

Royal Institute of British Architects

Housing, Communities and Local Government Committee: Local government and the path to net zero

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The Royal Institute of British Architects is a global professional membership body driving excellence in architecture. We serve our members and society in order to deliver better buildings and places, stronger communities and a sustainable environment. Being inclusive, ethical, environmentally aware and collaborative underpins all that we do.

The Royal Institute of British Architects (RIBA) welcomes the opportunity to respond to this inquiry. The built environment is responsible for around 40% of global carbon emissions and architects have a significant role to play in reducing UK greenhouse gas emissions. The RIBA joined the global declaration calling an environment and climate emergency on 29 June 2019; just two days after the UK government passed a law stipulating the UK end its contribution to global warming by 2050, by bringing all greenhouse gas emissions to net zero.

The RIBA welcomes the direction of travel signified by many of the measures proposed by Government in recent years to help the UK reach net zero. However, we believe that there is a need for greater ambition if we are to significantly improve the performance and reduce the environmental impact of the built environment.

Local authorities are key players in addressing the climate emergency and many have set themselves very ambitious targets to reach net zero, often well before the UK target of 2050. It is imperative that local authorities have the knowledge, skills, and clout to address carbon emissions from the built environment in their local area.

The RIBA recommends that the Government help local authorities reach net zero by:

- Using appropriate metrics for measuring energy efficiency
- Setting actual performance energy targets
- Promoting and undertaking Post Occupancy Evaluation to help close the performance gap
- Bringing forward additional funding and resources for local authorities to help improve the energy efficiency of the building stock in their local area
- Ensuring sustainability is at the heart of the planning system

New homes: The Future Homes Standard and Future Buildings Standards

Do the government's proposals for improving the energy efficiency of new homes by 2025 go far enough?

The RIBA welcomes the direction of travel shown by many of the measures proposed in the Future Homes Standard, but we believe that there are several areas Government must address that are critical to ensuring our new homes do not negatively impact the environment.

Start regulating total energy consumption

The Government's response to the Future Homes Standard consultation outlines that primary energy will be the principal performance metric in the 2021 uplift to Part L of the Building Regulations. However, we do not believe this is the appropriate approach. Primary energy is a complex metric with factors that change over time. Primary energy will become less relevant as the electricity grid decarbonises. Primary energy also favours gas over electricity, going against heat decarbonisation objectives.

Instead, we must start regulating the amount of energy used by a home. We suggest that operational energy becomes the key metric. The metric is already well known and understood within the sector as well as by building owners and occupiers. We must use operational energy rather than primary energy as the principal performance metric.

Using operational energy as the key metric would also allow for benchmarking and minimum standards to be easily established based on building type, driving further innovation within the built environment.

Set actual energy performance targets for buildings

The Future Homes Standard states that new homes will be 75-80% better than the previous iteration. However, this is a percentage reduction against a prescribed notional building. The notional building does not reward efficient building form and orientation and it also does not consider unregulated energy uses.

We must move towards setting actual energy consumption requirements, measured in energy use intensity (EUI), in kWh/m²/yr. This would encourage architects, engineers, developers and homeowners to work together, be innovative and reward good design based on form, orientation and fabric performance. Operational energy targets should be in line with the [RIBA 2030 Climate Challenge](#).

Assess building performance better to close the performance gap

We have known for many years there is a gap between anticipated and actual performance of buildings. The current tools used to assess a building's compliance, such as Standard Assessment Procedure (SAP), do not accurately predict actual operational energy or carbon performance. Therefore, they are an inappropriate methodology to reduce the climate impact of the built environment.

There needs to be better enforcement of regulatory requirements. In addition, Post Occupancy Evaluation (POE) must be used to improve predictive energy modelling through verification and comparison in use. Without checking how buildings actually perform, the industry is relying on unverified predictions of performance.

Introduce and regulate embodied carbon targets for buildings

The carbon emissions from a building's operational energy use make up only a portion of the carbon emitted across its entire lifecycle. There are significant carbon emissions embodied in the materials used to produce, operate and maintain buildings. However, the Future Homes Standard consultation does not address this.

Government must phase in requirements for the consistent assessment and reporting of whole life carbon and set targets for embodied carbon, which is the emissions associated with materials, construction, refurbishment and disposal, and these should be regulated. Embodied carbon targets should be in line with the RIBA 2030 Climate Challenge.

The government has acknowledged the need to clarify the role of local planning authorities in setting energy efficiency requirements for new homes that go beyond the minimum standards. What role should LPAs play in determining local energy efficiency standards?

Setting a national energy efficiency standard for dwellings has many merits, for example, it creates consistency and a national market for innovation in products and skills. If the national minimum standard is set at the correct level (i.e. is sufficiently ambitious but achievable) there would be no need for local authorities to go further. However, the Future Homes Standard lacks sufficient ambition and does not guarantee that new dwellings will not negatively impact the environment.

At least 230 councils have declared a climate emergency, and nearly two thirds of councils in England aiming to be carbon neutral 20 years before the national target of 2050. Therefore, local authorities must be able to continue to set energy efficiency requirements that go beyond the minimum standards to reach their targets.

Is the government right to anticipate that heat pumps will become the primary heating technology for new homes?

The Future Homes Standard should stipulate that any new home requires low carbon heating and that it should not be attached to the gas grid or reliant on any fossil fuel.

Heat pumps are an effective way that new homes can achieve low carbon heating. It is essential, however, that heat pumps are designed, specified, installed and operated correctly to avoid high energy bills for the consumer.

As research and development continue, there may be new technologies and products that are low carbon and produce similar results to heat pumps, these should not be discounted.

In addition, we believe that fabric efficiency should be the primary consideration when designing a new home; any method of delivering heat should be secondary.

Will the proposals address the performance gap between design intent and build quality of new homes?

As mentioned above, we have known for many years there is a gap between anticipated and actual performance of buildings. The proposals in the Future Homes Standard do little to address and close the performance gap of new homes.

To close the performance gap, we must use design for performance tools and verify this through POE. POE is the process of obtaining feedback on a building's performance in use after it has been built and occupied. POE collects information on building and energy use and user satisfaction and is the only way of accurately measuring if a building is as energy efficient as anticipated.

The data collected through POE must also be used to improve predictive energy modelling through verification and comparison in use. Without checking how buildings actually perform, the industry is relying on unverified predictions of performance.

The RIBA recommends that the Government should require POE as a condition for all publicly funded buildings and housebuilders receiving Help to Buy payments.

Local authorities should also mandate the use of POE, and data sharing, on large scale housing schemes by making it a requirement through the planning system.

Is the government right to introduce revised transitional arrangements?

There is evidence that housing developments are being built to energy efficiency requirements that have been superseded more than twice. This is not acceptable, and the RIBA is pleased to see the Government plans to introduce more stringent transitional arrangements.

In addition, the Committee seeks evidence on any other issues relating to either the Future Homes Standard or the Future Buildings Standards.

Many of the issues with the Future Homes Standard, such as lack of operational energy targets and little mention of embodied carbon, are mirrored in the Future Buildings Standard. We are concerned that, without adequate metrics and ambitious targets, new homes and buildings will continue to significantly impact the environment. We need the Government to set adequate standards to ensure we meet our climate commitments and preserve the planet for future generations.

Existing homes

The Committee also seeks evidence on plans for improving the energy efficiency of the existing housing stock, including:

Local authorities' progress towards reducing or eliminating the carbon footprint of their own building estate.

Local authorities and social housing providers are active in delivering energy efficiency improvements but installing energy efficiency and low-carbon heating in these homes is subject to funding constraints.

The Government should urgently bring forward the remainder of their commitment to the £3.8 billion capital Social Housing Decarbonisation Fund. A retrofit revolution led by social housing landlords would not only cut carbon emissions and help fight climate change, but would also create jobs, support local economies, and help tackle fuel poverty – whilst helping a green economic recovery from the coronavirus pandemic and “level-up” across the country. Ramping up delivery of energy efficiency measures as a step on the way to decarbonising heat more fully, is something all local authorities with housing duties should do.

Schools, leisure centres and community buildings account for a large proportion of energy use for councils across non-domestic buildings. These buildings, as well as councils' own housing stock, provide opportunities to develop innovative energy efficiency programmes and generate significant cost savings for councils.

In addition, it is vital that building owners and users gain a better understanding of how their building performs compared to the design intention with POE. Even when a building's design has energy efficiency at its heart, the promised energy efficiency standards are not always met.

POE informs building users if their building is energy efficient and reveals if it is being used as intended. It also allows for continuous improvement within the construction industry as it provides information on how a building's design could be improved. This allows architects to help modify and alter spaces that are not functioning as expected or in accordance with actual needs.

The data gathered from POE can inform the design and construction of future projects. This reduces the need for adjustments once a building is occupied resulting in lower costs. POE provides invaluable feedback and lessons learnt that all involved can take forward into their organisations and to their next projects. Local authorities should mandate the use of POE, and data sharing, on large scale housing schemes by making it a requirement through the planning system.

The role of local authorities in improving the energy efficiency of non-council building stock, including through take-up of the Local Authority Delivery scheme and the setting and enforcing of energy efficiency standards.

Local authorities can play an important role in providing advice and information for residents and businesses on energy efficiency and low-carbon heating options. Raising awareness of the transition to net zero needs to be undertaken in sequence with practical support and options for action, so that people are supported. Local authorities must work with delivery partners and community-based organisations to promote what works locally.

Improving energy efficiency in private rented homes will be important in delivering net zero. Local authorities have the power to enforce Minimum Energy Efficiency Standards (MEES) in the private rented sector which makes up 19% of housing in England, a sector traditionally performing poorly on energy efficiency standards.

However, with local councils severely hampered by funding and capacity constraints, we are worried that MEES are not being properly enforced. The Government ought to ensure that enforcement is fully funded at the local authority level. This means either providing a central allocation of funding specifically for building enforcement capacity in local councils, or by overseeing a cost-neutral means of enforcing the standards, such as through the charging of non-compliant landlords.

The role of local authorities in encouraging and enabling private owners to reduce or eliminate their carbon emissions, including through the development of loan schemes similar to the green deal and the delivery of existing grants, such as the Disabled Facilities Grant and Housing Renewal Assistance.

In addition to raising awareness of the transition to net zero, local authorities should be empowered to use taxes, such as council tax, to incentivise private owners to retrofit their home.

The RIBA's recent report, [Greener Homes: decarbonising the housing stock](#), suggests that the Government must set out a long-term plan and investment programme for upgrading the energy efficiency of our housing stock – a National Retrofit Strategy.

A vital element of the Strategy is incentives for the “able to pay” market. Our report suggests that the Government already has the tools to do this, through taxation. Stamp Duty Land Tax, for example, could be altered to help embed energy efficiency in the housing market. Greener Homes suggests a sliding scale of stamp duty payments, where the most efficient homes pay much less tax than the least.

However, this should not be limited to stamp duty, other taxes, such as council tax should be reviewed to incentivise energy efficiency. Embedding energy efficiency across the tax system would send a strong message that the Government is serious about meeting net zero and energy efficiency improvements.

Local government's path to net zero

The Committee also seeks submissions on how else local government help the UK achieve “net zero” emissions by 2050, particularly in relation to improved and decarbonised public transport, waste management and decarbonising the electricity grid.

Sustainability must be at the heart of the planning system

Disappointingly, the Planning for the Future White Paper lacks any mention of our global climate emergency. The planning reforms are a once-in-a-generation opportunity to embed sustainable development into the planning system and these must provide the industry with a clear pathway to net zero carbon. However, the current proposals do almost nothing to guarantee the delivery of affordable, well-designed, and sustainable homes.

The White Paper suggests the merging of the Environmental Impact Assessment with the Sustainability Appraisal. If we over-simplify these tests, we risk damaging environmental and ecological standards as opposed to enhancing them. If the Government does create a new single ‘sustainable development test’, it must be based on the UN Sustainable Development Goals – and be ambitious, flexible, and holistic.

The Planning White Paper pits the environment against other aspects of development by suggesting that local plans must ‘strike the right balance between environment, social and economic objectives.’ However, sustainability experts can help deliver local plans and improve social and economic objectives, while still being sustainable.

In addition, the extension of Permitted Development Rights (PDR) means that local authorities now have very little control over many aspects of change in their area, particularly in town centres. PDR allows for building owners to undertake certain types of work without the need to apply for planning permission. While a significant number of homes have been delivered, the lack of regulation has seen a substantial number of extremely poor-quality housing since the policy was introduced.

Removing the oversight of local authorities and the planning system from the process has led to a decline in standards. There are also no requirements relating to the quality, size or sustainability of new homes delivered through the conversion of offices and commercial premises to dwellings. It is vital that all new homes – including those undertaken via PDR are sustainable and energy efficient.

Homes must be sustainable, long-lasting, affordable and contribute to the health and happiness of the people that live in them. PDR is fundamentally changing our building stock without consideration to sustainability and space standards. This failure to take a holistic view of what constitutes good design will inevitably lead to the continued and accelerated development of sub-standard housing.

The Government's proposed amendments to the National Planning Policy Framework (NPPF) highlight the importance of sustainable development within the planning process; however, the expansion of PDR is in direct opposition to this and does not guarantee sustainable or energy efficient homes.

Permitted development must be restricted to create a level playing field that ensures that all homes and buildings meet the same scrutiny, sustainability, safety and quality standards.

Procuring projects in a way that focuses on quality and long-term value rather than just minimising costs

Effective public procurement prioritises good design outcomes and can maximise the social, environmental, and economic benefits of development. Sometimes as a result of poor procurement practice or lack of in-house expertise, public clients don't get what they expected, and communities don't get the quality they deserve.

Government and local authorities should take an outcomes-based approach and invest in the right design skills, briefing and design process when setting project budgets and fee levels. Consultants should not solely be appointed on the lowest fee, as they may not be able to properly resource the level of service required. This can lead to low quality outcomes which do not deliver long-term value to the taxpayer.