Retrofit

Creating a high-quality business model: a system change proposal to government

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The retrofit challenge
how many homes a minute/a year to meet net zero targets?
Who, how, what?

Short and long term challenges must be tackled together

Short term crisis strategy related to energy costs rationalising, extending and expanding using WHD, Winter Fuel Payments is imperative but should not deflect action to establish long term retrofit programmes.

Longer term retrofit plans – THIS PROPOSAL – must address the systemic failures and establish understanding and action to achieve system change.
Context

SHAP has over 15 years of experience of working with local and regional public bodies, housing providers, fuel poverty organisations and the supply chain to understand problems with retrofit and developing potential solutions.

Retrofit is a broken system, and in its current form is highly unlikely to improve housing at scale, meaning carbon reduction targets will not be met, householders will continue to face significant increases in energy bills and the health impacts of people living in cold, damp properties will not be addressed the low carbon economy will fail to grow and the energy system transformation will not be optimised.

During 2021 and 2022, SHAP worked with a range of organisations to gather experience, evidence and ideas, including social housing providers (owning over 200,000 properties), local and combined authorities, fuel poverty organisations and the retrofit supply chain. This proposal is in three parts:

• **A vision for retrofit:** The issues we believe a retrofit system should address to be able to deliver at scale and efficiently, over the next 10-20 years.

• **The ask of government:** The immediate ‘ask’ we feel is necessary for new retrofit programmes to address, including the forthcoming SHDF and LAD programmes.

• **Our commitment:** The ‘return’ from organisations – how we can operate differently to ensure retrofit is a successful system
The System Change Model
Builds on evidence based modelling, costings and processes produced by SHAP since 2009
The Beyond Decent Homes Standard is designed to set social housing on a course to support delivery of the UK’s Low Carbon Transition Plan in which the Government expects the domestic sector to deliver a greater share of emissions reductions, of at least 29% on 2008 levels by 2020, with proposals that all homes undergo a ‘whole house package’ of improvements by 2030.

Stage 1: Minimum Standard All stock to achieve a minimum 42% reduction on 1990 levels by 2016 (SAP 75, Energy Performance Certificate rating C);

Stage 2: Work in progress Asset management plans to achieve the 2025 target (Step 3) to be in place and substantial initial progress to have been made by 2020;

Stage 3: Approaching completion Over 90% of stock to have achieved a minimum 80% reduction on 1990 levels by 2025 (SAP 85, Energy Performance Certificate rating B).
Community Green Deal 2010 explores the building blocks of successful area wide programmes in more detail to inform planning and action before the launch of the Green Deal Retrofit Reports – Sustainable Housing Action Partnership (shap.uk.com) scroll down to find reports from different years.
Scaling Up Better Homes Yorkshire
lead author Charlie Baker, Red Coop
Commissioned by the WYCA reviewed and further developed the previous SHAP reports and thinking. Doubling activity every year allows high quality supply response while demand grows and delivers against long term targets.
The report summarises key retrofit programme components which need to be developed in parallel and proposes sharing of the lead for each component https://shap.uk.com/retrofit/
Context

This is why system change is required – retrofit is complex and multi dependencies, enablers and barriers exist

Local Authority Retrofit Challenge Map Snapshot 2022

Retrofit skills training run by the LGA in 2021/2022 showed that many local authorities are unready to support and co-ordinate local retrofit effectively.

The Retrofit Challenge Map – showing some of the complexities of scaling up retrofit identified by Local Authority officers

Local authorities are having to rapidly develop their officers’ skills to plan and deliver retrofit of their social housing stock and to coordinate retrofit across all tenures for all residents. This map shows the challenges and activities raised by participants on the LGA's Retrofit Skills Leadership and Learning programme from 2021-22. Officers brought their own particular foci within their own local contexts.

Supply and demand connected
Skills of supply chain
Qualifications of supply chain
Working with different tenures
Procurement processes
Social benefits
Economic benefits
Low interest of local contractors
Start-stop nature of funding
Skills of supply chain
Qualifications of supply chain

Availability of training providers
High skill level training
Start-stop nature of funding
Reskilling opportunities

Understanding of local training needs
Co-ordination of training provision
Resident engagement
Member engagement
Collaborative partnerships
Economic wellbeing
Tenure diversity
Community ambassador
Funding availability

Economic wellbeing
Need for multiple interventions
Willingness to retrofit
Fuel poverty programmes
Community energy schemes

Low interest of local contractors
Uncertain pipeline of work
Planning guidance
Housing stock data

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Supply chain

Direct control of local authorities
Remaining issues are outside of the control of local authorities

Hard – innovate
Soft – make explicit


The LGA LRAP (retrofit action plan training) programme 2022
System change thinking for scaling up net zero place investment and outcomes (through a lens of retrofit)
New research on the jobs and economic growth opportunities at stake. This is old news. The system change to realise these opportunities is still required.

Nearly 700,000 new green jobs could be created by 2030 if councils are given a greater role in local job creation, the Local Government Association sets out today.

Official statistics show there are already around 400,000 jobs in low carbon businesses and their supply chains across the UK, with turnover estimated at £41.2 billion in 2020. Both the British Energy Security Strategy and Net Zero Strategy aim to leverage an additional and unprecedented £100 billion of private investment, while supporting an additional 480,000 British jobs by 2030.
Contributors to this proposal to Government

https://shap.uk.com/retrofit-reports/
The System Change Model

https://shap.uk.com/retrofit-reports/

SHAP
SUSTAINABLE HOUSING
ACTION PARTNERSHIP
Government-led systems change

To stimulate supply and demand

Enabling the achievement of clear targets

Realising a hopeful vision

Flourishing communities, warm homes and healthy people

Zero Carbon Targets
Clear net-zero kWh/m2 targets based on house archetypes

Enabling a green supply chain
A diverse supply chain (size, skills and reach/footprint) with increased capacity, stimulated by long-term funding with certainty and stability of demand

Optimising Customer Experience
A customer-excellence framework that informs and underpins geographical household engagement and optimal retrofit delivery

Needs-based Technology
Effective and appropriate use of technology for whole-house retrofit, enabled by primarily fabric first approach and monitoring to check in-use performance

Whole-house Property Assessments
Central repository of medium-term plans, delivering measures in the right order and that are accessible for future use.

Enhancing Skills and Quality
A long-term intelligent plan to meet the future retrofit skill needs to ensure high-quality delivery

Supportive Regulation and Legislation
Legislation and regulation that actively enables the scaling and adoption of energy efficiency

Sustainable Financing
Public, private and hybrid financing options based on need and ability to pay, encouraging investment in energy efficiency

Geographical Ownership
Geographical areas of excellence based on shared skills and resources, enabling efficiencies and consistency of roll-out, leading to sustainable employment opportunities

National Campaign
A national government information campaign to increase awareness, serve as an umbrella to localised engagement and stimulate supply and demand
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SUSTAINABLE HOUSING ACTION PARTNERSHIP

The Ask
The Ask – to be topsliced from SHDF wave 2 – reallocating committed funding for better outcomes

1. The national ask: one local authority officer retrofit post funded for 5 years = 333 LAs x £50000 x 5 yrs = £83.25m

2. The national ask: 10 sub-regional retrofit centres of excellence – 5 staff to create partnerships, provide technical support to LAs and RPs, drive collaboration and coordination = 10 teams x 5 yrs x 5 staff each team x £50,000 = £12.5m

3. The SHAP ask: £20m over 5 years, allocated to 5 – 10 social housing providers and local authorities who will restructure internally to establish new retrofit teams

- The rationale: Restructuring from BAU to be able to resource the planning and delivery of net zero housing programmes has a cost. This cost does not lie within existing budgets.

- The long term impact: of proper planning of strategic retrofit programmes is the leverage of funded/financed investment that will create sustained local social and economic impact and jobs

- The evidence: 10,000 stock holder - £2.3m government revenue investment in retrofit skills leverages £230m to take 10,000 social homes to net zero and creates £944m social & economic benefit and 31,000 tonnes GHG emissions reductions

- The interim outcomes: £2.3m investment in retrofit skills leverages £14m to take 10,000 social homes to EPC C and creates £71m social, economic benefit and 7,400 tonnes GHG emissions reductions

- 30,000 stockholder - £4.7m gap funding required
The Ask

Sustainable funding model
A funding model is needed that goes beyond capital-only, short-term programmes that only serve to increase costs and fail to build customer confidence as well as failing to enable the supply chain to increase skills and confidence.

- Change the structure of SHDF funding to be a rolling programme over 5+ years.
- Registered Providers to submit their 5 years plans to the programme funder, with initial revenue released to validate the plans for the first portion of houses.
- Once a stage gate is passed, capital is released for the retrofit works.
- Programme to be monitored against output KPIs, such as the number of homes assessed or retrofitted.
- Registered Providers’ progress against retrofit plans to be integrated into the audit process every 3 years by the Regulator of Social Housing.
- Rolling programme will enable a place-based approach to be taken and ensure retrofit is integrated in social housing stock investment programmes in the long run.

Area co-ordination
Current short-term, limited outputs do not build skills and create legacy supply or demand to build retrofit sector for the long term. The start-stop series of activity cycles increases costs by neighbouring local authorities and social housing providers competing for a limited supply of contractors and equipment.

- 5-year revenue funding for West Midlands and wider area to build skills in retrofit surveys and work, supporting local area co-ordination. This should include revenue funding for LA/RP officers to manage delivery and also for MEES enforcement – possibly funding enforcement from HHSRS fines.
- Area co-ordination to fund property assessment and project development (such as building passports, net zero neighbourhood plans), ensuring projects are more effectively delivered.
- BEIS secondments to be integrated into local coordination schemes to facilitate learning.
- Area co-ordination to build a local skills hub.
- Funding clients and supply chain to collaborate and improve skills for developing and responding to tender documents.
- Retrofit design playbook to be developed, through local coordination of retrofit designs

Short-term regulation changes
Existing regulation creates barriers with no significant safeguards or benefits. These should be relaxed during the development and delivery of the next SHDF/LAD programmes, providing a no/low-cost approach to gathering evidence and implementing changes for future retrofit delivery.

- Greater ability to integrate different funding streams (potentially through a gateway process) and scrap fixed funding deadlines for individual funding schemes, to create ability to bid into BEIS for a combination of SHDF and LAD funding with the potential to tie this together with new ECO flex and other local funding pots, as well as allowing for better phasing and timing of works.
- Include a local government role in investment decisions for DNOs as a mechanism to fund energy efficiency through DNOs.
- Create an innovation fund at a national level sitting alongside SHDF/LAD – for building passport development, improving assessment through better application of technology and SMETERs.
- Access to previous retrofit assessments from Trustmark – overcoming issues with GDPR/interaction of accreditation schemes.
- Clearer PAS 2035 guidance for specific types of home, e.g. park homes.
- Access to xml data files from EPCs into asset management software (API) to improve efficiency of retrofit planning.
- Scrap EPC quotas to avoid pepper potting.
Our commitment

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SUSTAINABLE HOUSING ACTION PARTNERSHIP
**Our commitment**

**Local authorities and public sector bodies**
- Dedicated Retrofit Champion with retrofit clearly defined in their portfolio.
- Council members briefed and engaged with statistics, data and outcomes of retrofit-potential for positive impact on electorate.
- Local plans to include a commitment to retrofit.
- Delivery against wider range of government objectives through existing networks, customer journey support and collaboration – not just energy but health, housing quality, transport, community integration and crime alongside retrofit delivery.
- Retrofit funding and broader investment matched through regeneration.
- Research and publish annual reviews on progress and outcomes.
- Build up shared learning and feed back to government to generate ongoing improvement.
- Act as ‘guinea pigs’ for good practice and testing new approaches (such as ECO flex).
- Data-based factors – understanding and coordinating local need and building collaboration.
- Create collaboration to the existing supply chain through ongoing engagement and understanding of shared demand.

**Social housing providers**
- Retrofit Champion nominated at board level.
- Executive retrofit lead nominated.
- Support these roles by sharing SHAP (and other) briefing papers on retrofit learning and best practice.
- Commit to cleared, definable retrofit budgets and resources (staff teams as well as capital) and share this commitment with government.
- Make a cross-tenure retrofit delivery offer, especially where the social housing provider holds stock in mixed tenure areas in order to deliver mixed-tenure, area-based retrofit programmes.
- Engage tenants/customers in retrofit programmes from the outset.

**Energy advice/fuel poverty organisations**
- Recruit and train Energy Advisors to be experts at retrofit alongside fuel poverty.
- Upskill current Energy Advisors, especially around RE and retrofit.
- Train and upskill staff around Retrofit Assessor and Retrofit Co-ordinator roles to provide an independent service operating alongside existing fuel poverty work.
- Secure health connections, and strengthen collaboration with other third sector organisations, such as Age UK, CAB and community organisations.
- Strengthen community and tenant engagement around sustainable energy, whole house retrofit, cold homes issues, etc.
Government-led systems change

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A vision for retrofit

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EXAMPLE DETAIL IN THE PROPOSAL - SUSTAINABLE FINANCING

• An explicit link between energy efficiency and property value (rent and capital):
  o Property valuation methodology to incorporate and reflect energy efficiency.
  o Regulation to push market to EPC C as a minimum standard for sale or rent, with a mechanism for a finance package to bring properties up to standard.

• A suite of finance options based on needs and ability to pay:
  o A spectrum of funding options, from fully publicly funded through to private finance packages and blended options in between.
  o A minimum of 10 years funded rolling programmes to create confidence for investors, supply chain and customers.

• Tiered energy prices that encourage reduced consumption:
  o Energy companies to price energy in line with consumption – higher unit rates for higher consumption levels per m2, with flexibility for hard-to-treat, multi-occupancy, health and other factors.
  o Address the increasingly disproportionate element of standing charges which is leading to decisions to disconnect.

• Mainstream adoption of energy efficiency measures:
  o Re-introduction of incentives such as feed-in tariff where they encourage market take-up.
  o A watching brief on best practice overseas.

• Clear intermediary milestones for the energy transition to avoid inertia and/or stranded technology
  o A coherent analysis and pathway to net-zero, with clarity on technologies to be adopted and complementary infrastructure to be established.
EXAMPLE DETAIL IN THE PROPOSAL - GEOGRAPHICAL OWNERSHIP

• Create geographical areas of excellence or cohorts with common characteristics
  o Apolitical, long-term delivery vehicles that promotes collaboration.
  o Greater integration of funding and delivery, allowing cross-tenure coordination and targeting of all homes in an area.
  o Consistent planning guidance across local authority boundaries.
  o 3-5 year revenue funding to create the necessary teams to build long term programmes and ensure ‘levelling up’ and support for smaller organisations.
  o Whole-place low carbon solutions leading to net zero neighbourhoods, recognising the interface between buildings, mobility, etc.
  o Recognise the timescales for adoption of new planning policy and work on interim solutions to facilitate retrofit.

• Standardised/consistent, efficient, street-by-street retrofit roll-out:
  o Sharing of data to enable housing stock assessment and planning.
  o Regional awareness campaigns and shared energy advice centres.
  o Multi-regional ‘care and repair’ agencies.

• Sustainable local employment and inclusive growth
  o Long-term funding for career certainty.
  o Consistent and accredited training and development.
  o Local regional procurement frameworks tailored to smaller contractors’ needs.
Immediate Actions

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SUSTAINABLE HOUSING ACTION PARTNERSHIP
1. Designate housing as critical infrastructure: and commit to outcomes rather than outputs as measures of Key Performance Indicators and Value for Money appraisals

2. Confirm a minimum 10 year capital funding commitment: spanning parliamentary cycles with longer bidding timescales and simpler eligibility criteria for beneficiaries

3. Allocate 3 – 5 year revenue funding: to create the necessary teams to start building long term programmes and ensure ‘levelling up’ so smaller organisations aren’t left behind. This should include funding for:
   ● 1 retrofit project manager post at every Local Authority and every Registered Provider.
   ● 1 retrofit hub at every Combined Authority and at every LEP not otherwise served by a Combined Authority
   ● A SHAP partner demonstrator of system change in delivering retrofit at scale

4. Establish national coordination: of the development of the components of the national retrofit programme including digital tools, data management and access and skills and training from client to public and the whole supply chain

5. Initiate a national and sustained public awareness and housing sector communications campaign: with clear, straightforward information and guidance to build trust and demand

6. Review the regulatory barriers inhibiting effective retrofit delivery: e.g. inconsistent VAT rates for different measures and clearer permitted development planning policies

7. Clarify and confirm:
   ● Fabric energy performance standards and targets
   ● Energy performance modelling and reporting methodologies
   ● A technology roadmap and energy cost models to ensure fuel poverty is addressed in fabric + low carbon energy solutions to reducing domestic energy demand
   ● Legislative framework for ‘warm rents’
   ● Energy generation/storage/income models – regulatory framework changes, income values and timescales applying
Proposal to Government
Current understanding

• The SHAP proposal to Government provides detail supporting many of the Chris Skidmore Net Zero report actions and recommendations.

• Retrofit is complex and must be seen as sitting within the context of net zero places. A buildings led approach will only get us so far. A whole system approach including energy generation/storage; wider quality of life considerations including mobility/green/blue space is critical. The Dudley Net Zero Neighbourhoods project builds on the findings of the Zero Carbon Rugeley project to explore net zero placemaking wider components.

• SHDF and LAD have successfully created collaborative partnerships in some areas and this needs to be built in to bring more organisations and areas into planning and delivering retrofit.

• There is more widespread understanding of the cost, requirements and complexity of delivery of retrofit programmes but approaches for successful all tenure solutions are urgently required.

• Long term multi parliament funding commitments are needed but...we wait to see and try to influence how this flows from the Chris Skidmore report.
Mapping the SHAP retrofit system change proposal to The Skidmore Report
25 key immediate actions and 129 recommendations
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This project aims to deliver an energy system design that is sustainable, low carbon and drives the regeneration of a town and its local energy infrastructure.

SHAP is a consortium partner and leading on:
WP15 Buildings and Connected Homes – designing for retrofit within the context of the energy infrastructure, mobility, financing solutions and business case development.

We have demonstrated that a fabric first retrofit design must be developed with reference to net zero placed based decisionmaking. This will be further demonstrated through the Dudley Net Zero Neighbourhood project.
The SHAP Approach – current work includes development of a Retrofit Readiness briefing

Whilst there is a focus on construction skills for retrofit, there is a clear need to raise awareness and skills of many others including decisionmakers with direct roles in development and delivery of retrofit strategy, programmes and projects and key stakeholders such as finance, procurement, planning, regulatory services and others.

SHAP is therefore preparing a Retrofit Readiness briefing which will includes insights not just into skills but into the understanding of process, dependencies and key enablers.

This will be informed by all our work to date and by a deeper look at non-technical barriers through the Innovate UK funded Staffordshire Net Zero Living project starting in April 2023.
The SHAP Approach – a membership organisation of peers from across the housing sectors offering member led research and policy development

A Safe Space & Peer Networking

Knowledge Dissemination

A Platform For Voices

Solution Development
JOIN SHAP TODAY

Download membership form here

SHAP
SUSTAINABLE HOUSING ACTION PARTNERSHIP

All tenures, private, public, business, supply chain

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