Written evidence submitted by National Retrofit Hub (RFH0010)

1. Delivery of Retrofit

1.1 The National Retrofit Hub, in partnership with Arup and Ashden, has conducted extensive industry engagement and data analysis, and published a report to:

- Evaluate the current state of retrofit delivery in the UK across tenures
- Assess the scale of delivery required to meet decarbonisation targets
- Examine the 'customer/resident journey' across five main delivery pathways in the context of the current policy and industry landscape
- Analyse key challenges within each pathway
- Identify best practices and emerging opportunities

1.2 Retrofit is currently delivered through four main routes:

- Grant-funded private housing
- Grant-funded social housing
- Privately financed private housing, often by small-scale contractors in the RMI sector, through DIY or via architect-led renovation.
- One stop shops, for example Cosy Homes Oxfordshire and People Powered Retrofit.

1.3 Other delivery routes are emerging, such as place based integrated delivery and community led delivery

1.4 The grant-funded sector has the potential to pump-prime, build expertise, capacity and trust in the RMI (repair, maintenance and improvement) sector and one-stop shops, to enable these to better serve the private financed sector. Schemes must be designed and adapted with close engagement and input from these sectors for this to be effective.

1.5 Key issues associated particularly with the Grant-funded private housing delivery route included:

1.5.1 **Complex eligibility requirements** make identifying suitable households difficult. There is a lack of clarity on who is responsible for identifying household eligibility. **Scheme changes and short funding windows** mean familiarity and trust does not build, and sometimes windows close before households are processed through eligibility processes. More straightforward eligibility criteria, or a mechanism for automatically assessing eligibility across a region would streamline access and provide project pipeline visibility for the supply chain. Better access to data, and digital building logbooks could support automatic eligibility identification, see section 3.

1.5.2 **Limited public engagement** means many are unaware schemes exist. This particularly means that those less engaged, and most vulnerable, are at risk of missing out. A consistent line of

messaging, communicated by a range of trusted sources, endorsed by government could improve this.

1.5.3 **Holistic outcomes of retrofit are not targeted or achieved** by schemes, opportunities are missed to improve health outcomes alongside fuel poverty alleviation and carbon reductions. EPC-based standards are poorly aligned with net zero, grid, health or climate resilience needs, see section 2. This limited focus means that individual needs are not catered for and customer satisfaction is low. Outcomes often referred to as co-benefits are not effectively measured or communicated, translating to both a lack of demand in all delivery routes, and the inability for finance providers to fully engage (as they require proven outcomes).

1.5.4 **Short grant delivery cycles** limit supply chain development, creating market volatility which increases costs. Opportunities are missed to address skills shortages by building confidence in the market. Consumer trust remains low, as a long-term vision is not developed.

1.5.5 **Funding packages are often insufficient to fully fund key measures and enabling work**, and opportunities to engage with blended financial models are missed. Lack of coordination means opportunities to unlock other forms of investment are missed.

1.6 Full findings of this analysis are available here: https://nationalretrofithub.org.uk/wp-content/uploads/2024/08/NRH-State-of-the-Nation-Review.pdf

2 The Energy Performance Certificate Framework

2.1 The National Retrofit Hub has conducted a detailed study on what is needed from EPC reform to enable retrofit at scale. The study involved:

- A literature review and synthesis of recommendations already published
- Engagement with stakeholders impacted by EPCs in three workshops:
    - Standards, technical design and project planning: over 100 industry professionals from the National Retrofit Hub's Working Groups 1 and2.
    - Financial specialists: 30 banks, building societies and financial professionals, convened in partnership with Bankers 4 Net Zero.
    - Citizen engagement: over 60 consumer advice, communications and community representatives from the National Retrofit Hub Working Group 6.
- An industry survey, with insights collected from over 300 professionals
- Expert feedback, from the NRH advisory panel and through one-to-one meetings

2.2 Energy Performance Certificates are currently used by many stakeholders for different reasons. Some stakeholders have an interest in individual EPCs, whereas others utilise the aggregated data provided by multiple EPCs. Uses directly linked to consumer decision-making include:

- Providing information and advice to homeowners on their home's performance and opportunities for improvement
- Creating comparability between homes for buyers and letters, influencing decision making
- Evidencing energy efficiency regulation compliance for landlords
- Informing national net zero and fuel poverty strategies, and therefore government messaging on home performance
- Influencing the design and eligibility requirements for upgrade grants
- Reporting and data gathering for banks and building societies, influencing green finance offers

2.3 Our literature review analysed numerous reports, published by industry, government and academia, on the improvements needed from EPCs. Topics frequently addressed include:

2.3.1 **Metrics:** the Energy Efficiency Rating (EER) is confusing, as it is actually a measure of energy cost rather than energy efficiency. The EER cannot be easily compared with real-world energy use, and ratings do not include all energy consumed within a dwelling. The EER, rather than the Environmental Impact Rating (EIR) is used to set policy related to carbon targets, which means reductions in carbon emissions are not properly prioritised. For example, the EER incentivises cheaper gas over more expensive, but lower carbon, electricity. This means EPCs do not allow consumers to make informed decisions around reducing the environmental impact of their home.

2.3.2 **Validity and Access:** EPCs are valid for 10 years, which means many are out of date, as they do not include changes made to a home in that time. Evidence from Which? suggests that when an EPC has information that is out of date consumers are likely to disregard all information contained.[1] Evidence from Santander shows that 40% of homes do not have an EPC[2], many consumers are not reached by the EPC framework.

2.3.3 **Upgrade recommendations with EPCs:** many reports suggest that these recommendations do not incentivise consumers to make performance upgrades, as costs and energy savings estimated are often seen as inaccurate and unreliable. The recommendations also have the potential to suggest packages of measures that have unintended consequences, for example, ventilation and other measures that relate to health and wellbeing are not considered. Opportunities are missed to incentivise repair and maintenance work that can play an important role in improving building performance, particularly for older and historic buildings.

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[1] https://www.which.co.uk/policy-and-insight/article/transforming-epcs-consumer-research-insights-and-recommendations-a7mQM8Z6Pnpj#introduction

[2] Santander. Tomorrow's Homes. April 2024

2.3.4 **EPC Data Access:** more data on EPCs has been made available, however input data, such as room heights, would be valuable for stakeholders to for quality control, project planning and stock model analysis, helping create more accurate recommendations for consumers.

2.3.5 **Consumer Awareness:** Santander found in a survey that 58% of consumers did not know what an EPC was[3]. Consumer awareness is fundamental to incentivise householders to upgrade the performance of their homes.

2.3.6 **Finance:** the finance sector need EPCs to be more accurate, reliable and comparable, to improve their ability to fund and invest in highly performing buildings, and to provide loans for performance upgrades.

2.4 A library of reports on the improvements needed to EPCs, with themes tagged, can be found here: https://nationalretrofithub.org.uk/knowledge-hub/epc-reform/

2.5 The NRH's industry survey on EPCs revealed that:

- 57% of respondents said they have little to no trust in current EPC ratings.
- 58% felt EPCs only slightly or moderately encourage home improvements.
- 87% agreed that EPCs should reflect a building's impact on occupant health and wellbeing.
- 80% supported including peak energy demand metrics to aid grid management.

2.6 The study culminated in the creation of an eight point roadmap for change:

- **Set clear targets** for the improvement and uptake of EPCs
- **Improve cost and carbon metrics** and use carbon metric to set Net Zero targets
- **Introduce confidence ratings** with options for both virtual EPC, and real- word data incorporation
- **Introduce optional metrics**, on health, climate resilience and smart energy demand management, with improved user interface
- **Improve recommendations** and clearly link to outcomes
- **Endorse digital building logbooks** and create mechanism to allow them to link with EPCs
- **Introduce more 'trigger points** for when an EPC is required to be updated
- **National campaign and re-brand:** EPCs provide a holistic view of building performance and health

2.7 The full report, with details on each point is available here: https://nationalretrofithub.org.uk/wp-content/uploads/2024/11/NRH-The-Future-of-EPCs.pdf

2.8 Primary aims for EPCs that emerged from this extensive consultation included:

[3] As 2.

- Ensure information within EPCs is accurate, reliable and trusted.
- Use right metrics to set targets and measure progress.
- Embed health and comfort.
- Utilise opportunity to use EPCs as a portal building performance upgrade

3 Role of Data

3.1 Better stock model data on homes could enable more effective identification of suitable homes for retrofit and heat decarbonisation and streamline delivery. **Digital Building Logbooks** have the potential to be expanded to gather and provide access to information required on homes to enable performance upgrades.

3.2 The National Retrofit Hub has produced proposals on how Digital Building Logbooks could be expanded to unlock retrofit at scale. This report outlines the benefits more and better data on homes could provide, and how this could help overcome the known barriers to retrofit at scale: https://nationalretrofithub.org.uk/wp-content/uploads/2024/05/NRH-Logbooks-Explainer-2.pdf

4 Affordability of Low Carbon Heat

4.1 The switch to low carbon heating should be considered holistically, as part of a home's overall performance. For most members of the public the switch to low carbon heat and hot water will mean replacing fossil fuel powered boilers (gas and oil) with an electric source. Currently electricity is significantly more expensive than gas, so systems providing heat and hot via electricity will need to be significantly more efficient, to ensure consumers' bills do not rise.

4.2 Heat pumps (air, water, and ground) will be the solution for many households, as these can be between 300-400% efficient (compared with around 80% for a gas boiler). Optimising heat pump efficiency relies on sufficiently sizing both the heat pump and heat emitters (radiators, etc) for the home's heat and hot water demand, which is determined by the fabric performance, size, shape and occupancy of the home.

4.3 Etude conducted an extensive study of 'heat pump readiness' within Cornwall, to inform their decarbonisation strategy. This report provides information on when a home may, or may not, require fabric improvements before the installation of a heat pump, to protect consumers from increased bills. The Etude Cornwall Housing Decarbonisation Report is available here: https://letstalk.cornwall.gov.uk/housing-decarbonisation#:~:text=We%20are%20working%20on%20a,making%20them%20affordable%20to%20run.

4.4 Focusing solely on heat decarbonisation could mean that we miss opportunities to improve the comfort, health, and repair of homes. Upgrading the fabric performance of homes to appropriate

levels also provides the opportunity for smaller heat pump systems to be specified, to meet the lower heat demand requirements, saving cost and embodied carbon. This also impacts on job creation.

5 Workforce and Skills

5.1 The NRH has been running a working group on retrofit workforce growth and skills. This group has consulted with stakeholders within the construction, training, college, and accreditations sectors to understand what is needed to build skill and capacity to deliver good quality retrofit throughout the UK.

5.2 The group has identified that, to build capacity, demand for jobs and engagement in training, a clear policy direction is needed from government on heat decarbonisation, and the continuation of funding for social and grant funded retrofit.

5.3 Publicly funded retrofit work should include skills targets, with explicit criteria within procurement and social value skills mandates.

5.4 The working group recommends that the government create a mechanism to guide, oversee, and co-ordinate regional & local skills development initiatives. This mechanism could also deliver guidance & upskilling to improve retrofit clienting in public sector, pre-bid advice and support to SME's reporting, and monitoring, evaluation and enforcement of mandated skills targets.

5.5 National curriculum reform should be considered to support pathways into retrofit, and standardised retrofit training. Alongside this a national 'train the trainer' programme with a fast-track pathway for mature / pre-retirees to 'train as trainers' should be introduced.

5.6 Funding for skills should be aligned at a national level, but adapted to regional and local needs.

5.7 A well evidenced gap in the construction sector across the board is building physics. A lack of understanding about the relationship between different roles and skills sets means that measures can be installed poorly, delivering a performance gap – a shortfall between how measures were conceived and designed to how they were implemented. The group recommends basic building physics delivered across construction education in a modular way, allowing for a flexible and agile way to close the gap and improve outcomes.

6 Home Heat Transition

6.1 Retrofit is a complex, cross-sectoral issue, impacting a diverse range of stakeholders and all citizens. It encompasses multiple overlapping themes, such as: technology and data, policy, diverse engagement, and industry practices. Therefore, enabling delivery at scale demands a cohesive

approach. Positioned as an objective entity, the National Retrofit Hub has been harnessing the interconnected ecosystem of the retrofit industry to drive impactful change.

6.2 A long-term vision for the upgrade of the nation's homes is needed to drive supply chain and skills investment, and to grow consumer demand and trust. This means working to a policy and investment timeline of at least 10 years and being transparent about plans for the future.

6.3 The government should work together with retrofit systems and organisations already in place to develop, implement, and deliver a National Retrofit Strategy. The National Retrofit Hub is well positioned to provide the government with access to stakeholder groups within the retrofit industry, and distill clear insights, giving an overview of the sector's inter-dependent parts. Our mission is to work collaboratively with the government and the retrofit sector, ensuring that all voices are included and acknowledged.

6.4 All benefits of retrofit should be considered and prioritised holistically. This means considering health, wellbeing, climate resilience and fuel poverty alongside decarbonisation and energy security, to inform strong and clear policies.

6.5 Local delivery should be prioritised, bolstering local jobs and supply chains. This also means empowering, enabling and resourcing local authorities to drive local retrofit delivery. There should be a focus on social justice and tackling inequality, by enabling neighbourhoods and communities to build resilience through retrofit.

6.6 Retrofit delivery must go beyond government intervention, creating an approach driven by partnerships between government, industry, community and private investment. Government investment should be used effectively to both reach those most at risk for poorly performing homes, and to build capacity including unlocking other forms of investment, skills and expertise within the retrofit sector, to enable privately financed delivery.

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