converted flat	646	69	33	6	4	757
Purpose built flat (low rise)	187	235	502	935	838	2,696
Purpose built flat (high rise)	22	10	107	151	27	318
Location						
City centre	303	58	83	91	111	645
Other urban centre	1,728	669	523	672	568	4,160
Suburban residential	1,571	2,686	2,986	3,092	2,791	13,126
Rural residential	409	293	555	726	670	2,652
Village centre	352	82	118	161	162	876
Isolated rural	403	77	80	62	107	729
Local area deprivation						
Most deprived 20%	961	781	1,044	915	612	4,313
2nd	1,159	872	937	829	676	4,473
3rd	1,148	794	825	888	810	4,465
4th	992	724	755	1,070	1,070	4,611
Least deprived 20%	506	693	784	1,104	1,240	4,328
All dwellings	**4,766**	**3,864**	**4,345**	**4,806**	**4,409**	**22,189**

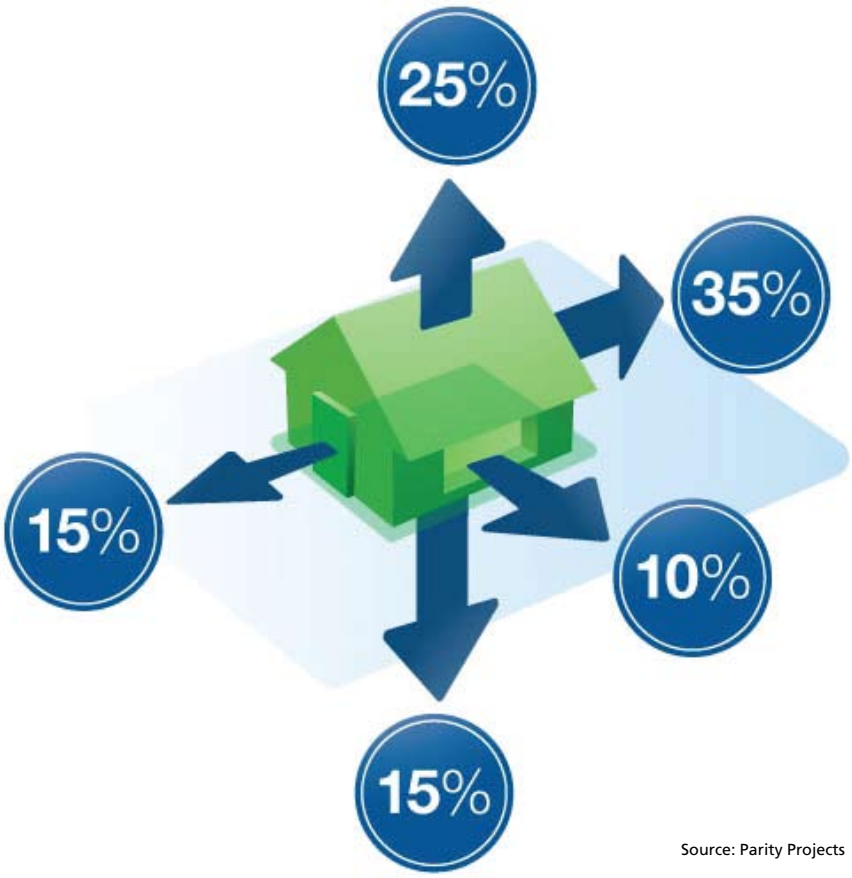
Source: Adapted from English House Condition Survey 2007, p15

Chart 5: Percentage of homes not decent – by tenure

Tenure	Number (000s)		Percentage (%)	
	2006	2007	2006	2007
Owner occupied	5,335	5,304	34.6	34.1
Private rented	1,223	1,244	46.8	45.4
ALL PRIVATE	6,558	6,548	36.3	35.8
Local authority	676	652	32.4	32.8
RSL	465	486	25.2	25.5
ALL SOCIAL	1,142	1,138	29.0	29.2
ALL TENURES	7,700	7,686	35.0	34.6

Source: Communities and Local Government, 2009, English House Condition Survey 2007, p22

Chart 6: Diagram showing how homes lose heat through poorly insulated elements



Source: Parity Projects

An old stock in need of repair

The age of our stock poses many problems. Government estimates show that one third of all homes did not meet a basic standard of 'decency' in 2007, meaning that they suffered from one of the following:

- poor internal amenities;
- damp;
- lack of thermal comfort; and
- disrepair.

This basic standard should be met between 2010 and 2012 for almost the entire social housing sector, about 15 per cent of our total stock, but there remain big problems in the private rented sector and in older, poorer owner-occupied homes. Chart 5 shows the problems of non-decent homes and where they are most common.

Leaky, inefficient homes

In our mild, damp climate, freezing conditions rarely occur. As a result, most homes are poorly insulated. They were built without too much attention to draughts, mainly because historically we warmed our homes with coal fires, but also because of the climate. With an almost limitless supply of coal, oil and gas (as we believed), we did not worry too much about saving energy. As a result, the continued 'leakiness' of our homes means that we are literally pouring out wasted heat into the atmosphere.

Heat accounts for the lion's share of energy use in homes and only since 2004 have our energy standards for new building even approached the level they should be, or the level of the rest of Northern Europe. While all our homes need to become highly energy-efficient by 2020, in line with the Government's own energy commitments, as well as the standards set by the European Union's, our typical energy efficiency is not even at two-thirds the level of the recommended base-line, with an average SAP rating of 53 and a recommended base-line of between 65 and 81.[12] Pre-1965 homes are on average only

Chart 7: SAP rating of homes by age, 2007

Dwelling age	Average SAP rating	% of total housing stock in 2005
Pre-1919	39	
1919 to 1944	43	58%
1945 to 1964	48	
1965 to 1980	51	23%
Post-1980	61	19%
Required minimum SAP (according to Building Regulations) = 81		

Source: CLG (2007) English House Condition Survey 2005 Annual Report

Chart 8: Changes in energy efficiency (SAP) ratings by tenure, 1996-2007

	1996	2001	2003	2004	2005	2006	2007
Owner occupied	41.1	44.4	45.0	45.6	46.1	46.9	48.1
Private rented	37.9	41.9	44.4	45.7	46.0	46.6	48.1
Local authority	45.7	49.6	52.0	53.9	55.3	55.8	56.2
RSL	50.9	56.4	56.7	57.3	58.9	59.3	59.5
All private	40.7	44.1	44.9	45.6	46.1	46.8	48.1
All social	46.8	51.9	53.9	55.3	56.9	57.4	57.8
All tenures	42.1	45.7	46.6	47.4	48.1	48.7	49.8

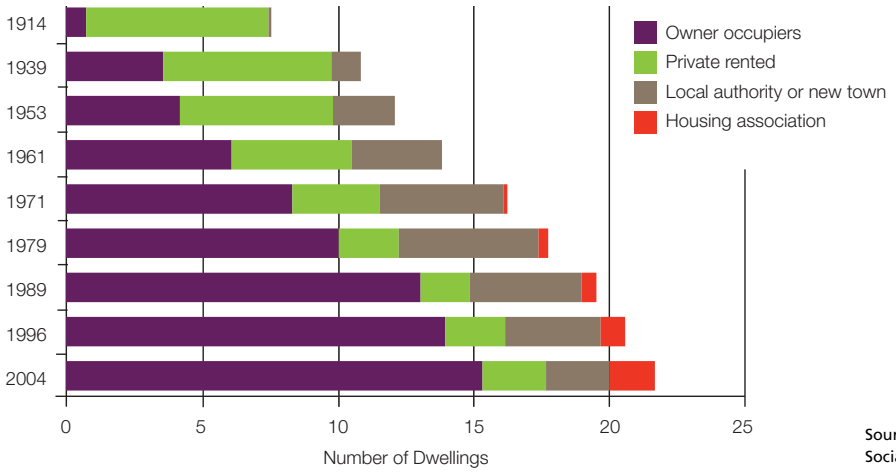
Source: Communities and Local Government 2009, English House Condition Survey 2007 Annual Report, p105

Chart 9: Percentage of households wanting to own their own home

	Percentage of people wanting to own a home within two years
1975	69%
1985	77%
1997	72%
2003	82%

Source: Adapted from Smith, J (2004) Understanding Demand for Home-ownership: Aspirations, Risks and Rewards, Housing Finance 62: 10-23

Chart 10: Dwellings by tenure, 1914-2004



Source: Hills (2007), Ends and Means: The Future roles of Social Housing in England, CASEReport 34, London: LSE, p43

two-fifths of the way to where they should be, with a SAP of 35.

Social housing performs a little better – it is generally more energy-efficient than the average of 53 but still only by a little with an average SAP rating of 57.

A majority are owner occupiers

In 1919, over 90 per cent of the population, including the fast growing middle class, were tenants. For nearly 100 years, since 1919, governments have favoured the idea of individual home ownership, partly driven by shortages and bad landlords, but also by a suburban ideal. Subsidies, planning controls and tax exemptions were used to accelerate the production. During the inter-war period, the cost of owner-occupation fell rapidly, as governments subsidised the building of around three million new suburban homes. Increasingly, working class families bought into subsidised owner-occupation, as the price of building fell and mortgages became affordable. It was a totally new and transforming trend that has continued in broad measure until very recently.[13]

Although owner occupation is more accessible now than in the past, and over 16 million homes are owner occupied, lower income people are much more likely to rent. Chart 10 shows the growth in owner occupation.

Chart 11: Location of RTB housing by building type in 2005

Right To Buy activity	Predominantly council built areas of			Other areas (not LA built)	All areas
	Mainly flats	Houses and flats	Mainly houses		
RTB homes	65,000	134,000	828,000	398,000	1,442,000
As percentage of all home-owners in area type	52%	52%	54%	3%	9%
As percentage of all RTB homes	5%	9%	57%	28%	100%
Estimated percentage of all originally social homes	12%	18%	34%	23%	26%

Source: Adapted from Hills (2007), Ends and Means: The Future roles of Social Housing in England, CASEReport 34, London: LSE p.89

Renting – why such troubles?

Meanwhile, tight rent controls in the private sector, imposed in 1915 as a result of World War I, stayed in place for over 70 years until they were finally lifted under the Conservative Government in 1989. A long, steep decline in investment and repair of privately rented homes blighted vast tracks of our inner cities, leading to blanket slum clearance between 1930 and 1980, causing the demolition of two million pre-WWI homes that had experienced a lack of care and investment for many years. Private landlords' share of the market shrank from 90 per cent in 1900 to 32 per cent by 1960, to just 11 per cent by 1984 and nine per cent by 1998, when it began its recovery in 1989, with the freeing up of rents. In 2008, it constituted 21 per cent of all homes in London and a steeply rising share everywhere, from a very low base. Private renting overall still only accounts for less than 15 per cent of all homes and still offers some of the poorest conditions.[14]

Council housing

A massive shift in ownership took place following World War II, partly fuelled by the return of the slum clearance programmes, which drove the expansion of both owner occupation and council housing, while crushing the private rented sector. Councils were given 100 per cent subsidies to build publicly owned, rented homes, driven by politically ambitious targets, dramatic need and shortages of homes caused by two World Wars, exacerbated by slum clearance and the requirement to re-house approximately two households from every home marked for clearance. By 1980, councils had built 6.5 million homes, 5.5 million of them in England. It now formed one third of the total stock of homes and 80 per cent of total renting. Giant council landlords, driven by rising costs, limited repair funds and the problems of scale, faced a huge management and repair problem. Worse than that, many of the estates they built became deeply unpopular because of their size, unappealing style and design, and unmanageability. Community instability and stigmatisation became major problems on council estates across the country. This led to the vote-winning electoral pledge of Margaret Thatcher's Conservative Government in 1979 to give virtually all tenants the 'right to buy' their rented council home at extremely generous discounts. At a single stroke, this opened the door to another huge surge in owner occupation.

Housing associations

A further twist to the story of our housing history lies in housing associations. Until the early 1970s, housing associations were small, fairly dormant philanthropic housing providers. In the late 1960s, just as slum clearance and new mass housing estates were becoming unpopular, housing associations were favoured by government as a third type of landlord. They were an alternative to the decayed private-rented sector and the overgrown public sector because they were able to operate in the difficult older areas where slum clearance and council building were both running aground. Their rapid rise in the 1970s and 80s stemmed from their community-based origins, and their renewal-oriented approach that protected existing communities. Over 1.5 million council homes have thus become housing association properties, now often called Registered Social Landlords (RSLs). Meanwhile, most new social housing has been built by housing associations since the early 1980s. As a result, in 2008, social housing comprised 4,125,000 homes with 2,255,000 units owned by housing associations (55 per cent) and 1,870,000 units owned by local authorities (45 per cent).[15]

Most of the remaining council stock is now managed through semi-autonomous companies called Arm's Length Management Organisations (ALMOs), rather than through the Councils' direct management structure. Under an ALMO the local authority retains ownership of the stock and controls the allocations policy. ALMOs were first established in 2002 and there are now 69 across the country, managing more than a million council homes across 65 local authorities.

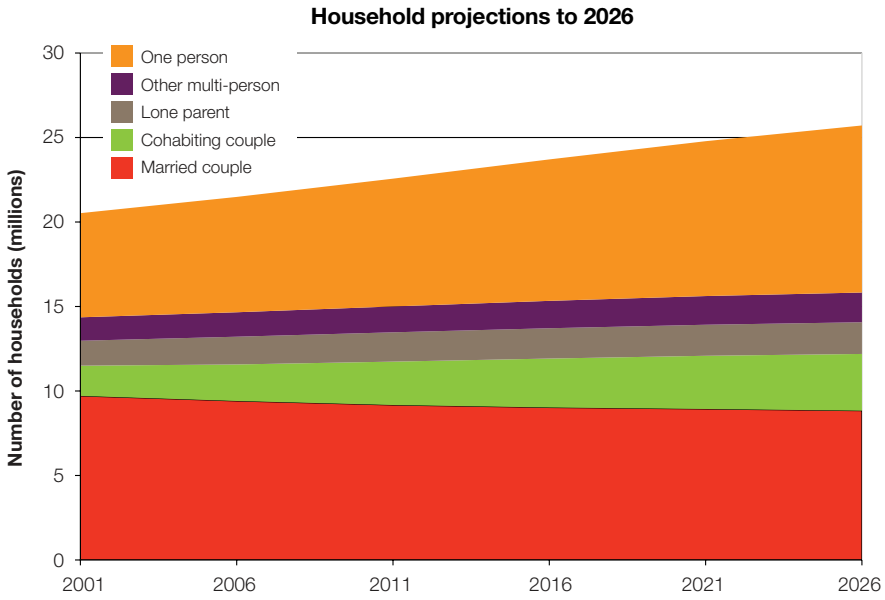
DEMAND, POPULATION AND HOUSEHOLDS

Obviously, the stock of housing and its location are a crucial starting point, but the kind of housing people want, where they want it, as well as who pays for it are drivers of demand, as is the universal need for a home. The British population has grown slowly over the last two decades, mainly because of rising life expectancy, and a general decline in birth

rates until recently. Our net population growth is concentrated mainly in the more prosperous southern part of England, while Northern regions and Scotland have experienced a loss in population. However, popular and successful cities and towns in more Northern regions also face growth pressures including Edinburgh, York, Chester, and Cardiff.[16]

Extra people and regional growth mean increased pressure on homes and space. Alongside this, households have become much smaller with people forming steady partnerships, marrying and having children later; people living longer and more people living alone or as lone parents. As a result household growth has been faster than population growth. These trends reflect big social changes that deserve much fuller discussion.[17] Demographic changes have a big impact on housing, straining the supply, pushing up demand, and causing pressures in places, and on particular parts of the stock. The growing pattern of young people staying at home until their mid or even late 20s reflects our inability to provide enough new homes to match household formation.

Chart 12: Household projections to 2026 (millions of households)



Source: Hills (2007), Ends and Means: The Future roles of Social Housing in England, CASEReport 34, London: LSE p.135

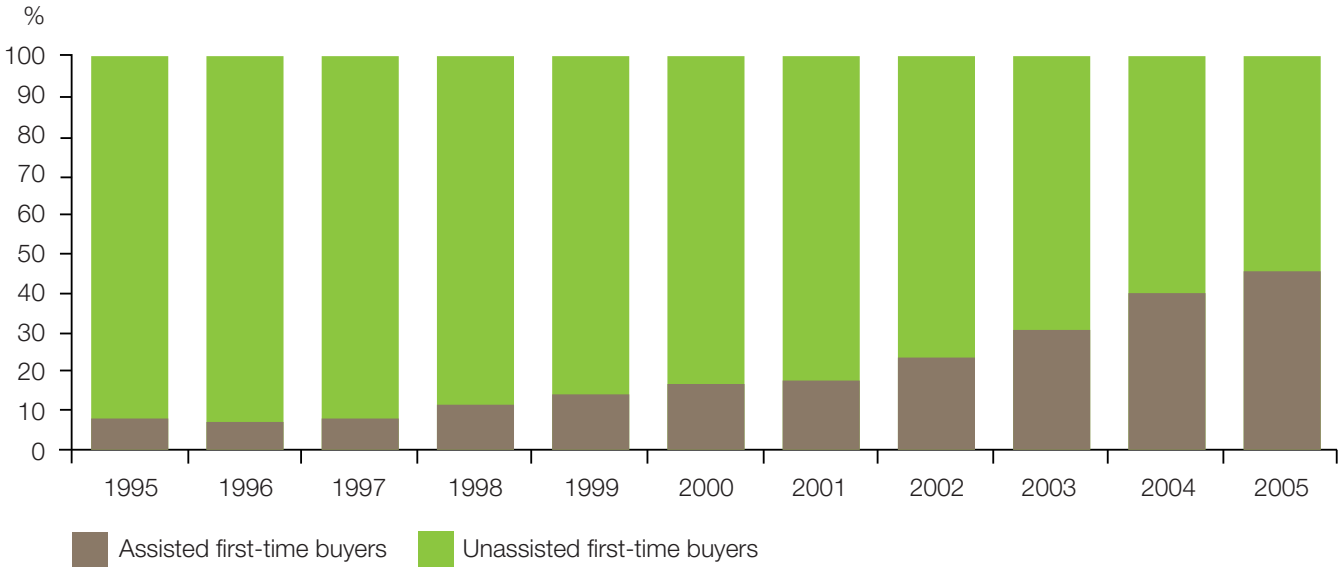
Demographic changes – smaller, older households

As people live longer, they occupy more space over many more years. The number of overcrowded households is small in absolute numbers and has fallen over many decades but it is a still significant problem, particularly in London and in social housing where there is an urgent need for more family homes. The pent up demand to buy among younger households (under 30) follows our history of favouring owner occupation over other tenures. According to the National Housing and Planning Advisory Unit (NHPAU), first-time buyers were typically aged 26 in 1974, with the average age varying between 26 and 29 up to the late 1990s.[18] Delaying buying, however, actually has some advantages, specifically avoiding the danger of inflating demand and creating undue financial pressures on young people at a still formative age. Nevertheless, the desire for independence shows up strongly in the demand for homes. Whilst the average age of first-time buyers rose as high as 31 in the early years of the 21st century, evidence suggests that by 2007 it was back down to 28.[19]

Wealth and housing demand

As more people become owner occupiers, a process that began in earnest nearly 100 years ago, so more younger people inherit wealth from their parents and are able to buy. This pushes up the potential to buy homes and therefore demand for owner occupation even further, particularly as renting becomes less attractive or less accessible in the case of social housing option. It also pushes up prices. Many more women now work and two earner households are far more likely to be able to and want to buy. Rising incomes and wealth, and the growth in two earner couples, combined with the ready availability of mortgages in the last decade up to the recent economic crisis, also made it easier to buy on somewhat lower individual salaries, but higher combined salaries. Many other factors have driven up demand for housing, particularly household splintering but also growing general affluence. Chart 13 shows the contribution

Chart 13: Proportion of first-time buyers under thirty receiving assistance with deposit, 1995-2005 (per cent)



Source: Hills (2007), Ends and Means: The Future roles of Social Housing in England, CASEReport 34, London: LSE p.14

made by wealth to the increased dominance of owner occupiers.

Housing need – who pays?

Meanwhile, housing need has grown as the availability of subsidised social renting has shrunk and private renting, while increasing, offers invariably short term lettings contracts and high rents. At the same time, the cost of owner occupation has risen steeply in the millennium years until the housing bubble burst in 2008 with dire financial consequences. Thus, social housing, if you can access it, is secure, cheap and of modest quality, while private renting is insecure, expensive, often poor quality but relatively easy to access. Social housing is increasingly restricted to the most vulnerable and needy families. For example, lone parents and vulnerable single people are disproportionately concentrated within it.

Government has long believed that there is a big housing supply deficit. By building three million extra homes quickly and cheaply, driven by household rather than population projections, we will build our way to an affordable, plentiful attractive supply.[20] Volume builders of course sign up to this approach. However, these targets can be more political than practical, and have not been met. It is important to understand the drivers behind this imperative to build: a combination of a rapid growth in single person households, coupled with a big slowdown in the rate of building. Due to the 'housing bubble' bursting and the recession, building is at a long term low, as Chart 14 shows.

Chart 14: House building: permanent dwellings started and competed by tenure, England

	Number of dwellings							
	Started				Completed			
Financial Year	Private enterprise		Local	All dwellings	Private enterprise		Local	All dwellings
1998-99	129,660	17,550	130	147,330	121,190	18,890	180	140,260
1999-00	132,540	15,940	150	148,630	124,470	17,270	60	141,800
2000-01	128,600	12,840	210	141,650	116,640	16,430	180	133,260
2001-02	138,850	11,060	120	150,020	115,700	14,100	60	129,870
2002-03	139,690	10,910	160	150,760	124,460	13,080	200	137,740
2003-04	148,770	12,350	280	161,390	130,100	13,670	190	143,960
2004-05	159,950	14,390	210	174,540	139,130	16,660	100	155,890
2005-06	167,430	17,230	250	184,910	144,940	18,160	300	163,400
2006-07	155,240	16,850	200	172,290	145,680	21,750	250	167,680
2007-08	140,420	15,810	200	156,430	144,740	23,100	300	168,140
2008-09	71,160	18,850	310	90,320	107,710	25,550	570	133,830

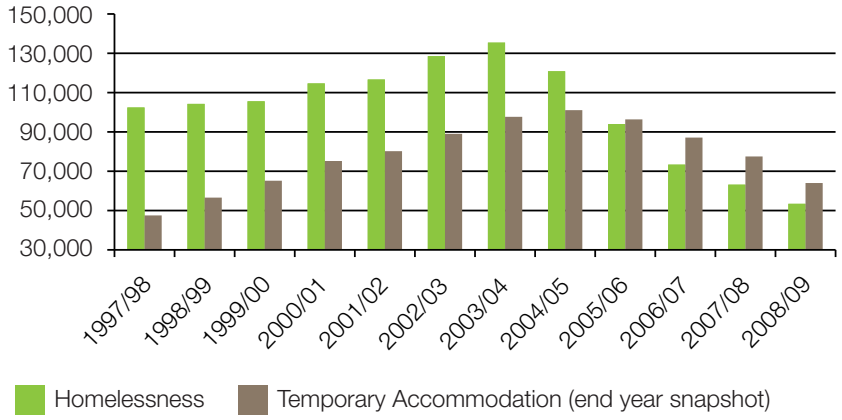
Source: Communities and Local Government. (2009) Housing and Planning Statistics 2009, p12 London: CLG www.communities.gov.uk/documents/statistics/pdf/1400509.pdf

Affordability

Even countries with large surpluses of housing supply can have affordability and access problems if people are too poor to pay, governments are unwilling or unable to help and landlords are reluctant to house marginal people. Actual homelessness in these circumstances can become a reality, as the steep rise in 'rough sleeping' and 'street homelessness' in the late 1980s and 90s showed. The USA illustrates the problem of affordable housing access and over-supply.[21] Today's official homeless figures reflect numbers of people housed on a temporary basis, because they need and qualify for help, but a permanent low cost home is not available. The number of households in temporary accommodation on 30 June 2009, arranged by local authorities under homelessness legislation, was 60,230. Of these households, 88 per cent had been accepted as being owed a main homelessness duty and were being housed in temporary accommodation by the authority until a settled home becomes available. The remainder were being accommodated pending a decision on their application, the outcome of a local authority review or an appeal to the county court on the authority's decision, or possible referral to another local authority, or had been found intentionally homeless and in priority need and subsequently were being accommodated for such a period as would give them a reasonable opportunity to find accommodation for themselves.[22]

The biggest problem is affordability, driven by the shortage of low cost renting and the steady loss of affordable social housing stock over three decades. Regeneration schemes, often designed to create more mixed tenures and therefore more mixed communities, effectively displace vulnerable households into the shrinking social stock. Only rarely do regeneration projects put back as many social housing units as were removed. This puts pressure on the remaining social housing stock, but it also polarises it by pushing out the more stable residents, usually Right to Buy owners, onto the open housing market.

Chart 15: Official homelessness figures



Source: Communities and Local Government
www.communities.gov.uk/housing/homelessness/homelessnesstrends/

In other words, as demolition blight takes over large estates of social housing while they empty, so housing needs are driven up.

The Labour Government responded by setting ambitious housing targets, both nationally and regionally. It injected funds into the major growth regions in the South and the low demand areas in the Midlands and the North. The NHPAU has advised an annual average requirement of **237,800 extra homes a year from 2008 to 2031** for England as a whole and that top of the range figures should increase by five per cent to a national average requirement of **290,500** extra homes. There are somewhat larger increases proposed for some regions including the North East, Yorkshire and Humber, the East Midlands and the South East.[23] Nevertheless, housing starts and completions are down to the lowest point for over a decade.

Housing capacity and density

The under-occupation of family homes by older and smaller households, the investment in new city centre flats, many of which, even in parts of London, have stayed empty, and the growth in second homes in rural areas , which are only partially occupied, create many pressures on supply. As society becomes richer, older, and more fragmented, we tend to *expand* rather than *shrink* our housing space per person.[24] Many older people remain in large family houses long after their children have grown up. The proportion of older people in the population has risen sharply and the proportion of older people who are owner-occupiers is far higher than the population as a whole. One big factor in people staying in three or more bedroom houses with gardens, long after they are able or energetic enough to look after them adequately, is the desire to pass on this family wealth to their children, and their emotional commitment to the home. The other significant factor is the lack of well-located, well-serviced alternative smaller homes, suitable for older people.[25] Thus, many elderly couples and single people struggle with too much space and too little support, while many young families are unable to gain access to our large supply of existing, relatively cheap family houses with gardens. This inevitably leaves less space for those on lower incomes, mainly younger households and with children. Obviously, what homes we have, how our population is made up, what we need and want, are big drivers of our housing futures. Who owns what is also a big driver.

Providing enough homes at a price people can afford in places they want to live has eluded politicians for decades. Here we can only highlight the dilemmas we face and pose some new approaches. By building single

Chart 16: Changes in density over the 20th century

Date	Number of dwellings per hectare	Number of people per hectare
1900 By-law housing	250	1,000
1950 New Towns	35	120
1970 Inner city estates	100	330
1990 Inner city renovated streets	70-100	85-250
1999 National average planning requirement	25	53
2005 average	40	85

family homes, by supporting owner occupation and by encouraging people to leave cities, we have dispersed far into the countryside, putting pressure on land, the environment and rural communities. Since 1945, partly due to slum clearance and massive building programmes, our cities and towns have thinned out to an average density of around 35 homes per hectare. Given our much smaller household size, down from six at the beginning of the 20th century to just over two today, there are too few people per home or per community at this density to support local shops, frequent bus services and sometimes even schools with less people per home, we need more homes per hectare to make shops, buses and local schools viable. We are now trying to recover a sustainable density by reusing inner city 'brown field' land, but a lot more needs to be done to make existing communities viable. Chart 16 shows the changes in density over the 20th century.

Environmental impact of homes and communities

Meanwhile all development carries a heavy environmental footprint and uses energy intensive materials, particularly concrete for foundations, steel, glass, timber, brick and lorry transport. Land has become far more prone to flooding, congestion has risen steeply as a result of our lower density and reliance on cars; more dispersed settlements have encouraged out of town shopping, longer commutes, more 'school runs' and so on. In addition, single family houses are more energy intensive and more costly to insulate. We have now built to the point where a majority say they want no more building near them, and many new development proposals are heavily contested.[26] At the same time, we have many run down existing areas with structurally sound homes in need of serious reinvestment.

PART 1: OUR HOUSING TODAY

CHAPTER 2: WHO OWNS OUR HOMES?

Tenure, or ownership of homes greatly influences the kind of housing we have now and want in the future. The advantages and disadvantages of different forms of ownership help us to understand housing problems beyond the basic 'bricks and mortar'.

Owner Occupiers

The vast majority of households in the country are owner-occupiers, making them fully responsible for the repair and management of their homes and gardens. This control and responsibility over housing at individual and family level carries many advantages and attractions.

- It gives people a sense of ownership, belonging and commitment to their homes and immediate surroundings.
- It leads to big investments in repair, improvements, and home-making that help maintain conditions.
- It solves many management problems by devolving responsibility for homes to individual householders rather than to landlords or government.
- It mainly provides single family houses which are easier to build, manage and control than multi-storey flats.

The problems of owner-occupation

Owner occupation also has many disadvantages:

- It places a big burden on lower income and marginal owner-occupiers who cannot afford full repairs. This applies to many older owners with low pensions, to many right-to-buy lease holders, and to unstable young families.
- It absorbs such a big share of housing investment that renting suffers, experiencing far lower status, limited supply and lower quality.
- Its attractions and the fact that it dominates house building and house buying put a lot of pressure on young and newly formed households to commit themselves to high mortgages, leaving too little to spare for proper maintenance and 'rainy days'.

Chart 17: Dwelling stock by tenure, England

	Owner Occupied		Rented privately or with a job or business		Rented from RSLs		Rented from Local Authorities		All dwellings
	Thousands	(%)	Thousands	(%)	Thousands		Thousands		Thousands
1901									6,277
1951									11,678
1961	6,068	44	4,377	32			3,382	24	13,828
1971	8,334	52	3,201	20			4,530	28	16,065
1981	10,653	59	2,051	11	410	2	4,798	27	17,912
1991	13,397	68	1,767	9	608	3	3,899	20	19,671
1996	13,983	68	2,073	10	942	5	3,470	17	20,468
2001	14,838	70	2,133	10	1,424	7	2,812	13	21,207
2006	15,390	70	2,673	12	1,842	8	2,086	9	21,990
2007	15,449	70	2,866	13	1,886	8	1,987	9	22,189

Source: Adapted from Communities and Local Government. (2009) Housing and Planning Statistics 2009, p2

- It creates a big financial gulf between owners and renters, bestowing on owners considerable wealth and security, allowing them to borrow and also to help their children become owners in their turn. For renters, the converse is true.
- The steep, long-term rise in housing wealth makes more people want to own more housing space, making under-occupation more common and driving up house prices, causing affordability problems lower down the income ladder.
- It is a steep step to move from renting to owning, particularly in the current climate of financial restrictions. Arguably, given the financial responsibilities of owning, this is right, but it does cause a major wealth division between 'haves and have-nots'.[27]
- It reinforces the ambition to build low density houses rather than flats, using more land than we can afford, further pushing up the price of housing and the value of land.
- Owner occupation becomes very difficult when elderly owners become too infirm to manage and need special care, or supported housing. Their savings are tied up in their homes and unless they sell they cannot pay for quality care. Many single elderly and infirm (a growing proportion of the population) struggle on for too long in oversized properties because of the logistical and emotional barriers to better, smaller, more supported homes.

These factors make it more and more difficult to build all the homes we want and make them affordable.

Social landlords

Social landlords provide a majority of rental homes, although their share of all renting has fallen from 70 per cent in 1979 to below 60 per cent in 2009. In 1965, the average local

council owned 14,000 rented properties, a huge operation, and in the big cities by 1980 over half of all housing was council-owned, almost all of it concentrated in large single tenure estates. In inner London, Glasgow, Liverpool, and Newcastle, the share rose to two thirds. However, council investment in management and maintenance was severely restricted by the rate of growth, the scale of operations and the concentration of resources on clearance and new building.

As the pendulum shifted in favour of renovation and more local tenant-friendly management, housing associations gained ground. By the late-1980s, the non-profit housing association sector had grown by over a million, as council stocks shrank. This has continued alongside shifts in ownership, with housing associations now dominating social renting while council landlords continue to shrink and lose stock.

One off-shoot of these changes and the management deficiencies in council housing was the growth in tenant co-operatives and Tenant Management Organisations (TMOs) in the 1970s and 80s. These small, community-based organisations took over responsibility from council landlords for running and repairing their homes in small, compact clusters (usually under 200 homes), using a share of the rents to employ local workers and helping improve conditions. They offer an alternative perspective on social housing as do smaller housing associations. In 2002 there were more than 200 TMOs in England, responsible for an estimated 84,000 homes, less than three per cent of the total council stock.[28]

The average size of social landlords however is now very large and many housing associations have several thousand homes and therefore the related problems of remote systems, community alienation and expensive administrative structures. This leaves growing problems of social polarisation with more and more needy tenants and unstable communities, and fewer direct local services.

The problems of social renting

The three biggest problems facing social landlords are:

- the supply of cheap, subsidised rental homes, vital to fast-changing urban communities and to low income families, is shrinking;
- the building and maintenance of rental homes at subsidised rates is expensive; and
- access rules targeting need risk increasing the social polarisation of social renting, particularly in large distinct estates.

The supply of social housing has been shrinking for 20 years, in spite of ongoing building, and the costs of maintaining homes occupied primarily by low income people are rising. The cost of building is also rising, in spite of the Government increasingly requiring private developers to contribute to the cost in exchange for planning permission to build for profit. In practice, this public-private funding system is no longer working.[29]

An underlying and seemingly intractable problem is the priority given to those in greatest need of a home, generally the 20 per cent of households on the lowest incomes, with least resources, who are most vulnerable to social problems. Lone parents, many of whom are on low income and vulnerable to homelessness, are disproportionately reliant on social housing. Social housing tenants are far poorer, less often in work and less mobile than they were 20 years ago, leading to far greater demands on management and greater need for responsive community-oriented supports. Social landlords often simply lack the resources to do all these 'extras' in the communities where they are responsible for much of the housing. Many government spending programmes to equalise conditions have been targeted at these highly deprived areas.[30]

Private landlords

Private landlords have a reputation for poor quality, high costs and insecurity in this country, even though the role they play is essential to the working of an increasingly mobile modern society. Many young, newly formed households and many emergency cases are dealt with fastest and with lowest immediate outlay by private landlords. They are therefore extremely important.

Governments across the world have learnt to their cost that over-tight regulation of costs or of standards makes private renting unviable. Strict rent control, as we had in this country from 1915 to 1989, reduces incentives and resources for investment in repair. High standards push up costs and therefore rents. In contrast, as in Germany for example, tax incentives, simple registration requirements and minimum standards, encourage better quality private renting, making it popular without making it unviable.[31] In the UK we are a long way from this position.

The common alternative to rent control is to subsidise tenants' income with housing allowances to pay for the rent. This requires rent registration and verification as part of the incentives process. Over the hundred years, from World War I, private landlords sold up as the pressures mounted on their aging stock, their controlled rents reflected less and less accurately real costs, and the older neighbourhoods in which they operated deteriorated through lack of investment.

Private renting has also expanded as part of the process of selling council housing. Many right-to-buy owners became small landlords, letting out their home to help fund the purchase of a better home in a better area. Another source of extra private renting was 'buy-to-let', the purchase of cheap, small, mainly new-build flats in new city-centre blocks funded with inheritance from housing and special mortgage deals, to let out to students, temporary workers or people looking for an urban *'pied à terre'*. The biggest factor helping private renting to grow was the abolition of rent controls in 1989. A

recent major source of rental homes is owner-occupiers who want to move but are not ready to sell their property or cannot get the price they want and opt to rent it out. This category has also been growing. Most important, the value of housing benefit subsidies, a direct cash subsidy for those on low incomes to pay rent, grew as rents rose and landlords' incomes from poorer tenants became more assured. Thus, private renting grew steadily in numbers from 1989 to today.

Private landlords are set to continue housing short-term, transient tenants, newly formed households including split relationships, newly arrived immigrants, low income households who cannot afford to buy, and many individuals who prefer a landlord to take care of repairing and maintaining the most expensive and complicated of assets, a home. Properties let on this 'fast-in-fast-out' basis require a lot of management and maintenance.

The problems of private renting

Most private landlords are small-scale, owning only a few properties (on average just two properties). They often rely on commercial property agents to let and manage their properties. In practice, letting agents often have a strong incentive to minimise spending on repair and rarely have a direct stake in the interests of their tenants. As long as the rents come in, they don't worry too much about conditions.

With so many small owners housing so many small, transient households and a generally poor quality stock, private renting is hard to control. It is a highly fragmented and varied market with a serious lack of information, regulation or enforcement. By its nature, it is ad hoc, opportunistic and elusive. We know that:

- on average, conditions are poorer;
- costs are higher;
- maintenance is problematic;
- regulation is weak;
- multi-occupation is common;
- fire risk is a hazard;
- electrical and gas standards are not always up to date;
- landlord deposits, normally taken in advance of letting, are not sufficiently protected;
- insurance is sometimes inadequate;
- poor insulation and repair standards impose big burdens on tenants;
- extra charges can be made unexpectedly;
- incentives for private landlords to do better are too low.[32]

All these areas are open to abuse. Tenants are in a weak and largely unprotected position, while landlords have had a fairly free hand since the 1989 reforms.

Chapters 1 and 2 have given a quick overview of how our housing stock is made up, how it is run, who owns it, and what the problems and pressures are. They lay the ground for an understanding of what we need, what barriers stand in the way to achieving this, and how we might to progress to where we want to be. The barriers to simply building more and more new homes are huge, complex, interlocking and entrenched. We look at this web of barriers next before considering ways forward.

PART 1: OUR HOUSING TODAY

CHAPTER 3: CONFLICTS AROUND BUILDING

Government is elected for the common good, balancing social and economic progress, environmental protection, security, mobility and many other critical but other conflictual factors. Public bodies therefore emerged first to control public health risks in housing, then to lay down standards of sanitary homes, and ultimately to broker the tensions between different types of land use, including protection of the environment. We face immense land constraints as an island, surrounded by water, dissected by large rivers which are bordered by flood plains. We have already built on much of the obvious, accessible and available spaces. The risk of flooding increases with each large new development we add.[33]

Planning was developed as a government response over the 20th century to conflicting pressures on the use of land as competition for space increased. The need to control harmful, exploitative or damaging activities required public consensus about how to use land, how to meet conflicting demands on it, and how to cater for the diverse and often competing needs of different social groups.

Housing is land-hungry, and therefore planning is vital. Vested interests intensify planning problems. Landowners gain or lose from planning decisions; developers and builders play for high profits on the basis of high risks. House-builders struggle with the price of land and the complexities of planning in suitable locations to build affordable, attractive and accessible homes. This makes government itself act in contradictory ways, both controlling the supply of land for building and its use, while pushing for the maximum output of affordable and decent homes.

Yet, all development and building activity makes a big environmental footprint, is energy intensive and therefore impacts on climate change. All new developments outside or on the edge of existing areas generate traffic growth, while drawing out the more ambitious and affluent households, increasing the separation of more affluent from poorer households.[34]

There are three major planning problems:

- We want to use **more land for growth in economic activity**, transport and particularly more homes. We also want to meet social need and affordability.
- The links between the **way we use land**, the **problem of climate change** and **social polarisation** are direct.
- **We face mounting conflicts over limited space**, its distribution and access barriers which are driven more by our dense population and sprawl building that by straight 'NIMBYISM' (not in by back yard).

Housing is prone to problems. The most obvious is affordability, for example in private renting or first time buying. Planning and large scale building are blunt instruments to tackle these problems. Poor decisions in the past such as mass inner city concrete estate building and poorly located new towns or outer sprawl developments today show this. A relaxation of planning controls only brings short-term relief due to our finite land supply and the direct environmental consequences of more building, particularly flooding and congestion. We face five big barriers to business-as-usual.

- Land is a major constraint in all heavily populated and highly developed island nations.
- Environmental limits are already severely breached on a planetary scale.
- The UK is a high energy user, particularly in transport.
- Low density buildings and associated transport account for over 70 per cent of all CO_2 we emit.
- Our large urban settlements are in need of constant renewal and upgrading to support a sustainable future and remain as a modern economy.

Real pressures on land

Only 13 per cent of the UK's land is built on and yet we face severe pressures for the following reasons:

- land prices are high and agreement over planned developments is increasingly contentious due to our population density;
- 75 per cent of land in the UK is in use of one kind or another and most places are already under the impact of development in the broadest sense, so new uses are difficult to accommodate without harm;[35]
- household size has decreased so that adequate basic services such as a bus or school now require at least 50 households or 120 people per hectare;
- density in built up areas has fallen from around 1,000 people per hectare in the late 19th century to 85 people per hectare today; other European cities are much denser in their cores with around 300 people per hectare; they tend to work better as a result;
- most new housing demand is driven by single person households who may or may not form at the predicted rates, given that a big majority of them cannot meet their own housing costs, and a majority are likely to share; and
- new building outside existing areas is socially and ethnically polarising, attracting more ambitious, established in-work households out of existing areas.[36]

Land use demands have been intense for 250 years in this country. Large parts of the country have had almost continuous building with many

towns almost running into each other, leading to popular support for green belts. The European Union map of urban conurbations shows the UK as having the most extensive built up areas in Europe, covering large swathes of the North West, the Midlands and Yorkshire. There are different kinds of demand on our land, all of which impact on and even conflict with each other. The competing demands for building, infrastructure, social integration, farming, food, and woodland, all put our scarce land under even stronger pressures.

At the same time, planning, green belts and other conservation measures, as well as the protection of unusable large areas of hilly moor land (mainly in the national parks); have helped protect many green landscapes in the UK. The national parks stand out as sharp delineators of preserved open space, whereas many parts of designated green belt areas are becoming harder to discern because of the impact of development. These areas are highly prized. We have no choice but to use our land more carefully to prevent the depletion of an irreplaceable and indispensible natural resource.

The impact human activity has on the natural environment in a highly developed country, like the UK, quickly becomes harmful. There would be great environmental benefits in adopting a more conservationist approach, reusing as much as possible, involving lower energy inputs and less damaging impacts on the natural environment. However, VAT on repair and maintenance, disincentives to reuse unwanted buildings or recycle small sites, and the complexities of existing urban conditions, make this slow and difficult. Reinvesting in and reusing existing areas and buildings are made much more difficult because so many resources are tied up in new building and new infrastructure. The 17.5 per cent VAT charged on repair and maintenance is made even worse by the fact that new-build goes tax free. Many economic advisers now predict that there will be a significant rise in VAT before the end of 2011. The new Liberal Conservative coalition government has committed to an emergency budget within 50 days to outline the plan for deficit reduction.

The problems building create

Widespread hostility to building more roads, airports, warehouses, retail, homes, hospitals, incinerators, power stations, wind farms, and so on underline our problem.[37] Yet, economic fears that jobs will move to mainland Europe and the Far East drive the race for growth. Commercial development can be insensitive to both social and environmental impacts, driven by cost cutting, profit and the interests of growth.

All development is traffic generating, in spite of efforts to curb car growth. At the same time all development is highly energy intensive, using vast resources of concrete, steel, glass, brick, timber, aggregates and other metals. Even when a building's operating energy use is low or even 'carbon neutral'. It takes around 40 years to 'pay back' the embodied energy in new buildings, even when they are highly energy efficient. [38] There are also high costs to reusing waste and contaminated, brown-field land. Yet, using new green-field land invariably increases flood risk, generates sprawl and car dependence, and causes social polarisation.

Social needs

We know what happens in a free market in land use and house building. The United States, under this system has created urban, social and environmental problems on a scale that is still unthinkable in Europe or in the UK.[39] These problems include:

- ghetto formation and extension;
- continuing urban depopulation and outer suburban growth;
- weakness of public and social policy or provision in support of urban areas;
- a rapid growth in planned, gated, suburban communities; and
- severe land depletion and congestion problems;

The USA uses almost double the European level of energy per person, much of this damaging over-consumption of land, energy and other finite resources results from low density sprawl, oversized homes and multi-car ownership. At the same time, it suffers extreme social polarisation, loss of urban vitality and severe environmental degradation, partly because decision makers live so far away from the problems. These harsh social and environmental pressures have contributed to a huge rise in inequality with five times the European and UK rate of imprisonment and violent crime, even allowing for recent falls in crime rates in the USA.

With only one twenty-fifth of the land per person compared with the USA, we in the UK have to protect our land and to support the renewal and reuse of buildings, used spaces and established communities. The land, water, air and biodiversity on which life itself totally depends are all under intense pressure and we cannot afford to deplete them further. So our own social structures are under severe strain from inequality, isolation, ethnic and class divisions.

Concentrating development in existing places

If we costed the impact of buildings and their related transport costs fully we would add significantly to the real cost of new building outside existing communities – the cost of new infrastructure for this purpose adds £40,000 per home or more.[40] If VAT was charged at five per cent it would on average add £5,000 to the cost of every new home. If VAT on repairs was reduced from 17.5 per cent to five per cent to equalise, that would reduce the average household repair bill by around £200 per year. A more equal approach would completely transform our attitude to the land, and to the built environment. Public opposition to yet more new housing is generated not only by 'NIMBYISM' but by a sense that green land is precious. The cumulative impact of incremental dispersed development has taken its toll. Adopting a 'carbon neutral', 'eco-friendly' approach, as proposed in the new eco-towns, only partially overcomes these problems, no matter how 'eco-sensitive' the design.

There is an alternative way forward. If we want to make our built environment more sustainable, we have no choice but to concentrate more activity

within existing areas. Our environment, our social harmony and the long-run economic viability of our society depend on this. Replacement building, retrofitting and remodelling existing buildings offer almost endless scope within urban areas, since land use, economic activity and social need are constantly evolving, creating a flow of new opportunities within existing areas. Previously developed land and buildings could accommodate all the new development and new uses we need, while saving energy, creating more sustainable communities, and offering social gains. The biggest gain would be in the potential for new jobs, new skills and reduced energy dependence.

Regenerating existing built up areas

The conflicts and barriers we have explored point to the need for new approaches. Most buildings last almost indefinitely with careful, continuous care, as buildings are effectively recycled over time through renovation and remodelling. Potentially they are as efficient to run as new buildings, once upgraded, but upgrading existing buildings requires 75 per cent less energy inputs than new buildings and their impact on the environment is negligible compared with new build, because they are already there and so is most of the necessary infrastructure. Existing buildings can be made more energy efficient to run, with modern insulation and heating methods. The cost is far lower and the pay-back time is much shorter.

Renewing existing areas of itself would generate greater density of activity which is both necessary and advantageous because urban populations have thinned out to a point where some urban services are no longer viable. This applies particularly to public transport outside London. In order to meet our development needs, and work within environmental constraints while helping to reduce social problems we need to do things differently. Next we examine new approaches to housing need, housing supply and housing demand, through a 'neighbourhood renewal' approach.

Renewing existing communities and increasing density

Renewing existing communities helps protect the countryside and reduces sprawl; it makes services cheaper through higher density and closer proximity, both to neighbours and to services. The traditional high density, mixed use pattern of urban centres offers valued assets and untapped potential including social contact and shared spaces.

While large developers favour large sites for obvious reasons, most builders in the UK are small and are used to working on small schemes within existing areas. An increase in incentives towards reuse would encourage small and medium sized builders to improve their standards and skills. With new incentives, we could make much more use of existing areas, which abound in family housing with three bedrooms plus gardens in inner and outer areas which could accommodate all the families we need to house if this large stock was re-valued, and the incentives to under-occupy space were removed.

Neighbourhood decline still drives people out of built up areas, particularly families. This fuels demand for new house building at relatively low density. In the post-war New Towns, the planned density was 38 homes per hectare including local schools, shops, buses, parks etc. The average household size was four people per family; giving 150 people per hectare. To achieve the equivalent **people density** today we require 60 homes per hectare. Yet the Government still only requires just 30 homes per hectare, even though smaller households, traffic problems and social divisions mean that we should raise densities, more akin to other European countries. Most new estates on the edge of existing towns and cities are devoid of amenities or services. They are heavily car dependant and they put at least 40 per cent of the land under tarmac.[41] Land makes up much of the cost of each new home. At a more sustainable density, double the present required density, the land cost ratio would fall. Fitting homes into existing areas will help raise urban densities to sustainable levels, generating more integrated and more viable communities. Higher density lowers energy costs for all services, but particularly transport. Meanwhile, schools, shops and health services will be within reach of residents without a car. Schools will become less socially segregated as a result. In this positive version of old communities made new we need to have a picture of the kind of areas we have in mind: Georgian Islington; Victorian Didsbury; Edwardian Hornsey; small terraces in Oxford or Durham; and large terraces in Anfield, Gosforth or Margate. All over the country there are opportunities to do better.

New building is such a small proportion of our total supply, less than one per cent per year, that even if we carry on as we are, it cannot solve our most pressing problems of:

- saving energy;
- integrating communities;
- keeping an affordable housing supply; and
- providing local services.

There are inherent attractions in older communities but we need constant repairs, street maintenance, cared for public spaces, and integrated services to draw people back. Neighbourhood renewal is invaluably popular when done, but policies supporting it are subject to sharp pendulum swings and programmes come and go in rapid succession in the same areas. Yet the cost of doing up existing homes and making them energy efficient is between one tenth and one third the cost of demolition and replacement, or building new homes in out of town locations.[42]

Social integration

In spite of considerable ethnic dispersal by some groups over the last 15 years, the concentration of ethnic minorities has grown within inner cities where these groups have traditionally settled. Meanwhile, new 'estates' or 'communities' outside cities are not well integrated. Neighbourhood renewal can help with social needs, with affordable housing, ethnic integration and better services in lower income areas, as well as general urban upgrading.

Energy saving

In order to meet our carbon reduction commitments by 2050, we have no choice but to renew existing homes to higher energy efficiency standards since stock replacement is too slow, too energy intensive and too expensive. Many trials and experiments have shown how existing buildings can be made as energy efficient as new build at lower cost. The work of the 'Old Home, Super Home network', the Zukunft Haus programme in Germany, Radian's work in the South of England and Liverpool Mutual Homes' work in Daneville, Liverpool all show what is possible.[43]

Decentralised community power generation in existing communities is also possible because of the higher density; this of itself saves at least 40 per cent of the energy we currently waste.[44]

CASE STUDY: KNAUF INSULATION LOW ENERGY WHOLE HOUSE REFURBISHMENT

In early 2009, Knauf Insulation took on a project to install internal insulation to a 1890s Victorian mid-terrace property in Doncaster. The objective was to install systems that could be undertaken by any competent general builder to achieve an effective and efficient low-energy refurbishment at a modest marginal cost compared with a 'normal' refurbishment.

The property was a private rental home which had been damaged by a previous tenant and required large-scale renovation. Knauf assisted the landlord and his builder to enable a 'whole-house, low-energy' refurbishment at a low marginal cost.

The attractive brick frontage made the property less suitable for external wall insulation but ideal for Knauf Insulation's innovative glass wool internal insulation system alongside suspended wooden floor / loft insulation and low energy lights.

The reduction in floor area was less that two per cent and an estimated £2,800 was added to the renovation costs (excluding one-off training). The calculated energy savings are approximately £300 per annum.

Element	U-values (W/m²K)	
	Before treatment	After treatment
Walls	2.00	0.35
Floor	0.43	0.13
Roof	0.71	0.21

www.knaufinsulation.co.uk

Finding new uses for unwanted spaces

Why are we so confident? Because this approach is how cities are made and remade all over the globe. Older buildings are adaptable: offices can become homes and vice versa; ground floors become shops; shops and churches revert to homes; schools become play centres and homes; flats over shops are reclaimed. Changing work patterns make home-work links closer and potentially valuable in recycling buildings. The service economy needs multiple small businesses, requiring varied building styles. Pubs, health centres, factories, warehouses, garages, sheds, basements, attics have all demonstrated their potential for this remodelling. Conversions are labour intensive but save materials, land, infrastructure, as well as bringing the big social and economic benefits of jobs and mixed use. Local builders and suppliers become vital. The increased activity helps restore the local economies of declining existing communities.

New build within existing communities

By reusing very small sites (site up to two acres) we can more than meet current housing need even in London. Small sites under half an acre, are actually too numerous to count, yet they can accommodate around 10 homes each. Currently undervalued infill spaces arise continually. None of these small sites are counted in official development plans so they are normally overlooked.[45] 'Scalpel demolition' or removing dangerous, structurally damaged and unusable buildings on a strictly 'needs must' basis, can create extra valuable space without involving the typical demolition

plan covering whole areas, which is socially disruptive, environmentally harmful and seriously blights areas. However, in the rush to infill it is vital not to lose urban green space and we must bear in mind that urban environments are vital to healthy communities.

Winning existing communities

There are many local objections to building at higher density, infill building, and increasing storey height within existing areas. Community activists can help ensure that the task of renewing their community brings real local benefits. They will fight to protect local green spaces and create play parks; they will value local land marks; they will argue for more security and street supervision with a local neighbourhood presence. All this can all win local communities over. The winning argument is that more affordable, more attractive housing will be more readily available and more accessible if we hold onto and reinvest in what we have already. For buildings last a very long time if we care for them and renew them.

There is a clear and positive way forward. Within existing communities in this country, there are large endowments of underused infrastructure, under occupied spaces and buildings (spare capacity). Urban areas, far from being exhausted, have untapped potential and are in need of continual reinvestment, modernisation, remodelling and new uses. The recycling and reuse of both buildings and land would help improve social integration by retaining more affluent populations and younger generations within existing communities rather then encouraging out-migration through new estate building. This approach would guarantee more affordable housing and more mixed communities. It would generate jobs for large numbers of under-qualified and workless people. It would help small building firms and local communities. It would save energy, transport and the environment. It would also enhance local services.

CHAPTER 4: WHY NEIGHBOURHOOD RENEWAL IS ESSENTIAL, ONGOING AND LARGE SCALE

The task of renewing existing homes and communities starts with neighbourhood renewal. Over 99 per cent of all homes this year will come from the existing stock, most of them within existing communities. It will depend on creating more jobs of much higher quality to the local building industry. Therefore our overwhelming responsibility is to make sure that these places continue to function.

There are several reasons why neighbourhood renewal matters.

- First, **physical environments and buildings decay rapidly** when too few repairs are carried out. Resources within households for the upkeep of neighbourhoods as a whole are limited and local authorities are expected to take responsibility for wider neighbourhood conditions and improvements. We pay our taxes to achieve this. Therefore there is a strong linkage between our homes, neighbourhood conditions and local authorities' commitment to neighbourhood renewal.
- Secondly, **all occupied buildings and areas experience 'wear and tear' damage**. This is often classed as vandalism and some of it is. But in the same way as children's dirty fingers at home leave marks on walls, so do cars pounding up and down streets, people moving up and down pavements, shops opening and closing and putting refuse onto the streets for collection, all in their different ways cause 'wear and tear' damage to neighbourhoods. They cause local environments to degrade without intense care. Therefore, it is important to make good this 'wear and tear' damage, much of which is the responsibility of individual owners and householders.
- Thirdly, much **neighbourhood maintenance and renewal is a collective responsibility**. Collective responsibilities require collective authority which is why local government emerged in the 19th century to cope with urban decay. This collective care in turn encourages individual householders and local service providers to do more to improve their local areas. To implement it requires a local workforce and an army of small, well-trained builders.
- Fourthly, there are the **services to all buildings** such as the plumbing, electricity, heating, structural elements and fittings that need modernising from time to time. The neighbourhood renewal approach addresses these issues. There are also shared amenities such as parks and play areas.

The Decent Homes programme is running until the end of 2010, when 95 per cent of social homes are expected to meet the Decent Home Standard. However, the Labour Government's established neighbourhood renewal programmes including the New Deal for Communities, Neighbourhood Wardens, and Neighbourhood Management have now been discontinued. Given the current economic climate and the associated fiscal tightening is unlikely that new programmes will be developed in this field. Neighbourhoods decline very quickly and need constant reinvestment and care. Hopefully new possibilities will emerge alongside retrofitting existing homes for energy efficiency and job creation. Retrofit proposals seem to have cross-party support in theory but major regeneration schemes are unlikely for the next few years. When we reinvest in neighbourhoods, places that previously were unattractive become desirable with rising values. As a result empty spaces and buildings are re-valued and reinvestment in existing homes becomes attractive. This means jobs for small and medium sized local builders. Builders must be up to the task to win this work. We move onto this in part two of the report.

CASE STUDY: METROPOLITAN HOUSING TRUST NEIGHBOURHOOD INVESTMENT UNIT, HARINGEY

Metropolitan Housing Trust developed a programme for refurbishing harder–to-treat Victorian street properties in Haringey to a standard beyond the Decent Homes standard. The project aimed to carry out whole house refurbishment to non-decent Victorian street properties that would dramatically cut carbon emissions and create more welcoming and more energy efficient affordable homes for residents. Residents had to be decanted into alternative accommodation for 14 weeks during the work but Resident Liaison workers from Metropolitan Housing Trust worked closely with residents throughout this process.

The refurbishment of the homes included:

- Double glazed windows (refitting timber sash double glazed windows in conservation areas)
- 300mm loft insulation
- 100mm floor insulation (ground level timber suspended floors)
- 60mm K18 Kingspan Kooltherm internal wall insulation
- Sound insulation between flats
- Low flow dual flush toilet
- Replacement of the central heating system with A rated condensing boiler
- Individually controllable radiators (TRVs) and room thermostat
- External improvement works and resident designed kitchen replacement and complete decoration
- New resident eco 'welcome home' pack including various eco products and an information guide on getting the most out of the refurbished home

The refurbished homes have typically achieved more than a **45 per cent reduction in their CO_2 emissions**. Residents are now better able to reduce their fuel costs and are being supported to make further changes in their behaviour, helping to reduce the risk of being in fuel poverty. The energy performance of a refurbished Neighbourhood Investment Unit mid terraced home are:

- Energy use: 164 kWh/m² per year
- Carbon dioxide emissions: 2.3 tonnes per year
- Estimated fuel costs of this home: £457.00 per year

*"The scheme has met and continues to meet all its key objectives (showing that **whole house retrofit of old street properties can be achieved, that residents can be fully engaged, that we can significantly reduce the risk of fuel poverty** in our harder to treat homes) and much more besides."*

*"Having an in-house team including a resident liaison officer and three building surveyors, overseen by the head of unit, ensures a **consistency in service delivery** and confidence in running a complex regeneration project. This is supported by **working with a variety of contractors that has enabled us greater flexibility** and an improvement in the effectiveness of the programming. As a result we are reaching more people and homes."*

Metropolitan Housing Trust: www.metropolitanhousingtrust.co.uk/

Public space

Public spaces and public buildings are part of neighbourhoods and are vital to their success. They are a major part of what people value in their communities and neighbourhoods, positively contributing to neighbourhood wellbeing, community spirit and the social interaction, as a result of people using the streets, open spaces and local facilities. Therefore, encouraging the reclamation and reuse of public spaces and buildings for community oriented activities makes neighbourhoods more welcoming to families, the young and the old, more attractive for all users. This raises demand for the area. As demand rises, so more empty and underused properties and scraps of land are brought back into active use, creating many demands on local builders. Local builders need new skills and capacity to help with external works, gardens, play equipment, repairs to schools, shops and other facilities. A lot of this work doesn't happen because it is simply too expensive. There are not enough 'odd job' repairs organisations that escape the 'cowboy builder', 'rip off', 'profiteering' accusations that are too often thrown at them. We come onto this in chapter five. Public bodies need to change the way they commission and organise ongoing maintenance of these spaces, so more regular, more locally known, more trusted smaller companies have ongoing 'call out' contracts for particular spaces or areas, thus avoiding the vicious cycle of decay and disrepair inviting vandalism and serious damage.

CASE STUDY: LIVERPOOL MUTUAL HOMES, DANEVILLE ESTATE REGENERATION

Homes and Communities Agency (HCA) Awards Winner 2009: Reducing carbon: Improving sustainable living in existing homes and communities

Housing Excellence Regeneration Scheme Winner 2009

Following the stock transfer from Liverpool City Council on 1 April 2008, **Liverpool Mutual Homes** (LMH) became the newest housing association in Liverpool and now manages over 15,000 homes in the city. Prior to the transfer Bramall Construction had been selected as a framework contractor to deliver £30 million improvement works to the Daneville estate in North Liverpool. This work began in May 2008. The Daneville estate is made up of 600 Boswell-type homes. Back in 2008 there were structural problems, the homes were 'unmortgageable' and the estate contained many voids.

The objectives of the estate regeneration were:

- To create a sustainable neighbourhood with increased security and wellbeing
- To improve the state of the properties and to make the neighbourhood desirable
- To reduce fuel poverty by reducing energy bills
- To improve the carbon footprint of the properties

*"It's really important that we **bring long-term void properties back into use** and get new people back onto the estate…Building the estate back to where it should be will help to create a vibrant new community."*

Head of Investment LMH

The Daneville regeneration programme included:

- Structural render – Structherm system: this comprises of structural ties and an insulated structural cage which gives the building back its stability, this then receive a number of coats of render to form an insulated weatherproof and attractive envelope. Residents did not need to vacate their homes as all work was external.
- Environmental improvements
- Re-roofing – Sandtoft Roof Tiles worked in partnership with LMH to advise and provide training on technical matters as well as on appropriate fixing methods.
- B rated windows and doors
- A rated boilers
- Roof and loft insulation
- Dual flush cisterns
- Kitchen and bathroom replacement
- Electrical rewiring

Continued overleaf

CONTINUED

Key impacts of the scheme:

- 100 per cent take up of void properties and a waiting list for houses on the estate;
- Physical appearance of the estate was radically improved;
- Local labour used across the scheme, sustaining 300 jobs;
- Reduced trades due to products selected;
- Energy bills have reduced;
- U – values of the properties have been radically reduced;
- Dramatic reduction in ongoing maintenance- target reduction from LMH average of five repairs per property to one.

LMH have stated that the cost of the refurbishment work has been around £39,000 per home, less than the estimated costs of demolition and redevelopment.

*"This scheme epitomises LMH's commitment – **it has future-proofed a whole estate of houses – delivering community regeneration as well as carbon reduction**. We look forward to working with LMH and its tenants in the coming years."*

Construction Director at Bramall Construction

*"The most pleasing aspect is the knowledge that **our tenants are really benefiting from the modern and sustainable homes and communities** we are building across the city as part of our five year £380 million regeneration programme…We hope **by creating such energy efficient homes we can play our part in educating people of the benefits and importance of being environmentally friendly**".*

LMH Chief Executive

*"This is an **excellent example of the regeneration of a rundown 1920s estate** that has dramatically reduced carbon emissions in the process."*

HCA Awards Judges

Liverpool Mutual Homes: www.liverpoolmutualhomes.org/

Government support is necessary

The Labour Government policies over the last 10 years encouraged reinvestment in decaying neighbourhoods. The Social Exclusion Unit's work in 1998 showed that there were about 3,000 extremely poor and very neglected neighbourhoods in the country in need of urgent renewal, leading to the creation of a Neighbourhood Renewal Strategy for the whole country targeting only the worst areas. Alongside this, around four million homes have been renewed through the Decent Homes Programme, targeting mainly social housing. There are many more homes still not dealt with and since all homes need ongoing repair and reinvestment, there is a constant flow of need for repair and renewal of at least half a million homes a year since all housing needs to be renewed thoroughly every 25 years and some major repairs need to be carried out at least every 10 years, with day to day repairs every year on an ongoing basis.

In the areas that have been targeted for improvement over the last 10 years, neighbourhood renewal has been a vital ingredient of home improvement. Thanks to government support and drive, those areas have actually closed the gap somewhat with the national average on education, crime, employment, and neighbourhood conditions. As they have improved, so more home improvements have taken place. It is a virtuous circle.

These three elements therefore, neighbourhood renewal, major repair and energy saving are crucial to our entire housing stock in order to expand our housing supply with minimal environmental damage, to advance the wellbeing of our communities, and to enhance the employment prospects of nearly a million young people currently excluded from the job market. All over the country small local builders would be recruiting, training and investing in this agenda if it carried a little more certainty.

New Labour's approach to retrofitting: how consistent is this approach with the new Liberal Conservative Coalition Government approach?

In March 2010, the Labour Government released *Warm Homes, Greener Homes: A strategy for Household Energy Management*. This strategy set out government plans to deliver on its commitment to cut carbon emissions from homes by 29 per cent by 2020.[46] The strategy includes clear phasing of delivery of energy efficient measures to homes, including insulating six million homes by 2012, installing loft and cavity wall insulation to all homes where practical to do so by 2015 and by ensuring that up to seven million homes will have had more substantial improvements such as solid wall insulation and renewable energy generating technologies by 2020. Furthermore, from 1 April 2010 Feed-in Tariffs (FITs) became available in Great Britain. Feed-in Tariffs support the installation of renewable micro-electricity generation by earning a return on investment of between five and eight per cent each year based on the owner investing in renewable technology, for which incentives are also available.

The strategy adopted in March 2010 enjoyed broad cross-party support. All three party manifestos in the 2010 general election

campaign made clear their party's commitments to energy saving through existing buildings. The new Liberal Conservative coalition government agreement confirms a continuation of this approach, although the detail may change. Under the new government, the following commitments will be helpful:

- Further support for job creation and green investment targeting the unemployed and young people.
- Support for SMEs as a core priority and financial backing for loans to facilitate investment.
- Adoption of the proposal for provision of home energy improvements to be paid for by savings from lower energy bills alongside a commitment to Energy Performance Certificates.
- An overall endorsement of environmental priorities and renewable energy.

The following section discusses the detailed approach and strategy as it stood pre-election in 2010. The broad elements of which should stay in place based on the new commitments of the new coalition government.

The potential for real reductions comes from existing housing.

(Killip, G. 2008, p10)

Until very recently the Government's policy on the energy efficiency of existing homes has focused on modest, cost-effective improvements with quick paybacks such as cavity wall and loft insulation, draught-proofing, low energy light bulbs, more efficient boilers and central heating systems and clearer heating controls. Measures have been primarily delivered through the obligation on energy suppliers, known as the **Energy Efficiency Commitment** (EEC) and then **Carbon Emissions Reduction Target** (CERT). This target driven approach often results in energy companies seeking the easiest and quickest route to guarantee they meet their targets within the three years, leading to an uneven demand for materials and labour, with the initial high demand tailing off significantly in the final year. In addition the uncertainty about where the CERT money will be spent can prevent SME builders from having the long term confidence to invest in training and expansion to deliver energy efficiency measures.

Funded programmes such as CERT and the Low Carbon Buildings Programme have come in for heavy criticism because erratic funding flows and uncertainty have clogged progress among SME builders. Over the past year there have been several calls to provide more certainty in retrofitting homes and buildings through stronger enforcement of energy efficiency standards in existing buildings.[47] We need a mandatory long term target for all homes to reach an improved energy standard of SAP80, in addition to mandatory refurbishment standards, to give small builders and their suppliers the confidence to invest in the training and know-how necessary to deliver this guaranteed demand.

Some local authorities have formed effective partnerships with energy companies and wider stakeholders to allow long term planning for energy efficiency. In particular, there is emerging evidence that the area based Warm Zones, which set out a long term strategy for neighbourhood level delivery across local authorities, deliver both carbon reductions and local job generation. For example, Kirklees Warm Zone has already created 80 full time jobs and saved approximately £1m a year on household energy bills.[48] The London Warm Zone in West London is a partnership arrangement between seven boroughs that has helped low income households, improved homes and reduced CO_2 emissions. During the period 2006-08: 20,000 assessments were completed, the partnership also levered in £4.2 million of additional funding (including £2 million of CERT funds) and over 3,000 vulnerable homes were brought up to the Decent Home standard.[49]

The **Heat and Energy Saving Strategy** (HESS) announced in February 2009, at the same time as the **Community Energy Saving Programme** (CESP) has provided a turning point in thinking about the scale at which we should upgrade existing homes. The CESP pilot will test the potential for delivering energy efficiency improvements at neighbourhood scale. Some areas are starting to look at ways to combine energy efficiency upgrades with wider improvements to neighbourhoods. This is likely to encompass a range of measures from installation of district energy networks to services already being offered by Warm Front, which tackles fuel poverty by offering free insulation to low income households with high energy bills, and other area based projects such as free installation of door and window locks, smoke alarms and ventilation. With greater understanding of the impact of water use on carbon emissions, particular hot water, it could also cover water saving measures.[50]

The introduction of Energy Performance Certificates (EPC) in 2008 has driven a quiet revolution in people's understanding of buildings and how they can easily waste energy. One very noticeable use of these certificates is that bit by bit public buildings are pinning up brightly coloured charts sharing energy ratings for the building, showing that the building earns a G (dark blue) or an A (bright yellow). So far, only orange to brown has appeared in most places – E to G. We need to have much clearer ideas about what bright yellow (A) or dark brown (F-G) on our EPC would mean so that this becomes a tool for sensible investment. The 2010 Strategy commits to launching a web-based tool to simplify the information behind an EPC and highlights the central role the certificates will play in the future:

EPCs will continue to be an important tool in identifying potential improvements in a property.

(HM Government 2010, p37)

It makes sense to advocate a whole-house approach to energy saving. This will require designing plans for the whole house that can be delivered in stages and bit by bit – for which we require small and medium sized builders. Insulating our homes to save £100 a year on an energy bill of around £1,000 is gaining ground. The idea of working street by street, and neighbourhood by neighbourhood is also gaining ground. Evidence from projects such as British Gas's **Green Streets** show that working at street or neighbourhood level can deliver additional benefits in terms of behaviour change.

This can cut energy by 50 per cent just by inspiring neighbours to join in an effort at energy reduction which will lead to calling in the local builder to help insulate our homes.[51] Islington Council has realised this as it tackles cavity wall insulation in blocks or streets, grouping together properties so tenants and owners alike benefit, creating almost a street party atmosphere as people come out to watch this magic injection, done by small-scale but highly skilled local building firms.

Taking a whole-neighbourhood or whole-street approach can also make significant cost savings for difficult measures such as solid wall insulation.[52] As with the whole house plan this does not require all homes to undertake a complete upgrade at the same time but could offer reduced costs to householders on specific measures if undertaken together or one after another. Delivering at neighbourhood scale can also provide cost reductions through bulk purchase, reduced delivery costs, shared project management, shared externalities and increased uptake of measures. Delivery at neighbourhood scale can also deliver wider benefits including the ability to influence behaviour change, support local businesses and create jobs, target fuel poverty more effectively and improve the quality of our existing places. Targeting fuel poverty by working at neighbourhood level (as CESP does), rather than means testing households has been calculated to be both cheaper and more effective getting uptake from the fuel poor.[53]

It is important that this is not just about behaviour change though. It should also cover the potential for neighbourhood solutions by taking a wider look at community energy use and needs – and the infrastructure needed to support this. The Sustainable Development Commission is developing thinking on this through its neighbourhood retrofit programme, tackling the big neighbourhood renewal needs of community infrastructure such as energy, waste, water, buildings, spaces, facilities and so on. Small and medium sized builders could be ready for this revolution that is already under way. While some procurement of energy saving work will be done on a big scale as happened with the Decent Homes programme, a lot of building work for the energy saving programme

CASE STUDY: RADIAN GENERATION HOMES LOW CARBON RETROFIT

2009 Sustainable Housing Awards Winner

Radian is an affordable housing provider based in the south of England with a stock of around 16,000 homes. The Generation Homes Low Carbon Retrofit project in Petersfield, Hampshire tackled 20 'hard to treat' 1940s homes during 2009. The 20 properties were originally constructed from reinforced pre-cast concrete and have no cavity walls. The project aimed to reduce household energy running costs that were previously more than £1,200 per year and to reduce CO_2 emissions by 70 per cent, with an additional solar package installed on a small number of (unoccupied) properties to reach an 80 per cent CO_2 reduction. The whole house refurbishment work took on average 10 weeks per home with residents being temporarily housed in three unoccupied properties that had been treated first while their own homes were refurbished. The **total cost of the refurbishment work is around £1.2 million** with the core package of measures costing around £24,000 per home, and £36,000 for the three homes that have benefitted from the additional solar package.

Technical features

- External wall insulation – 100mm of high performance insulation applied behind a new external render system
- Roof insulation – increased thickness of roof insulation from 150mm to 300mm
- Double glazing
- Draught proofing
- Installation of efficient gas condensing boilers
- Energy efficient light bulbs
- Photovoltaics
- Solar thermal systems – expected to meet around half of the houses' hot water requirements annually for non space heating.
- Water efficiency also addressed through provision of dual flush toilets, low flow rate showers and water butts.

Training and skills

Radian has an in house contractor, Radian Services, who carried out the first phase of retrofit work. The specialist solar work was sub-contracted out but there are currently efforts in place to train up some Radian staff to deal with this kind of work in future, apprentices were also on site throughout the process and received training.

"It is especially pleasing to Radian, that with the exception of the solar panels, the refurbishment work has been managed and undertaken by Radian Services – our in house contractor – who have ***gained new skills in low carbon retrofit which included the training of apprentices****."*

Continued overleaf

CONTINUED

"We are bringing attention to new products, things that we hadn't done before, workers had to learn on the job. For us, ***it was about developing existing skills*** *and just learning about the particular elements of new products...****The objective is to train up as many people as possible in the retrofit skills****."*

Sustainability & Innovation Manager, Radian Technical Services

Consultation and involvement of residents

Radian has fully involved the residents in the refurbishment process from the outset of the work. Residents were consulted on an individual basis during the conceptual design phase and were kept fully informed throughout the process with regular resident and community meetings and a monthly newsletter. Additionally, detailed home-user manuals are being provided to residents when they move back into their homes to help ensure that residents know how to use the various technologies to deliver the maximum environmental savings.

"I love my new home. Both the house and I have been given a new lease of life."

Radian resident

Radian: www.radian.co.uk/
www.radian.co.uk/retrofit/files/Casestudy_highfield.pdf


Before


During


After

has to happen house-by-house through small builders, since about 18 million homes in this country are owner-occupied, by far and away the largest single group of homes. There have been calls from within the industry to suggest linking procurement more tightly with accreditation and training schemes, and thereby limiting the allocation of government funding to those builders and installers who meet the required standard.

There is enough work in this field to keep every small builder, running to stay on top for the next 30 years! Therefore, it is absolutely vital that the building industry should gain a much stronger reputation for being well-trained, open-minded, adaptable, experienced, reliable, insured and accurate. If a builder can show through earlier work that he can help to save 50 per cent of an energy bill, in other words, taking the average annual bill down from £1,000 to £500, then that householder will want to make that saving. If the Government delivers on its word in making the payment for this work easy to access and appealing to the householder, there is a very rosy future painted green for the building industry.

Challenges

There is an exciting but demanding road ahead. Our building industry still has a reputation for poor quality, poor enforcement, poor standards and unreliable delivery. Yet we are all going to want and expect to make energy savings of up to 80 per cent. This plays perfectly into our core argument about the links between housing, communities, neighbourhoods, the environment and the economy. To do it, we need local builders we can trust to deliver.

The challenges to the building industry therefore are:

- **How can small builders equip themselves** for rising demand? The Low Carbon Skills Cluster report states that ' ... the potential demand from refurbishment is enormous and could add around 50 per cent to the current domestic building repair and maintenance spend of around £24 million per annum. This level of demand could cause a massive mismatch in the capacity of industry to deliver.'[54]
- **How can builders raise the quality of their work?** Or prove that the quality of their work is high, thereby raising profile and status of the industry?
- **What role can specialist training courses and accreditation systems play** in upping the game? And who can play this role?
- **Who will provide the training** and at what cost for retrofitting existing homes to save 80 per cent of their energy?
- **Where will the money come from** so that householders take the plunge and hire the builder to do the work? And who will make it easy enough?
- **Who will help builders** equip themselves for this task? Who will communicate the collective needs of thousands of individual building firms?
- **What is the role of government** in helping to deliver this?

These challenges have been highlighted in the government consultation on 'meeting the low carbon skills challenge' due to close on 23 June 2010.

School teachers have received special training because in 1997 'education, education, education' was a driving slogan with a social purpose. Is it possible that saving and reusing existing homes and communities, thereby saving energy and the environment, will become a driving ambition following the new Household Energy Management Strategy? If so, builders need to be ready to respond. Housing and regeneration have not featured prominently in the electoral campaigns of any of the parties in 2010, partly because of the climate of fiscal tightening and spending cuts. The themes of improving energy efficiency and job creation, skills and apprenticeships have been more topical.

This election has been unlike any other and has led to a new form of government that will create, according to its architects, much greater consensus around issues of national significance including the environment. The following extracts from the Liberal Conservative Coalition Government Agreement show the most important of these commitments for the work of SME builders and the FMB.

Deficit

- The parties agree that a plan for deficit reduction should be set out in an emergency budget within 50 days of the signing of any agreement.
- The parties agree that modest cuts of £6 billion to non-front line services can be made within the financial year 2010-2011, subject to advice from the Treasury and the Bank of England on their feasibility and advisability.
- Other policies upon which we are agreed will further support job creation and green investment, such as work programmes for the unemployed and a green deal for energy efficiency investment.

Banking reform and SME business development

- We agree that ensuring the flow of credit to viable SMEs is essential for supporting growth and should be a core priority for a new government, and we will work together to develop effective proposals to do so.

Environment

- The parties agree to implement a full programme of measures to fulfil our joint ambitions for a low carbon and eco-friendly economy, including:
  - The establishment of a smart grid and the roll out of smart meters
  - The full establishment of feed-in-tariff systems in electricity – as well as the maintenance of banded Renewables Obligation Certificates (ROCs)
  - The creation of a green investment bank
  - The provision of home energy improvement paid for by savings from lower energy bills
  - Retention of Energy Performance Certificates while scrapping HIPs

PART 2: OUR BUILDERS
CHAPTER 5: WHO ARE THE BUILDERS?

The construction industry in the UK represents a significant sector of the economy, with an annual output of around £97 billion in 2009 (around 8.5 per cent of Gross Domestic Product (GDP)) and employing 2.35 million workers.[55] SME builders are by far the most numerous builders in the UK. According to Construction Statistics (2009), in 2008 there were 202,407 private building firms recorded in Great Britain of which 201,011 (99 per cent) of the firms employed 80 staff or fewer with the vast majority of firms (93 per cent), 189,000 of the total employing 13 members of staff or fewer.[56]

The construction industry is made up of a small number of very large firms and a very large number of small firms. SMEs are predominantly involved in repair, maintenance and improvement work, although some are developers of new housing, mainly on a small scale. Of the 13,000 members of the FMB, approximately 75 per cent concentrate on RMI work and 25 per cent build new homes.

(Killip, G. 2008, p15)

Despite the construction industry being dominated numerically by small builders, large firms (those with over 80 employees) account for more than half (52 per cent) of the value of work done and just over a third (36 per cent) of construction jobs. This leaves SME firms carrying out approximately half of all construction work and employing around two thirds of the construction workforce. Within this SME group, the size and nature of firms varies enormously from sole traders operating out of a van to larger companies with up to 80 employees covering a wide variety of different trades and at different skill levels.

CASE STUDY: RUSSELL BUILDING SERVICES

Russell Building Services is based in Tyne and Wear and was established over 30 years ago. Phil Russell MBE, started in the trade when he was 21. He is a member of the FMB and also serves on the Health and Safety Policy Group.

Russell Building Services' work is split between reactive maintenance for RSLs and private landlords and also some planned refurbishment and maintenance work for RSLs and private landlords and clients, e.g. fitting new kitchens as well as some facilities management. They carry out new build, repairs and modernisation

Russell Building Services are a local authority approved contractor which means that along with great customer service and hard work, they guarantee professionalism.

The company has five direct employees (joiner, plasterer, decorator and those who do general buildings work) who all multi-task and they also use about six sub-contractors for electrical jobs, specialist flooring, roofing etc.

They have installed various energy efficient measures including:

- Loft insulation
- Solid wall insulation
- Ground floor insulation
- Draught proofing
- Other measures to reduce air infiltration, e.g. blocking up chimneys
- Hot water tank insulation
- Efficient heating boiler
- Mechanical ventilation with heat recovery
- Heating controls
- High performance glazing

"Many of the energy efficiency measures listed are now mandatory as part of building regulations. Also energy efficiency best practice, for example, heating controls: all engineers should be advising on upgrading boilers and controls as necessary. Every heating installer should have gone on an energy efficiency course and be using the guides in their work."

"The message is getting through to people that they need to think about other measures (energy efficiency) but money drives everything. The most effective tool the government has got is money; making it the only cost-effective thing for people to do but also need to make sure those least able to pay for measures are helped and that there is help for the most vulnerable."

www.russellbuildingservices.co.uk/index.html

CASE STUDY: I. J. CURRY

Based in Penruddock, near Penrith, **I. J. Curry** is a small family building firm that has been operating for around 20 years, since Ian decided to set up by himself following years of working for another local firm. Ian describes his firm as a general builders and he employs 12 people, specialising in joinery, bricklaying, stonemasonry, all structural work, plastering and tiling. The firm subcontracts specialist work to local electrical and plumbing firms. Ian relies on local suppliers who can usually advise him about new or unusual products.

Ian is a member of the FMB and sees membership as a sign of prestige and the Federation as made up of member builders that people can trust to give work to. Despite pride in being a FMB member, Ian thinks that accreditation is less important than local reputation. The custom they receive through word-of-mouth referrals is far more important than anything else.

Ian does not employ untrained workers but takes on trainees and apprentices. Ian thinks it is important that his workforce has qualifications and skills (CITB training) but that this should be combined with real work experience on site. He also emphasises the importance of multi-skilling. Ian leant the craft of joinery from his former employer and strongly believes that traditional crafts like joinery and stonemasonry can best be learnt from others skilled in the craft.

John, Ian's skilled stone mason, came to Ian's firm while working on a local job requiring traditional Cumbrian stonemasonry. John had learnt the craft while working for an experienced local stonemason, and when he joined Ian, he got the chance to test his skill on conversion jobs. He now works as I. J. Curry's leading stonemason, a precious skill within the Lake District National Park where Ian's firm is based.

Ian's son, Nick, works in the business. He trained as a joiner but covers many different building trades. He is also building his own house as a live-work unit in the National Park.

Ian believes that builders are very dependent on what architects design and that architects are often environmentally motivated. Unfortunately, for Ian there is still no direct cash incentive to install high-level energy saving insulation, such as reduced VAT. He is very happy when he gets the chance to install these – including extra thick internal solid wall insulation, under-floor and within ceiling insulation, extra cold resistant double glazing etc. He also goes for new ideas such as the new cheaper version of sheep wool insulation. Ian prefers to keep his operation as a small family business. He would not like to get any bigger as the planning and management would become too onerous. In 2006, I.J.Curry won the FMB's Northern Region prize for the best conversion over £300,000

WHAT KIND OF WORK DO SME BUILDERS DO?

SME firms vary not only in size but in the kind of work they do and their methods of operation. Many SME firms build new homes on small sites; others specialise in the repair, modernisation and improvement (RMI) market including extensions and conversions, most SME builders will carry out both new build and RMI work.

Of the total 202,407 private firms recorded in 2008:

- 47,761 firms covered the main trades of non-residential building, house building and civil engineering;
- 29,128 firms specialised in the installation of electrical wiring and fitting;
- 27,368 firms specialised in plumbing;
- 19,076 specialised in joinery installation;
- 7,884 specialised in roofing;
- 4,653 specialised in glazing;
- 1,768 firms specialised in insulating activities.

CASE STUDY: BADGER BUILDING

Badger Building is based in Lowestoft, Suffolk and is an independently owned local home builder that has been going for around 18 years. Badger build new properties on a small scale and have a flexible approach to building enabling them to offer a variety of new homes to both private clients and RSLs.

The company has around 35 tradesmen covering all the major trades as well as eight management staff and they sub-contract for more specialist work. Badger Building also take on apprentices but haven't taken on any new ones recently:

*"Our contracts director tends to supervise our employees who are training. **We do have a number of apprentices though we haven't taken on any this year**. We do have three at the moment though I think and have always had them in the past."*

Badger do install highly energy efficient measures in their new homes, for example insulation, double glazing and high performance heating systems but believe that there is no financial incentive or market yet for the more advanced renewable technologies such as solar panels:

***"We install lots of insulation as pound for pound it makes sense and provides the best return**. All of the insulation we install exceeds current building regulations. We put in under-floor heating in many of our properties and insulate walls and roofs. We think it is better to keep the heat in than to spend lots of money on new technologies to produce own energy. The payback for solar panels is not great at the moment."*

*"It is all about using the best quality product and installing it in the same way as always would. You will always get cowboy builders and installers who will promise people the earth and not be accountable for the installation or performance of the new technologies. **We do need some kind of accreditation system**."*

www.badgerbuilding.co.uk/09/index.asp

CASE STUDY: BORDER CRAFT HOMES

Border Craft Homes is based in Hexham, Northumberland and is a family business set up in 1976. The company has 12 full time employees including joiners, bricklayers and stonemasons, a kitchen and a bathroom fitter. They bring people in for the specialist trades and work with around 65 contractors who are used on a rotation system and there are normally about three or four main contractors for each trade. Julian Weightman of Border Craft Homes has been involved in the business for around 10 years. Julian is a FMB member, a National Councillor for the Northern region and also serves on the Managing Board.

'The Complete Home Service'

"We offer every building service from new built timber frame homes, kitchen and bathroom design and installation, windows & doors, extensions, you name it and we will be able to supply it. *We also pride ourselves in our flexibility in relation to all our projects, so if you want to fit the kitchen yourself, that's fine, we'll just supply the high quality kitchen chosen from our wide range of suppliers."*

The kind of work Border Craft Homes does has changed in recent times, with a shift away from house-building and towards refurbishment and renovation of existing properties:

"Our core business was property development. We have always done contract work but house-building used to be the biggest area of work, it's now the smallest and contract work is now the biggest. Rather than moving people are looking at what they can do in their own home. This has been a big swing for us, having to re-steer the business and how we work."

Border Craft Homes do take on apprentices through ConstructionSkills but Julian believes that it has become too easy with too little emphasis upon real on-site work experience:

"In the past you used to spend more time with the employer – they called it indentured or something – people can do apprenticeships in three years – I think this is too quick."

Border Craft Homes has done work on installing energy efficient measures including:

- Cavity wall insulation (with an external contractor)
- Loft insulation
- Ground floor insulation
- Draught proofing
- Other measures to reduce air infiltration (e.g. blocking up redundant chimneys)
- Hot water tank insulation
- Passive solar design features
- Efficient heating boiler – probably the main part of our energy efficiency work
- Mechanical ventilation with heat recovery – twice but on new build but not retrofit
- Heating controls
- High-performance glazing.

"People are now more energy conscious than in the past but this seems to be more of a money saving issue than an environmental one…There is a good mix of clients asking specifically for these (energy efficient) technologies and we also always try to get people to consider them. There are certain trigger points where it can be a quick and easy decision to get people to save energy."

Julian acknowledges that there are problems within the building trade in terms of disreputable builders – cowboy builders:

"A big problem in the building trade is the black economy / the cowboy builders. The first question some clients ask us is how do we get rid of the VAT and we say that you can't do that. There are others however who are happy to do this and who just want to provide the cheapest possible job for the client."

www.bordercrafthomes.co.uk/default.htm

CASE STUDY: SYNTONIC

Syntonic Solar Heating is a family-run business based in South-East London and is fully accredited to install domestic solar heating. Neal Etchells set the business up around 40 years ago. Neal is a FMB member, a National Councillor for the London region and also serves on the Health and Safety Group and the External Affairs Committee.

The company has around 15 direct employees who cover the main trades: plumbing, gas work, electrical work and it is only really necessary to sub-contract to supplement work. Syntonic take on apprentices and believe multi-skilling is vital for builders of the future:

"We take on apprentices and have three of them here at the moment. We have two who are plumbers and one who is an electrician but they do everything because we are a small company."

"We have a 30 years experience in delivering high quality sophisticated heating and cooling systems to industrial, commercial and domestic clients. Our engineers are happy to give you impartial friendly advice to design a fully functioning renewable installation that will save you money, reduce the carbon footprint of your house, office or factory."

Syntonic Solar also offer energy performance information and are able to monitor energy requirements using stand alone or web based software. Syntonic Solar can also install traditional central heating systems, air conditioning units and integrate existing plumbing systems into new installation.

Syntonic have experience of installing the following:

- Cavity wall insulation
- Loft insulation
- Solid wall insulation
- Ground floor insulation
- Draught proofing
- Other measures to reduce air infiltration (e.g. blocking up redundant chimneys)
- Hot water tank insulation
- Passive solar design features
- Efficient heating boiler
- Mechanical ventilation with heat recovery
- Heating controls
- High-performance glazing
- Rainwater harvesting
- Air / ground / water source heat pumps
- Biomass heating
- Micro CHP
- Solar PV
- Solar Thermal

"We do it because it is good business decision: insulating homes makes much more sense. You can have a few teething problems with particular items, for example, the first condensing boilers were really no good."

Neal has also proposed the development of a **Competent Builder Register** comprised of the necessary essential elements a competent commercial builder must meet. The objective of the register is to impart knowledge and confidence through a sensible and practical training process that enables builders to prove their worth without any unnecessary intellectual humiliation. The project is designed around the objective of enabling builders to demonstrate their ability to self-regulate and develop in the same manner as gas fitters, electricians and other professionals.

"A modern builder needs a combination of health and safety, and IT skills now. A modern builder needs to be multi-trade. There is not enough respect for these things."

www.solarheating.uk.net/index.htm

General builders cover as many trades and types of work as they can. They often work with sub contractors to keep their own overheads down and give themselves flexibility to respond as demand changes, for examples between new build, renovation and repair. Many SME builders would describe themselves as a 'Jack of All Trades' and would agree to a job, with the knowledge that they can complete it themselves or easily access sub-contractors to work with.

SME builders are versatile enough to adapt themselves into other markets. Some SME builders who may have been doing small new build projects have now moved into renovating existing buildings such as new kitchens and bathrooms as people are improving their homes rather than moving. (Education / Training Professional)

WHAT ARE THE LIMITS UPON SME BUILDERS?

Informal nature of building trade

Many builders working within SME firms have entered the trade via informal channels and with little technical training, learning 'on-the-job' through direct work experience. SME firms tend to rely on word of mouth and personal contacts in their recruitment. These informal channels and processes of job entry and recruitment have been highlighted by Linda Clarke and Georg Herrmann[57], as contributing to maintaining the status quo within the trade as an industry dominated by low-skilled white males.

In opting predominantly for informal and word of mouth rather than formal methods of recruitment and for experience rather than qualifications as the main criteria for taking operatives on, firms perpetuate the current situation and at the same time favour the recruitment of 'likes'.

(Clarke and Herrmann, 2007, p518)

The majority of site workers enter the industry through informal routes, learn on the job and have no formal qualifications. Advertised job vacancies still account for only three per cent of employment – equivalent to only two per cent of the workforce. As a result we estimate that around 500,000 workers currently have no qualification at Vocational Qualification Level Two or equivalent.

(ConstructionSkills, 2005, p61)

Sub-contracting

Many SME building firms rely heavily on sub-contracting and have long-established contacts with sub-contractors across the various specialist trades. While subcontracting allows a huge degree of flexibility for builders in the market, it can also lead to problems through a lowering of quality standards and reduced consistency and communication on site.

Construction is one of the most fragmented industries in the UK. Less than 20 per cent of the workforce is employed by large companies and there is a strong reliance on sub-contracting to SMEs.

(ConstructionSkills, 2009a, p18)

The situation is complicated through the use of subcontracting, with subcontractors themselves either employing directly or using self-employed operatives…Difficulties with subcontractors can give rise to major problems through lowering of quality standards and restricting the capacity of the house-building sector.

(Clarke and Herrmann, 2007, p521)

There is often a disconnect on site between the individuals working on different aspects of the project. The sustainable development and energy efficiency messages can get lost somewhere between the many contractors. Project management plays a vitally important role here and it is particularly important that the site foreman or equivalent understands what is meant to be happening on site and why, and connects and communicates with the different trades people working on site. An awareness of the need for a wider whole-house energy efficiency package, in addition to the technical building skills, is vital for work to be carried out to the highest quality and to ensure the greatest environmental savings.

The architect was onsite explaining how important it was for the materials used and the design to maintain air-tightness. Through this the site foreman really connected with the process and understood the need to avoid breaches for the insulation. The visualisation of the process was important. It is not enough to just deliver drawings to a site and materials. Someone needs to explain why the work is happening and what it will do so people on site understand. It is a learning process for all involved… There is a real need to make people understand how new technologies work and the wider concept of saving carbon and retrofitting.

(RSL employee)

There is of course a limit on how much control SME builders can have over the energy efficient measures installed in new and existing homes. Builders themselves feel that their role is to respond to the market and therefore to what consumers want. They do not see themselves as directly responsible for the design and quality of new build or refurbished and modernised homes. These are determined by architects, surveyors, owners and occupiers.

The position of many small companies as either working on domestic, small development, or as subcontractor to larger ones, limits their sphere of influence over whether a building or a community is designed to be sustainable.

(MRM Solutions, 2004, p10)

Supply chain

In addition to arguments about a lack of consumer demand and the lack of capacity within the building industry, the construction supply chain is widely criticised as being unprepared for the scale of retrofitting work that will be necessary. There are concerns that the existing suppliers of insulation and other materials will not be able to cope should demand from consumers and builders increase by a significant amount. Builders also rely upon suppliers to stock the most up to date materials and information on new technologies.

There are lots of products out there but it is sometimes hard to get the kind of information to us in the building trade. We need very simple and smart products that have an instant impact.

(FMB Member)

Work to integrate supply chains and promote multi-disciplinary working to ensure the industry takes responsibility for training and development is crucial, but not currently widespread.

(ConstructionSkills, 2009a, p18)

Impact of the current economic downturn

Many have argued that the fragmentation within the construction industry and its lack of overarching innovation has been allowed to continue because of the lack of economic motivations to modernise the trade.

For the last decade, the industry has been sheltered by a healthy economy. This has enabled construction to prosper without having to strive for innovation.

(Constructing Excellence in the built environment, 2009, p4)

The industry as a whole has been hard hit by recent economic difficulties. SME builders particularly now operate with minimal margins and very little security in an even more precarious market. Output has fallen, redundancies have been made and businesses have had to close.

…The construction industry has endured a prolonged period of discomfort, as a sharp slowdown in house building and a drying up of new commercial building projects has caused an estimate 16 per cent decline in output during this year, making it the country's leading source of redundancies during the recession.

(UK Contractors Group, 2009, p16)

With the country facing unprecedented economic challenges, the new Liberal-Conservative coalition government of 2010 has set out plans to reduce the current deficit and ensure economic recovery is maintained. There is a commitment in place to make cuts of £6 billion to non-front line services in the financial year 2010-2011 whilst simultaneously supporting job creation and investment in a low carbon future. There are many uncertainties and many critics of deficit reduction measures so early on the recovery. On the other hand, these measures could be compensated by new investment flows, particularly actions supporting SMEs, creating jobs for the unemployed, protecting front line services and investing in energy efficiency.

Skills and training deficit

It is widely accepted that serious skills gaps exist within the building industry as a whole. Building has for too long been seen as a career of last resort, something that people go into if they have limited options, and therefore the industry as a whole has a low entry point in terms of skills and qualifications.

The building trade has low standards and low expectations all the way through from apprenticeships. If you are no good for anything else you go and work in the building trade and it's been this way for a long time.

(FMB Member)

I think a construction career is devalued. Normally, if you have parents who were university educated you wouldn't be encouraged to enter the construction industry. It hasn't been a venerable vocation for about 100 years.

(FMB Member)

Building work is unpopular as a career option for many reasons including:

- relatively dangerous working conditions and high accident rate;
- working outside in all weathers;
- unreliable / inconsistent flows of work;
- limited, relatively high cost training and progression opportunities; and
- a general view that it is dirty and low-skilled work.

Therefore, there is an insidious combination of factors at work making the status and potential of builders seem extremely precarious, particularly for SME builders where training is harder to pay for, and work less often examined and monitored. Given all the problems and limitations, there is a need for more fundamental structural change. The built environment has been identified as being key to achieving government targets for reducing carbon emissions, and protecting the environment, particularly with regard to existing homes and communities. SME builders undoubtedly have a vital role to play in delivering energy efficiency upgrading and modernisation to existing and new build homes. The need to make the building industry as skilled, efficient and cost-effective has become top priority:

The growing low carbon industry in the UK can flourish only if workers have the right skills to meet the demands that businesses will face. For example, workers in the construction sector will need the right skills to build and install small-scale renewable energy technologies, and to install the full range of measures

that will make homes and businesses more energy efficient in both new and existing buildings.

(HM Government, 2009a, p128)

WHAT DO SME BUILDERS DO? WHAT DO THEY ACHIEVE?

As noted above, the SME builder plays a hugely important role in the construction industry in this country. We have spoken to a wide variety of builders to find out their views on the current situation within the trade, the training and skills agenda, and where they see themselves positioned in the challenge of upgrading and retrofitting existing homes, renewing communities and ultimately shaping our housing future. We asked SME builders about the kind of work they do and whether this had changed as a result of today's economic and environmental limitations:

We started off building porches and doing extensions but we don't do so much of that at the moment. There has been a shift away from strictly building work towards facilities management. To survive though we have to go out and do other things. We've also done more on the gas and electrical side as well.

(FMB Member)

We do bits of everything but not much new build. We do general building work including mechanics, interiors, renewables: 'whores and mercenaries' you could call us. We cover every base.

(FMB Member)

We also asked the builders about any energy efficient technologies or approaches they were using and their motivations for doing so. Many mentioned that while some energy efficiency and micro-generation measures (including air / ground / water source heat pumps and small hydro) may require the skills and experience of specialist installers, the vast majority of measures were within the reach of most SME building companies and their sub-contractors, including:

- Insulation (loft, cavity walls, ground floor);
- Draught proofing;
- Efficient heating boiler;
- Heating controls; and
- High performance glazing.

The energy efficiency measures are generally within the scope of the general builder and tradesman. The renewable energy technologies are more specialist.

(FMB Member)

VELUX hot water solar panels are installed in the same way as a velux window. I am a great believe in simple technologies. Some ideas seem too complicated which are not good for everyday consumers. People want things that are not too disruptive. If we all do little things then we can make a huge difference together.

(FMB Member)

Its always good business sense to be putting in the best technology available at the time, clothes shop don't sell last season's clothes do they?

(FMB Member)

CASE STUDY: OAKWOOD BUILDERS AND JOINERY LTD

Oakwood Builders and Joinery Ltd was set up in 1963 and is based in Oxfordshire but has experience of working across the nation. Oakwood is a family-run business with a specific commitment to both environmental protection and advancing skills and training of its workforce.

Since 1997, Oakwood has embedded responsible and forward looking practices into its business and made them a key belief for all of the staff through an award-winning training and career planning programme.

- Recycling building products on-site, currently installing plants to process site waste timber into wood pellets and looking to develop this further to offer other construction companies a facility to minimise their waste by converting it into fuel.
- Using environmentally friendly construction materials whenever acceptable to the customer, for example roof slates made from rubber tyres, exterior paint that contributes to thermal insulation.
- Only using FSC certified or verified sustainable hardwood timber.
- Using recycled waste materials within the business, such as producing bio-diesel for vehicles and cement mixers and using sawdust from joinery workshop to fuel heating system.
- Setting up webcams on the building site so that customers and architects can track progress without needing to use fossil fuels to travel quite so often.
- Ensuring that offices are constructed to be energy efficient using advanced eco-build techniques, including timber framing, air-tight windows, solar energy, heat-exchanging technology, wind turbine electricity generation and with sawdust fuelled heating from wood pellet boilers.
- Being an active member of the Association for Environmentally Conscious Building (A.E.C.B.).

"We need to equip builders with the basic knowledge that will enable them to tell people about the options available to them. Builders would have to back up suggestions about energy efficiency measures with evidence, e.g. thermal modelling, air testing etc. This would raise the status of the industry. Cowboys will get kicked out; if builders perform badly they will lose the accreditation."

"Refurbishment and new build need to go together – extensions are effectively new build. Cannot be treated separately as most small builders will do both."

Eco-refurbishment of a Victorian Terrace, Camden

Sustainability Award Winner, Camden Building Quality Awards 2009

Extensive refurbishment and the construction of a rear extension. The main focus of the project was to maximise energy efficiency with the latest insulation materials and to create a home with a unique art-deco interior design. A detailed PassivHaus Planning Package assessment was used to calculate the predicted energy consumption for various insulation options incorporating air-tight construction.

Continued overleaf

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Traditional box sash windows had to be recreated to match the degraded original windows. They were then fitted with double-glazed sealed units and double draught seals were incorporated into the design to maximise energy efficiency.

Several heating system options were explored and a ground-source heat pump connected to under-floor hearing and solar thermal were eventually chosen. The entire rear garden was excavated and vertical slinkies installed in trenches to maximise efficiency of the heat pump. This could only be considered as a suitable option after insulating to the maximum possible standards and achieving 30kWh/m²/yr heat requirement.

Due to structural problems with the existing building infrastructure, the entire internal walls, floors and roof had to be removed leaving only the original external walls. The wall insulation design included the use of rigid batts manufactured from recycled paper (Homatherm) in combination with a multi-foil insulation (Airflex). The design also included a service void behind the plasterboard which reduced the amount of penetrations through the airflex membrane. Mechanical Heat Recovery Ventilation was installed to provide fresh air into the building to maintain air quality as necessary in buildings with high levels of air tightness.

The gym pod (as seen in picture in bottom right corner) was built using the latest insulation technology and has a green roof to enhance biodiversity in the garden. Rainwater harvesting also supplies all the WCs in the house.

www.oakwood-builders.com/

CASE STUDY: B N KAUSHAL LTD

B N Kaushal Ltd, trading as BNK Construction, is a Birmingham based general building and roofing contractor specialising in design and build, new build, renovations, maintenance, disability works, schools, commercial and ecological building projects. The company is a family business that was set up over 25 years ago. They currently employ over 30 skilled tradesmen from a number of ethnic communities.

BNK Construction have been incorporating energy saving, renewable and sustainable resources in both their new build and refurbishment projects for a number of years. They have installed solar hot water panels, ground source heat pumps, wind turbines, green roofs, rainwater recycling and sustainable urban drainage systems.

BNK Construction proved in 2003 that it was possible to incorporate various energy saving systems into refurbishment projects, not just new build, successfully completing projects for housing associations including Black Country Housing and Accord as well as the Bournville Village Trust.

Continued overleaf

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264 Selly Oak Road, Bournville

BNK Construction has refurbished a home built in 1929 for the Bournville Village Trust incorporating a large number of eco-friendly features. The house needed to be refurbished by the Trust before it was re-let so it was selected as a pilot project to discover which energy efficient features would work and which would not. BNK advised on a number of energy efficient initiatives that were not originally included in the specification. A number of materials including bricks and timber were also reused.

The house now has:

- External Wall Insulation: Envirowall insulated render was applied to the existing external walls. The insulated render comprises 60mm Phenolic insulation and 16mm render to improve the thermal performance of the existing external walls.
- Internal Wall Insulation: 40mm Lafarge Thermal Board Super applied internally.
- Underfloor heating – the ground floors were also solid insulated floors.
- Smokeless Coal / Wood Burning Fire.
- Greenskies Solar Panels – Solar Water Heating for Domestic Hot Water: Solar radiation absorbed by the flat plate collectors fixed to the roof is then transferred and used to heat the water to the property.
- Greenstore Combi 6 Ground Source Heat Pump: Heat is absorbed 65 metres below the ground and transferred to the heat pump. The heat produced is used to heat the under floor heating and radiators and also offers hot water.
- Moondraught Sunpipe: Provision of a sunpipe reduces the need for artificial lighting by illuminating the space with natural sunlight.
- Chamois Eco Kitchen: Kitchen units are made from 100 per cent recycled timber.
- Water Saving Bath Suite by Lecico: Bathroom suite designed to conserve water, therefore saving money and caring for the environment.
- Passive Ventilation System by Passivent: Ventilation system applied to the whole house as a natural, energy free alternative to mechanical fans.

www.bnkaushal.co.uk/index.htm
and **www.bvt.org.uk/ecohome/index.html**


The environmental consultancy

e²S

certify to all that

264 Selly Oak Road

has been recommended for the award of an

EcoHomes EXCELLENT

Environmental assessment rating from the BRE

EcoHomes

WHY DO SME BUILDERS HAVE A POOR REPUTATION?

Builders in general have a low status in this country in comparison to many of our European neighbours and tales of unqualified, untrained and disreputable builders are widespread.

> *The bad press about builders (cowboy builders) is popular in the press and commands a lot attention but there is never any coverage when a builder does a good job. As a whole, I think the industry is run by responsible people who do a good job in difficult circumstances.*
>
> *(FMB Member)*

The SME dominated repair and maintenance industry has a generally poor reputation. The accreditation system is incomplete and building regulations and inspection systems generally do not apply to repairs (and most modernisation and improvement works) certainly not small-scale repairs. There are also key skills shortages in all areas of the building trade, particularly in specific trades such as plumbing, gas and electrical work. The low-level of skills and training within construction has had a negative impact upon consumer confidence and trust in the trade.

> *Lots of builders are incompetent and don't know what they are doing. There are also those who what are just bad at running a business and don't know how to deal with customers.*
>
> *(FMB Member)*

> *Building work does have a bad reputation…Builders and developers have always been perceived to be devious and just trying to make money. This has influenced the way planning policies have been developed.*
>
> *(FMB Member)*

The value of the building trade has also been diminished with many consumers opting for the cheapest possible solution to any repair and maintenance work. Reputable and responsible builders identify difficulties in persuading consumers of the need to pay for quality work, and dealing with being undercut by 'cowboy builders' who are happy to rush jobs and not comply with current VAT or health and safety and building regulations.

> *For every 100 quotes that we put in we probably lose about 20 or so to cowboy builders. It is a prolific problem and it all goes back to the devaluation of the building trade – everyone thinks they can be a builder! People don't value the expertise that good builders offer.*
>
> *(FMB Member)*

There have been various efforts within the construction industry to improve the status of the trade as a whole, for example, the FMB's 'Nail the Rogues' campaign. So called 'soft skills' such as communication and customer service also need development across the trade. Much energy efficient retrofitting work will need to be done internally and in-situ, with residents in their homes. Attention needs to be paid to ensuring trades-people are equipped with the customer-facing skills they will need in addition to any technical training.

> *Small builders are generally in people's houses and it's not the same relationship as other services like in a shop or restaurant, you are actually practically moving into the house with the client!*
>
> *(FMB Member)*

A more diverse workforce could play an important role here. For example, female consumers may feel more comfortable with a female tradesperson within their home. There is currently a shortage of female builders (women comprise just one per cent of the construction workforce) so there may need to be additional energy directed towards recruitment and training programme for female workers to deliver these services.[58] Increasing the diversity of the construction workforce is part of the objectives outlined by ConstructionSkills within the Sector Skills Agreement (SSA). Another example of efforts directed towards diversifying and improving the construction industry, on a local scale, is the Constructing the Future project in East Lancashire.

CASE STUDY: CONSTRUCTING THE FUTURE, REGENERATE PENNINE LANCASHIRE

Launched by Regenerate Pennine Lancashire (formerly Elevate East Lancashire) in 2003, Constructing The Future is a scheme that gives residents opportunities to improve their skills, gain qualifications, increase employability and access jobs and careers within the construction industry. The objectives of the project include:

- Education and Training: increasing the supply of apprentices and trained workers within the Pennine Lancashire construction industry, specifically the local supply chain.
- Business Development and Support: improving the local construction industry and improving its ability to compete regionally and nationally, especially by assisting local firms to secure local sponsored work.
- Jobs: promoting economic inclusion and improving local employment on local projects.
- Sustainability and Technology: promoting sustainable construction methods and increasing the use of new and emerging technologies.

Constructing The Future (CTF) has helped launched one of the first Construction Skills Academies in Pennine Lancashire – an innovative training programme that delivers project-specific on site training. Construction students are able to work on local projects where they can benefit from dynamic, flexible, hands-on learning. The apprentices will normally work on site four days a week and then spend one day at college.

"Providing training opportunities is very important to us as part of the company's commitment to long-term regeneration… Despite the economic doom and gloom, there will always be a market for skilled construction workers because there will always be a market for new buildings."

Lovell Craft Trainee Supervisor

CTF continues to maximise job opportunities and upskill the local workforce by working closely with the local industry and educational providers. In 2008/09 25 apprentices were placed into employment and a further 61 young people found work through the YouthBuild project.

YouthBuild

YouthBuild aims to empower socially excluded young people by encouraging them to undertake vocational training in the construction industry. The scheme provides assistance and guidance to help enhance employment opportunities for the apprentices. **YouthBuild specifically targets young women and workless people** in the disadvantaged areas of the region earmarked for Housing Market Renewal activity. All recruited trainees, though they may have underperformed at school, must show the potential to achieve an apprenticeship or other recognised construction award.

"I struggled to find employment to complete my plumbing NVQ and decided to complete a full-time plumbing course at Burnley College before returning to my apprenticeship…To prove I was capable of doing the job I worked on a voluntary basis for Hyndburn Electrical and Plumbing Supplies and I'm now employed by the firm."

YouthBuild apprentice

"It's fantastic that we have an organisation like Constructing the Future on our doorstep. The project provides essential support to local construction companies whether its through their training courses, help with attaining qualifications, finding a dedicated apprentice or giving us the opportunity to voice our opinions in the industry…As a former apprentice, I have first hand knowledge of how beneficial apprenticeships are for youngsters learning a trade, and now, as an employer, I understand that apprenticeships provide an effective and economical way of developing individuals' skills, ensuring that trainees are prepared for employment and are confident in their ability to perform in their careers."

YouthBuild employer

www.elevate-eastlancs.co.uk/main/Aboutus/Skills&training?DOCID=29&page=1

WHY DO WE NEED SME BUILDERS?

SME builders dominate the building trade and carry out a significant volume of work, particularly in the areas of small-scale new build, upgrading, renovation and conversions. They contribute hugely to the total value of construction work carried out in this country. In general, **SME builders are flexible and are able to respond quickly and easily to changes in market demand**.

The building trade does react very quickly to change in markets as long as the opportunity is there. However, we cannot expect people or the industry to train for the jobs that don't yet exist. The real problem is that people still don't know whether the new approaches will work.

(Construction services provider employee)

The big thing for smaller firms will be the need for continuity. If this work is something that is going to carry on and be popular than great…With the help of the FMB we can be at the forefront of the market.

(FMB Member)

SME builders employ over a million people and offer valuable **employment opportunities**, particularly in the uncertain economic conditions we face in the future. The industry could be key to the UK's transition to a low carbon economy as well as providing wide ranging training, skills and employment to thousands of people.

Construction participates in a number of key initiatives to bring young people into the workforce and to enhance skills, training over 70,000 people through apprenticeships in the period 2007-09.

(UK Contractors Group, 2009, p21)

A large proportion of retrofit and renovation work is carried out by SME builders. There is a huge opportunity here, as long as sufficient standards are established and training is provided, for SME builders to help achieve an 80 per cent reduction in green house gas emissions by 2050. Gavin Killip in 2008 identified that there could be a new market in refurbishing existing homes worth between £3.5 and £6.5 million per annum.[59] The Labour Government suggested in 2010 that a core of 65,000 people could be employed in the energy efficiency industry by 2020 with potentially many more jobs created further down the supply chain.[60] The SME builders' focus on small scale development and repair and modernisation offers a valuable opportunity to identify and deliver energy efficient improvements to homes. Builders being able to inform and advise householders and landlords about potential improvements when other renovation / repair work is planned or underway can provide a simple and accessible way of upgrading homes.

Using existing 'trigger points' to require improvements in energy efficiency, such as when other building work is happening in the house, or when people carry out improvements to a home they have just moved into, could help remove some of the 'hassle' associated with the work and reduce costs.

(UKGBC, 2008, p9)

There is a good mix of clients asking specifically for these technologies and we also always try to get people to consider them. There are certain trigger points where it can be a quick and easy decision to get people to save energy.

(FMB Member)

This is the work that should be appealing to SME builders. Its not rocket science. It can all be carried out using existing workers and skills.

(FMB Member)

We need to equip builders with the basic knowledge that will enable them to tell people about the options available to them. Builders would have to back up suggestions about energy efficiency measures with evidence, e.g. thermal modelling, air testing etc. This would raise the status of the industry.

(FMB Member)

Getting small builders to know enough about insulation / air tightness etc so that they can say well while I'm doing this I can also do these things. It's important to know enough to do things without being cowboy builders.

(Skills sector representative)

Upgrading advice and delivery on the ground at trigger points during building work could help enhance the value and effectiveness of EPCs that are currently only required at the point of sale or rental of property. SME builders have a wealth of knowledge and experience that can be utilised with support and training to enable them to become Domestic Energy Assessors. More detailed whole-home energy efficiency plans would contain in-depth building based proposals for future work.

EPCs are only as good as the people doing the survey so needs to be done by someone who understands the building…Domestic Energy Assessors can't be men in suits. You need people with common sense who understand what the walls are made up of and how the building works.

(FMB Member)

ConstructionSkills agrees that appropriately trained Domestic Energy Assessors should deliver energy audits. There is also mention within the strategy of builders being able to offer energy efficiency advice to householders when carrying out other repair and refurbishment work. There would however, be a need to ensure that any builders offering this service received the same level of training and information as the Domestic Energy Assessors.

(ConstructionSkills 2009b)

There is now greater acknowledgement of the vital role that builders and trades people are able to play in raising awareness and advancing knowledge of energy efficient measures in homes, as they are key contacts for many householders:

> *There are many opportunities to provide householders with information and offer advice to coincide with other events or activities relating to homes ('trigger points'). When people move into a new home they will see their EPC and often have the chance, as part of early changes they make to their home and with a clear loft, to address energy efficiency issues. There is also potential for trades people to advise whey they go to homes to undertake plumbing or building work, for example. As part of developing our advice services we must recognise the contribution of those already meeting householders.*
>
> *(HM Government, 2010, p41)*

PART 3: OUR HOUSING FUTURE

CHAPTER 6: THE NEED FOR SKILLS, TRAINING AND ACCREDITATION

The built environment sector and all the businesses that work in it have such a vital role to play in delivering a sustainable quality of life for our society. We need to raise our collective game despite uncertain economic times. More than anything, ***we need to support the development of the next generation, who appear to get very clearly what is needed to take the industry forward.***

(Constructing Excellence in the built environment, 2009, p27)

The issues around skills and training in the construction industry are long established and well documented. In 1998 Sir John Egan produced *Rethinking Construction* and identified considerable scope for improvement within the industry. Particular areas of concern included:

- low profitability;
- low investment in research and development;
- inadequate training; and
- low client satisfaction.

Key recommendations of the report included the need for a commitment to people and improvement in areas such as decent site conditions, fair wages, health and safety and training and development improvements for staff; and the need to improve the image of the industry in order to attract the right calibre of employees, thus ensuring the future prosperity of the construction industry. ConstructionSkills (the Sector Skills Council for construction) has tried to address issues around the image of the building industry by running a 'Positive Image' campaign aimed at attracting quality recruits by boosting the image of the industry.

ConstructionSkills – the Sector Skills Council for Construction

ConstructionSkills was set up in 2003 as a partnership between Construction Industry Training Board (CITB)-ConstructionSkills, the Construction Industry Council (CIC) and CITB Northern Ireland (NI). It represents all aspects of the construction industry, from architects to bricklayers, across the UK. The ConstructionSkills' Sector Skills Agreement (SSA) outlines the four predominant current skills challenges within the construction industry:

- Improving business performance particularly increasing SME's investing in training
- Recruiting qualified new entrants and boosting the image of the industry
- Qualifying the existing workforce
- Infrastructure in support of these priorities.

The Construction Qualification Strategy (CQS) was developed in March 2007 with the objectives of:

- developing a well-planned and structured approach for developing fit-for-purpose qualifications and pathways that meet sector and learner needs;
- implementing and realising the sector's vision, stated in the Sector Skills Agreement (SSA), through the support and engagement of key stakeholder partners; and
- offering a blueprint that draws together guidelines, principles, priorities and actions as a basis for future planning and development.

The CQS is thought of as a 'moving' annex to the SSA.[61]

The organisation and delivery of construction training is through CITB-ConstructionSkills via the collection of an annual levy from all liable employers (those with a wage bill of over £80,000) and returning the money collected back to employers in training grants. It is seen as the best way to support the industry in skills and training as even those firms who are not benefitting directly from the grant are aiding the development and advancement of the industry as a whole.

> ***The industry operates a training levy through the Construction Industry Training Board (CITB). The levy raises over £90million annually and is spent on improving training right across the sector. On top of this, the construction sector receives £56million each year from Government through funding for Modern Apprenticeships with further funding from other programmes. (Barker, 2006, p116)***

ConstructionSkills has demonstrated its commitment to ensuring that the current economic uncertainty does not widen the existing skills gaps in the industry by identifying the need for:

> ***Highly skilled and experienced people in place to respond to the upturn when it happens. This means safeguarding existing skills while encouraging employers to continue to invest in training and develop skills at all levels – from apprenticeships and graduate training programmes for new entrants to lifelong learning for those already working in the sector.***
>
> ***(ConstructionSkills, 2009a, p3)***

A new 'Cut the Carbon' campaign is due to be launched by ConstructionSkills in Autumn 2010 aimed at raising awareness among SME companies of the legislation, the timelines and the new opportunities presented by the low carbon agenda. Practical support and training will be developed in order to help companies prepare for the changes needed to the skills base of the construction agenda.[62]

Some of the skills and training issues within the construction trade have proved difficult to address because of the fragmented nature

of the sector with a large proportion of SME firms and the unregulated entry routes that many workers make into the industry. *Rethinking Construction*, the report of the Egan Task Force, in 1998 described the fragmentation of the construction industry as both a *strength and a weakness*. While the large number of small firms helps the industry to cope flexibly with variations of workload, the low level of vertical integration means that subcontracting continues to be a dominant way of working.[63]

> ***Construction is one of the most fragmented UK industries, with a major reliance on subcontracting with less than 20 per cent of its workforce employed by large companies (defined as having over 250 employees)***
>
> ***(ConstructionSkills, 2005, p7)***

> ***The problem with building is that we are an enormous employer in this country but very fragmented, when we go through a hard time we don't have the same kind of unified response as car manufacturers for example.***
>
> ***(FMB Member)***

The SME builders we have spoken to all agree that training is vitally important but that the current system is not well-suited to meeting their needs now, or in the future. Training is viewed to be complex, expensive and overly bureaucratic with too much focus upon paperwork and not enough attention given to work experience and job-based training. There are also concerns that the content of training does not keep pace with the developments within the wider construction industry.

> ***Although we do supposedly get grant-aided support from ConstructionSkills, it's difficult to believe when you see my Levy bill!***
>
> ***(FMB Member)***

> ***The principle of training is fantastic but for tradesmen there isn't enough emphasis on skills and too much on paperwork. Health and safety is a priority obviously but there is not enough time spent on the skills that are needed to make a tradesman…Training does not have the correct balance of skills. Quite a few builders now want to do their training in-house so that they have the skills they need in their business available to them. This may not be as good for the employee for when they choose to move on.***
>
> ***(FMB Member)***

> ***The training is only ever as good as the chap training them and not everyone can be a good teacher… It's only through hands on fitting and doing the work that you learn though. You can learn what you like in a classroom but you only really know how to do things / know how things work when you actually do it.***
>
> ***(FMB Member)***

> ***Colleges give out NVQs now just to get the money from government for the student! There are lots of people who are not ready to work on a building site. We as employers are expected to do most of the craft training.***
>
> ***(FMB Member)***

> ***Colleges have lots of youngsters on full-time courses but they only come out with a technical certificate, they have no site experience at all. No one is going to want to employ them.***
>
> ***(FMB Member and Skills Sector representative)***

> ***My concern is that we are still training traditional apprenticeships when we should be training people for when the downturn is over. We should be training people now for the upturn. We need resources and facilities to develop courses for young people and current employees, to be ready for the new technologies and standards anticipated.***
>
> ***(Education / Training Professional)***

Qualifications and Credit Framework

The Qualifications and Credit Framework is a new framework for recognising vocational qualifications in England, Wales and Northern Ireland. It is part of a comprehensive effort to make vocational qualifications, in the construction sector and elsewhere, more beneficial to the business needs of employers. Vocational qualifications on the framework are new work-related qualifications designed to allow learners more flexibility in the way they learn and to acquire the skills sought by employers.

> ***It will give a wider range of learners the opportunity to get qualifications they need, in a way that suits them. QCF qualifications are designed with the help of employers so learners can be assured that they're gaining skills that employers are looking for.***
>
> ***(Qualifications and Curriculum Development Agency (QCDA), 2010)***

Throughout 2010, existing vocational qualifications, including BTECs, are being converted into QCF units and moved on to the framework. Some NVQs are also changing although other qualifications will remain as NVQs. ConstructionSkills have been prominent in the campaign to keep NVQs at the centre of the construction industry's training infrastructure as it was felt that removing NVQs would lead to widespread confusion among employers who would also incur additional costs at a difficult economic time. NVQs were designed to ensure 'work-based competence' could be measured and NVQs should only be awarded when the person is competent. NVQs are also central to the Apprenticeship system with the associated links to industry registration and certification schemes currently supported by the qualification, damaging health and safety standards and customer confidence.[64]

Apprenticeships

Apprenticeships in construction are schemes designed for young people (16-25 years) entering the industry who combine working and earning with studying for NVQ

qualifications. Employers may be able to claim CITB-ConstructionSkills Grant of up to £9,400 to support their apprentices through the three year scheme.[65] Most apprentices attend college for a day or week or on block release from their employer for a number of weeks at a time. Apprenticeships across all sectors have received a lot of coverage recently with cross-party support for the importance of apprenticeships in the future of Britain's skills development and the economy as a whole. According to ConstructionSkills in 2009 there were 7,637 starts on an apprenticeship during 2008. Furthermore, two per cent of the construction workforce are currently undertaking an apprenticeship, and a third (31 per cent) claimed to have completed an apprenticeship.[66]

The Government has rescued and rebuilt apprenticeships from a low base in 1997, making significant investments and trebling apprenticeship numbers in order to provide opportunities for people to train for the jobs of the future. We know that business values the apprenticeship highly because this training is providing the skilled workers British businesses need for the future and Government remains committed to making it easier for businesses to offer them.

(Apprenticeships Minister Kevin Brennan, 17 December 2009, Department for Business, Innovation and Skills, 2009)

To tackle the gap in intermediate skills in this country, we will expand our apprenticeship numbers to create a modern class of technicians. They will have transferable skills, gained as a result of both academic study and practical on-the-job experience.

(Department for Business, Innovation and Skills, 2009a, p3)

The National Apprenticeship Service (NAS) was set up in 2009 to 'provide a dedicated and responsive service for both employers and learners' and is currently piloting a number of programmes to explore how government support can be improved to address the unique cost pressures that SMEs face.[67] The NAS provides funding for the training of apprentices depending on their age. For those aged 16-18, the NAS covers 100 per cent of the costs; for those aged 19-24, 50 per cent is covered; and for those aged 25 or over there can be contributions for specified places. However, there are concerns within the construction and education sectors about recently announced funding cuts for apprenticeships in the industry for all age groups.

Many of the SME builders we have spoken to have specific concerns about the current apprenticeship system and its operation. Particular issues included the perceived lack of incentives for employers to take on apprentices, the complex organisation of the system, and the need to focus more on training and up-skilling for existing workers and older apprentices with some criticism directed at an over-emphasis upon apprenticeships for young people and entry-level training and skills.

There is a complex system at the moment for apprentices in terms of taking them on, training and supervising. Too much bureaucracy.

(FMB Member)

Employers see apprentices as a huge liability rather than an asset to the firm at the moment.

(FMB Member and Skills Sector representative)

Apprenticeships are viewed by many within the trade as a social good rather than an industrial good.

(Skills Sector representative)

Government has taken the view that young people (those not in education, employment or training: NEETS) are the priority. They are the ones that are not getting into work and so are the hardest hit by the recession. Government has put a disproportionate amount of money into courses for young people…They should be funding apprenticeships in full for everyone, regardless of age.

(Skills Sector representative)

Re-skilling existing workers is the priority and someone has to pay for this. CITB gives grants of £35-40 for day course training, employers generally happy to pay for training but not for qualifications

(Skills Sector representative)

The Government has devalued the Investors in People award and promoted apprenticeships. This seems ironic because there has to be up-skilling and business development otherwise who can then employ the apprentices? Seems the wrong way around. But apprenticeships appear an easier problem to solve so this gets the attention.

(FMB Member)

Currently, 22 per cent of FMB members train apprentices and the FMB is continuing to lobby government and industry colleagues on the need for a more sustainable and dynamic skills base that truly responds to the needs of employers.[68] It is vital that organisations like the FMB represent the needs of the diverse and fragmented SME construction industry to ensure that employer needs and experiences are communicated.

SKILLS AND TRAINING: WHAT NEEDS TO HAPPEN?

To support its Household Energy Management Strategy the Labour Government in March 2010 also launched a consultation on meeting the low carbon skills challenge.[69] This consultation document outlines the need for skilled trades people to carry out retrofit work on the existing stock but also acknowledges the difficulties in achieving this:

Skills and training in this industry are fragmented. There is no single

qualification or standard which installers are required to achieve through their training…We will need creative solutions to roll out training to sufficient people to provide a skilled workforce quickly from this patchy landscape.

(HM Government BIS and DECC 2010, p57)

Up-skilling builders and training improvements

The building trade in this country is currently not sufficiently geared up to be able to deliver the large-scale low carbon refurbishment of homes and other buildings that will be required.

Low carbon skills provision within the construction industry is still in its infancy in Britain.

(BIS and DECC, 2009)

The skills that we will need tomorrow are very different to the skills of today. The colleges are preparing for this – they are looking at what a NVQ will really need to look like.

(FMB Member and Skills Sector representative)

Our industry is facing a challenging period, both in terms of build volume and low and zero carbon requirements. We must tackle the potential skills gap that hindered the housing sector's recovery in the 90s and threatens again as we fight our way back from one of the worst years in the industry's history.

(Housebuilder magazine, 24 November 2009)

The fear is that we won't be in a position to train people with the skills they need at the right time. Builders and building control both need to be educated in order to be ready for 2016 and later standards. There is a huge educational opportunity out there. We need to train people on quality and sanctions.

(Education / Training Professional)

This is hugely important given that most refurbishment and repair work needed to improve and maintain the existing housing stock in this country can be carried out by SME general builders and specialist subcontractors such as plumbers, electricians and roofers. Whilst specific training and qualifications may well be needed for new pieces of technology and installation techniques, the technical skills and experience of existing builders and trades-people can be transferred and adapted to new uses with the associated knowledge.

The same skills are transferable to solar technology – if as a plumber, you know how to work with a radiator, it's all the same stuff. Need to apply practical / transferable skills to new and unfamiliar technologies.

(FMB Member)

Most sub-contractors can do most of the jobs that are needed – the new technologies are not really that different to what we already do. For example, solar thermal system is really just a pump, a panel and a pipe. People could pick this up on a half day training course once the market for it has been created.

(Construction services provider employee)

As seen above, there are lots of examples of impressive retrofit and upgrading projects from both private individual householders and from large homeowners including RSLs. However, the learning and knowledge sharing from these projects needs to be improved and disseminated more widely.

The problem lies in up-skilling people for one particular project and then not spreading the learning and experience more generally and applying to all projects and works. There are pockets of skills and experience within the trade.

(Construction services provider employee)

The skills and knowledge that is gained during pilot projects needs to be reapplied by the tradesmen and women working on site when they move on to new projects and work with different contractors. This process of 'site diffusion'[70] could prove to be one of the most effective ways of extending learning and good practice among building workers.

Suppliers

Suppliers of materials and systems have an important role to play in ensuring the building industry is ready for the challenge of retrofit and improvement of the existing stock. There have been suggestions that suppliers and manufacturers could play more of a leading role in the funding and delivery of training. For example, placing a charge on products and supplies which is then used to provide training on the installation of the particular product.

We are looking to manufacturers because they have a vested interest in wanting to sell as much as possible and therefore it is in their interest for people to be trained and skilled up to use the materials. There are 3 main insulation companies; it is in their interests to train people to use the product successfully. Could be a way to take existing workers through training.

(Skills Sector representative)

Some suppliers are already taking on this challenge, for example, the National Federation of Roofing Contractors (NFRC), in conjunction with ConstructionSkills and Ploughcroft Building has developed a specialist training course for roofing contractors to install solar panels. The trained installers are registered with TrustMark and are trained in both photo voltaic and solar thermal systems. The course covers installation of the systems on the roofs but not the connection to the heating and energy systems. Furthermore, Knauf Insulation

provides training for approved installers of their insulation systems:

We see the training of the installers as a significant part of the process to ensure they become familiar with the installation techniques and they can then repeat the process time after time. We have trained installers at our facility here in St Helens and will roll out this training to include installer's premises over coming months.

(Insulation Supplier representative)

Thousands of plumbers have already begun to capitalise on the growing market for advice on designing and installing the latest low carbon technologies such as efficient boilers, solar water heaters and heat pumps.

(HM Govt, 2009b, p43)

ACCREDITATION: IMPROVING STANDARDS AND THE STATUS OF THE BUILDING TRADE

There is widespread agreement that some form of compulsion and improved incentives will be necessary to ensure that the construction industry and householders move towards energy efficient retrofit approaches to existing homes. Accreditation of builders whereby building firms receive a licence and grading has been proposed from within the industry as a way of raising standards and improving the status of the building industry.

Government has to address the issue of licensing builders. There should be some kind of recognition / accreditation for builders that is the equivalent of the Gas Safe accreditation for gas fitters and the FENSA for windows.

(FMB Member)

People want to know that there is some accreditation available if they are going to invest in training. They want to be able to separate themselves from others who have not paid to train their employees. It creates consumer confidence in you and provides a certain amount of credibility as a builder.

(FMB Member)

We do need some kind of accreditation system that is similar to gas installers. But accreditation brings costs with it. Maybe installation grants should only be available to accredited installers?

(FMB Member)

There are some systems of accreditation and regulation already in place and it makes sense to develop existing standards. The **Construction Skills Certification Scheme** (CSCS) was launched in 1995 aiming to achieve *'quality up, accidents down and cowboys out'* and it retains an objective of helping people who work in construction prove that they are competent to do their job and have health and safety awareness. There are over one million CSCS or affiliated cardholders, covering over 250 occupations.

Whilst portrayed as an 'industry standard' and proof of competence of workers demanded by employers and clients, the scheme may require additional work in order to hold more relevance for the SME builder.

The Construction Skills Certification Scheme is for the big boys really, not a lot there for small builders because clients never ask for it. There are different requirements to work on a big commercial site.

(FMB Member)

There has also been some criticism that an over reliance on developing card schemes has detracted attention away from genuinely improving the quality of training and competence within the trade.

TrustMark is a not for profit organisation that is supported by Government, the building industry, retailers and consumer protection groups. The scheme aims to help consumers find reliable and trustworthy trades-people (including general builders, electricians, glaziers, plumbers and roofers) to carry out internal and external repairs. TrustMark is the only scheme that can guarantee homeowners that every member firm is willing to have both their professional competence and customer care checked and the only scheme that is entitled to carry the badge of 'Government Endorsed Standards'. Consumer awareness of the scheme still needs to improve and TrustMark has been running an award-winning promotional campaign to increase the number of consumers who know about TrustMark, 34 per cent in 2007.[71]

FMB members, who have been trading for three years or more, can opt to join the National Register of Warranted Builders (NRWB), a wholly owned subsidiary of the FMB, which also entitles them to be TrustMark accredited. Members of the NRWB can offer their clients various insurances on the building work they do. To join the NRWB, builders must meet higher entry criteria, have their work inspected and agree to be re-inspected every three years.

I am a member of the FMB and have the warranty mark which is the same as the TrustMark, the government's own accreditation but I still can't get any work from local authorities. It's meaningless.

(FMB Member)

A well publicised training and up-skilling programme for builders that is linked to registration or licensing could contribute to raising awareness, knowledge and demand among consumers. This was seen in the 1991 when mandatory CORGI gas registration was introduced. The CORGI gas registration scheme ended in March 2009 and was replaced by the Gas Safe Register. By law anyone carrying out gas work in Great Britain and the Isle of Man must be on the Gas Safe Register. There are 120,000 engineers on the register and they are inspected to ensure that the gas work they carry out is safe and up to standard. Unfortunately, a training and accreditation scheme of this kind for builders and trades-people is not yet driven by government in the same way.

Training in the industry helps to improve public awareness and expectations, for example, CORGI registration made it clear to consumers that you weren't going to get gas work done for the same price as some painting and decorating. It became a specialist trade. Customers know they have to have CORGI / Gas Safe engineer and they expect to pay more. On the whole improved training has been a good thing.

(FMB Member)

The Labour Government planned to create a new accreditation framework to offer consumers confidence in the quality of workmanship they receive when energy efficient measures are installed. Minimum quality standards and consumer protection schemes are key aspects of this new proposed framework and the Cavity Insulation Guarantee Agency is cited as an example of an established scheme currently operating in the market.[72]

Competent Person Schemes were introduced in 1997 by the Department for Transport and the Regions (DETR). The rationale behind the scheme was to authorise businesses and individuals judged as sufficiently competent in their work to self-certify that their work has been carried out in compliance with all applicable requirements of current Building Regulations. Certain types of building work can be self-certificated as compliant with building regulations by a member of a Competent Person Scheme without the 'need to notify'. Schemes are designed to recognise and complement other industry schemes such as TrustMark. Competent Person Schemes could be a very valuable tool to enable wider scale highly efficient renovation of homes. Examples of existing Competent Person Schemes include Gas Safe and FENSA.

CASE STUDY: GREEN BUILDING ACADEMY

One proposal for improving both training and skills, and the accreditation needs of SME builders has been proposed by FMB member Tim Fenn and the Oxfordshire Construction Training Group (OCTG). The Green Building Academy would represent employer-led sustainable construction training and accreditation. The idea of the academy would be to get builders actually doing the work to lead by example and train colleagues and others through practical examples and experience.

"We want to put the small builder at the forefront…similar to the CSCS approach of getting the core skills to begin with…Needs to be 'by builders, for builders' ".

They have identified the requirements of a construction training framework for builders:

- Primarily focuses on **up-skilling existing workforce**;
- Promotes **multi-skilled workforce** development;
- Promotes **specialist training** / learning;
- **Encourages** companies / individuals to undertake training;
- Promotes / rewards **life long learning**;
- Acknowledges short courses and **onsite experience**;
- Leads to highest accolades in **training achievement (degrees)**;
- Promotes **self-esteem and status** of construction workers;
- Leads to **'real' recognition of skill level**.

The training would lead to real recognition of the skill level and achievements of builders who had undertaken the training. There have been suggestions that the training could then be accredited by a third party, for example the Energy Saving Trust, which is well known and respected already within the construction industry and among consumers. It will be important to ensure that any accreditation or evaluation scheme is managed by an independent, recognised and respected organisation.

"There has been the suggestion for the academy that the Energy Saving Trust (EST) accredit the training. Builders would then get the EST stamp which is widely recognised and will mean something to people."

Competent Person Schemes are an important element of building regulation enforcement. It is possible for a rigorous Competent Person Scheme to provide both advice about and installation of energy efficient technology.

(National Federation of Roofing Contractors 2009)

An evaluation of competent person self-certification schemes was carried out for Communities and Local Government in late 2009, and a consultation on the schemes was also held between 23 December 2009 and 19 March 2010.

CASE STUDY: PARITY PROJECTS LOW ENERGY REFURBISHMENT TRAINING SUITE

Parity Projects has developed the first nationally accredited training courses for low-energy refurbishment available in the UK. The range of BTEC modules are aimed at trades people and professionals who wish to advance their knowledge as and when required for specific jobs and enable them to build up qualifications over a set period of time. Each module comprises one day in the classroom and upon completion of six modules learners will gain one full BTEC qualification. The courses have been designed to link in with the new Qualifications and Credit Framework.

The courses are not directed at either just construction professionals or at trades people but are designed to develop a common language for low energy and water refurbishment by ensuring that all parts of the supply chain have a strong grounding in the principles, are convinced of their value and can convince clients to take this approach.

Some manufacturers provide training to installers of their specific products and in many cases all work relating to the installation of certain components or systems must be carried out by recommended installers (who have received the manufacturer's in-house training) in order to provide a warranty for the work. However, this training is generally system specific and does not provide the necessary background for increased understanding of the wider energy efficiency measures and renewable technologies in the wider home refurbishment arena. The Parity Projects training modules have been designed to align with typical manufacturers' approaches to provide this background.

Specific modules include:

- An introduction to techniques for significantly reducing energy consumption in existing buildings
- The business case for significantly reducing energy consumption in existing buildings
- Installing insulation onto solid walls in domestic houses
- Loft insulation for all construction types
- Air tightness and thermal bridging in existing homes
- Reducing water demand in existing homes

www.parityprojects.com

Building Regulations establish standards for the design and construction of buildings, in order to ensure health and safety, and access requirements are satisfied, as well as setting standards for energy conservation. The regulations apply to almost all new buildings and in many cases to alterations of existing buildings (domestic, commercial or industrial) including the extension of a building and the insertion of insulation into a cavity wall. Building Regulations Part L (Conservation of fuel and power), revised by amendments that came into effect on 6 April 2006 brought into effect new energy performance requirements. In June 2009 the Government launched a consultation on the 2010 Proposed Changes to Part L and Part F of the Building Regulations.

> ***The Building Regulations, and Part L of Schedule 1 therein, set out minimum requirements for energy efficiency for new buildings and for building work to existing buildings including alterations and extensions and certain categories of refurbishment or replacement work.***
>
> ***(Communities and Local Government, 2009e)***

However, building regulations do not yet apply to consequential works for the whole of an existing building.

> ***Making the principle of consequential works apply through Building Regulations would have the advantage of extending the policy to the national level.***
>
> ***(Killip, G, 2008, p14)***

Local authorities have a duty to enforce building regulations through building control, either directly or via a private sector Approved Inspector. However, there remains a need for improvements in enforcement.

> ***Although greater requirements to fulfil sustainability criteria exist, it is often a tick box approach – one not well regulated or established like current health and safety regulations.***
>
> ***(UKGBC, 2009b, p2)***

CASE STUDY: UTTLESFORD DISTRICT COUNCIL, ESSEX

One local authority, **Uttlesford District Council**, in Essex has pioneered the inclusion of consequential improvements in their planning processes. Since April 2006, all planning permissions for householder development (including extensions, loft and garage conversions and new annexes: any works where the heated volume of the property is increased) have had a condition attached which requires cost-effective energy efficiency measures to be carried out in the existing dwelling where it is practical to do so. This was achieved by a policy in a supplementary planning document on home extensions adopted by the council in November 2005.

The condition is enforced by council building surveyors who advise householders on the programme of measures appropriate for their home. There is a standard list of straightforward energy efficiency measures such as loft and cavity wall insulation, draught-proofing, boiler replacement and heating controls. In addition to being possible and practical, the simple payback period of each measure required must be less than seven years, and the **upper limit on the total spend on required measures is 10 per cent of the project budget**. Measures that cause this budget threshold to be exceeded are excluded. A householder might not be asked to do anything to satisfy the requirement if their existing home has already been improved or none of the standard measures are applicable.

According to the Council:

"The advice of building surveyors on home energy efficiency is well received and generally people view our approach as reasonable. We have applied our condition to approximately 1,400 planning consents, 854 of which have commenced building work. We estimate the combined savings from all measures that have been required as a result of our policy to be £45,000 and 244 tonnes of CO2 per year."

"We urge the Government to follow the lead set by Uttlesford District Council in requiring homeowners who extend their homes to make consequential improvements to the rest of their property as part of the planning consent process. We recommend that Part L the Building Regulations be amended to require householders making substantial improvements, such as building an extension, to ensure that the carbon footprint of their improved home is at least no greater than before."

www.building.co.uk/story.asp?storycode=3145940#ixzz0c2YtVGT2
www.uttlesford.gov.uk/main.cfm?Type=n&MenuId=0&Object=3105

Building regulations could be used as a valuable tool in monitoring and enforcing high energy efficiency standards as they are applied at many natural trigger points in the refurbishment and upgrading of homes. Furthermore, there is great potential within the existing system of building regulations as more energy efficient requirements can be added as knowledge and awareness about technology increase and become more mainstream. If enforcement is also improved then builders will be forced to adapt accordingly.

Building regulations are only going to keep growing; what comes under building regulations is going to increase.

(FMB Member)

Legislation on sustainable development applies equally to all construction projects however monitoring of this vast number of jobs completed by the thousands of small construction firms is less easy and so compliance is largely at the 'discretion' of the firm.[73] The former government made clear its intention to improve the energy efficiency standards of new homes (all new homes to be zero carbon by 2016) through the Code for Sustainable Homes introduced in 2008. In order to deliver on this commitment, the Zero Carbon Hub was set up by industry with funding from Government. The Zero Carbon Hub has been working alongside ConstructionSkills and the National House Building Council to identify key skills issues and challenges for the industry in the short, medium and long term.[74] A commitment of a similar type and scale as the Code for Sustainable Homes, with the regulation and enforcement support that is required, will be needed to truly push forward the large scale retrofitting of existing homes.

The main thing that would help would be Government telling us what they are going to do and when. What exactly will be required and by when. The actual standard doesn't matter as long people know what it is. What we need most is clarity. Decide on a set of standards and stick to it.

(Construction services provider employee)

Government needs to set a target. It is not about persuading builders. If there is a requirement to do something then if builders don't want to adapt and learn how to do it then they shouldn't be in business.

(FMB member)

However, despite the calls for clear government standards and regulatory codes there is also the criticism that the planning and building control system is already too complex and bureaucratic. Steering a path through this contradictory situation of needing clear standards for builders to attain and yet not burdening them further with administration is a difficult yet essential journey for the government and industry to take.

PART 3: OUR HOUSING FUTURE

CHAPTER 7: HOUSING FUTURES: CONCLUSIONS AND RECOMMENDATIONS

It is vital that government provides the clarity and commitment that enables the private sector to invest confidently in low carbon change, and help consumers to make low carbon choices.

(HM Government BIS and DECC, 2009, p13)

This report argues that our housing future needs to be:

- more environmentally sustainable and energy efficient;
- more repair intensive and more oriented towards renovation, remodelling and community renewal;
- less land hungry, more compact and more integrated within existing neighbourhoods;
- less reliant on large scale new developments and more reliant upon smaller scale infill developments; and
- renewed or built in ways that make it more affordable.

In practice, progressive housing thinking is already oriented in this direction, and for the last 10 years places like London, Manchester, Glasgow and many smaller places have adopted an 'urban renaissance' and 'neighbourhood renewal' approach. There is much talk of 'Decent Homes Two' following the success of relatively modest investments (around £10,000 per home) over the last seven years. In March 2010, the Labour Government outlined plans to introduce a new Warm Homes standard covering the building fabric (standard insulation measures and harder fabric measures where practical) and heating systems.[75] In fact, many housing associations are already doing this work in places and many more would follow if given the stimulus. We see the urgency of pushing much further and faster in this direction.

- To achieve this, we will need to **value small and medium sized builders** and their contribution to the built environment and our communities. There is a very big task for them to do and they offer a flexible approach and broad experience of different types of property and skills.
- Builders will need to develop key skills through accredited training. We will need to **up our game on accreditation** in order to improve the standard of the building industry and raise the status of builders. As part of this, there will need to be stronger regulation of standards, for repair as well as new build. Builders and suppliers as well as householders need more clarity and certainty about what to do and how to do it.
- Increased training, higher standards and stricter regulation will generate a more **positive attitude towards builders**. This is vital to achieving our future aims of high energy efficiency in our homes, recycling and adapting existing buildings.
- The need for clear government standards and a stronger regulatory framework has to sit with a planning and building control system that is transparent and accessible
- At the moment there is a lot of confusion and serious attempts to avoid controls and duck standards because of the complexity and the risk of problems. Finding a way through the current system is beyond the capacity of many small builders, making it more difficult for them to play their full role. If the Government is serious about achieving its targets for energy saving in existing homes, recognising that this comprises over 90 per cent of all homes, then it must set a tight timescale for delivery, with clear incentives, advice, training and standards enforcement.
- Changing behaviour is crucial as 'we are all part of the problem' until we become part of the solution. Owner occupiers can all save more money than they will spend by adopting energy efficiency measures. They rely on small builders for most of what they do to their homes. It will also be important, particularly for smaller housing associations and private landlords to support renewal of existing homes, leading to greater energy efficiency and saving.
- Social landlords are leading the way on new ideas about energy saving, retrofitting and neighbourhood renewal. We believe that small builders could play a much bigger role in this.

On the back of these fairly simple and uncontroversial ideas, we make the following recommendations under five main headings:

Government

- We need a **Code for Sustainable Existing Homes** to give all builders a clear signal of what standards are expected, to be reinforced by tightening building regulation and more vigorous Energy Performance Certificates. We strongly advocate a Code for Sustainable Existing Homes and a commitment to carbon neutral existing buildings as there needs to be a much stronger fit between requirements for new build and for repair. Also, VAT should be equalised for both sectors, possibly at five per cent.
- There are **particular issues for the new Government to address**. These are the most important:
  - VAT on repairs and improvements including energy efficiency measures should move in line with new build and not be subject to higher rates;
  - Enhancing the role of Energy Performance Certificates is crucial and they need to be properly credited and validated;

– regulation standards need to rise and be enforced;

– consequential works: all extensions, loft conversions and substantial remodelling requiring planning permission should all conform to the highest enforceable standard.

- **The long term standards** for energy efficiency in homes (an equivalent to 80 per cent reduction in carbon dioxide emissions in homes by 2050 overall) require mandatory standards. These would provide small builders with the confidence to invest in training and the potential for expansion to deliver on this ambitious reinvestment programme. 81 SAP is the proposed standard for energy efficiency in homes.
- We need **strong incentives and ambitious targets for energy efficiency and energy saving measures at the point of sale or purchase of homes**. This would help to transform the pace of retrofit and reassure the construction industry. Potentially over a period of maybe 15-20 years, all the obvious work could be done. In its 2010 Heat and Energy Management Strategy the Labour Government outlined a commitment to working with the Royal Institution of Chartered Surveyors (RICS) to develop recommendations to ensure that the energy performance of properties is better reflected in its market value.[76] This is an obvious incentive to improve energy performance and should receive ongoing support from the new government.
- **Planning** needs to offer more flexibility in remodelling existing buildings, use of small infill sites, sub-divisions and conversions. It also needs to favour higher environmental and energy saving standards for work in existing communities. One way to speed up stronger planning guidance would be to make new and more exacting building and environmental standards enforceable on extant planning permissions after two years rather than the current five.
- There should be a **phasing out** of toxic building materials including UPVC, formaldehyde, toxic glues of all kinds and toxic ingredients in paints, varnishes etc.

Building industry

- **Small builders offer flexible and responsive skills adaptable to market demand**. This will be vital to achieving government objectives in terms of energy efficiency standards of existing homes and renewal of existing communities. But recognition of their potential and value requires both regulation on the government side and higher standards of performance on the part of builders.
- **The reputation of the building industry will only improve when builders earn it**. Generally higher standards in all building trades are vital for builders to acquire a better reputation. Training needs more recognition and stronger incentives to attract new people into the industry, to retrain experienced builders and to help small buildings firms with very few employees.

Training

- **Training and apprenticeship systems** need to gain recognition as the automatic route to a good job with high quality performance. Early steps in this direction could falter due to funding cuts. Increased collaboration by builders and trade associations with further education, training and Government accreditation schemes could build a much stronger training system.
- There need to be **bigger financial and professional incentives for education and stronger requirements for training in the building industry**; particularly to reduce accidents, to improve the reliability of performance, to increase customer confidence, and to squeeze out the 'cowboy builders'.
- **Low-skilled, currently unemployed young workers** aged between 16 and 24 are particularly vulnerable to long term unemployment if not in employment, education or training. With special training they could help clear and insulate lofts and attics. This work could become part of structured work-based training projects linked to retrofit. Health and Safety and insurance are key concerns that must be addressed.[77]
- The new Liberal Conservative government has committed to creating new jobs and targeting the unemployed to deliver energy efficiency and upgrading work. Any job creation programme of this kind needs to be accompanied by well thought out training and accreditation support.

Specialist retrofit skills / training

- **Much clearer structures and guidance** are needed if we are to achieve anything like the energy savings and rate of renewal that we need. This applies to: energy saving advice; energy saving techniques and installations; energy saving finance, payback, incentives and requirements. There have been suggestions that an 'Existing Homes Low Carbon Hub' could be established to provide the leadership for the industry to start planning for delivery. This could link into government proposals for a 'Retrofit Consortium'.[78]
- With a series of short, accredited training courses both **builders and suppliers could promote energy saving ideas** to householders when they are contacted over repairs, for example toilet and tap leaks and water saving devices. They could advise on doors, windows, wall and under-floor insulation, also types of material and their relative energy saving value. They should obviously pass on these acquired skills to apprentices.

- There will be many new door-to-door energy advisers, through EPCs, CERT and other energy saving programmes. **Training builders and suppliers alongside these new energy advisers** in the field of energy advice, delivery and everything that goes with it will be vital.
- In order to deliver a 'whole house' retrofit where energy use is reduced by over 75 per cent, all parties involved from architects and surveyors, to planners and building control, to suppliers and builders themselves will need to develop **both practical skills and targeted knowledge**
- More emphasis on learning on-site and sharing learning among the various trades and trainees will be important. Spreading learning across the site and between sites, called 'site diffusion' by some builders, can become an infectious method for encouraging new energy saving materials and technologies with new methods of applying them that are required, for example, air gaps, moisture membrane.
- Experience is accumulating fast among individual householders,[79] and among social landlords[80], among local authorities[81], and among building professionals[82]. This experience needs at least to be gathered in a single place as a 'Wikipedia of retrofit'. Suppliers need to be brought into this game and showcased if they are building up their 'green' supplies and retrofit advice, for example with fact sheets being available in builders merchants and suppliers.

Accreditation

- **Accreditation is key** in order to raise awareness of existing accreditation schemes and standard, for example, TrustMark, and adapt card schemes such as the Construction Skills Certification Scheme. Introducing an independently regulated accreditation scheme for energy saving skills, for example, solid wall insulation, could be linked to rising consumer awareness. The CORGI registration in 1991 when gas supplies were privatised has led to 120,000 accredited gas fitters and extremely strict enforcement and adherence to agreed standards.
- Trade Associations like the Federation of Master Builders, the National Federation of Builders, the National House-Building Council and the Construction Products Association need to embrace this opportunity, given that its arrival is inevitable (in our view), has cross-party support and offers exciting new possibilities for jobs, manufacturing, renewable technologies, savings in the long run, and cleaner, greener, more sustainable communities for us all to live in.
- It is vital to act quickly to bring in new standards and to incentivise all parties including builders themselves, customers and funders. This will obviously require strong leadership by Government, local authorities, agencies such as the Homes and Communities Agency and English Heritage, trade bodies across all professions including planners, builders (big and small), suppliers, and funders.

With very big incentives for a steep rise in energy efficiency and renewable energy installations, the army of small builders who do the lion's share of the work on existing homes need to gear up. There are immediate costs such as accreditation and certification with the Micro-generation certification scheme. In order to qualify, builders have to demonstrate competence (and undergo some training if not familiar with solar water heaters, ground and air source heat pumps, solar PV etc). Given the rich returns, the expected rise in demand, the registration benefits, this is a move that should receive the strong endorsement of bodies like the FMB. It is strongly in the interests of members that it should move ahead of the game and it is an opportunity that is there for the taking. The new Government is committed to the full establishment of Feed-In Tariffs and renewable energy generation. These measures have unusually clear cross-party support, driven by Europe-wide commitments to a level of renewable energy production and use, on which the UK lags far behind. These proposals, costly though they may be, are the low-hanging fruit of renewable energy.

The way we spread knowledge and understanding of the issues around materials conservation, renewal and energy saving is confusing and opaque. There needs to be a much clearer, firmer and more compelling knowledge base, shared by homeowners, small and large builders, suppliers, planners and other specialists. Knowledge, skills and training must be part of the same process; involving both practical experience, learning 'on the job' and real acquisition of new knowledge and skills. Builders, large and small, are part of a very extensive and complex network delivering services and products to every household in the land. For this reason, improved regulation, enforcement, inspection, training and standards would help raise the quality and reliability of building that is expected and delivered across the board. The Government's role is to ensure an even playing field in contracts and procurement, to maximise opportunities for small and medium sized as well as large builders, and to push up standards. The more small builders are involved in openly scrutinised and competitive contracts, the better they will perform. Housing associations, have proved that small is often not just the most beautiful but also the most efficient. Surely the same should be true of small builders who are able to deliver value and tailor made solutions. Without them, it will be difficult to deliver on the important commitments now in place to modernise our housing stock through repair and investment, to improve our energy efficiency through tried and tested methods, and to help communities live more sustainable lives.

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