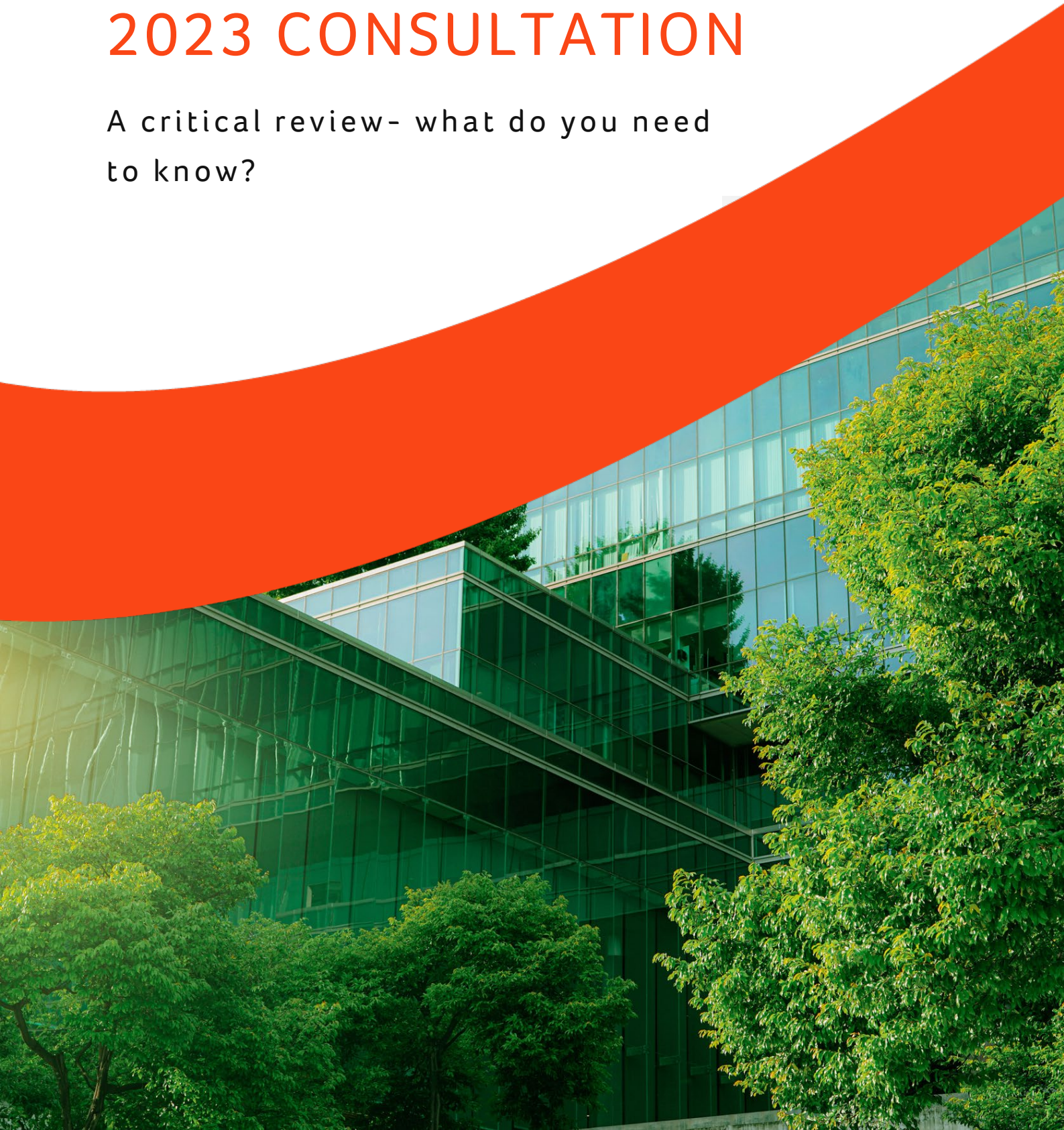
McBains

# THE FUTURE HOMES AND BUILDINGS STANDARDS: 2023 CONSULTATION

A critical review- what do you need to know?



# STATEMENT BY THE AUTHOR

**Tassos Kougionis**
**Director**

An accomplished professional holding extensive expertise in climate and energy policy analysis and innovation. Oversees technical delivery for various net-zero and sustainability projects.

Specialises in Approved Documents and UK Government Regulations, Local Authority policies, new and existing buildings high energy efficiency and performance solutions.

''As we envision the future of new homes and buildings, we should champion a holistic approach. We need to provide communities and users / occupiers with sustainable and high-quality products.

The success of the Future Homes and Buildings Standard lies not only in meeting immediate goals but in building a legacy of resilience, sustainability, and innovation that stands the test of time.

Lifecycle, energy and carbon assessments, protection of biodiversity and support of local communities are all critical components for the successful delivery of our common vision, that of a thriving future ''

**Tassos Kougionis, BEng, MEng, MSC**
**Director of ESG & Net Zero**

December 2023

# OVERALL CONCLUSIONS

The Future Homes and Buildings Standards: 2023 consultation acts as a step towards advancing new buildings standards in terms of carbon and energy efficiency of new buildings in England.

However, several critical considerations and unanswered questions necessitate industries and government's attention.

## Lifecycle Energy and Carbon Elements

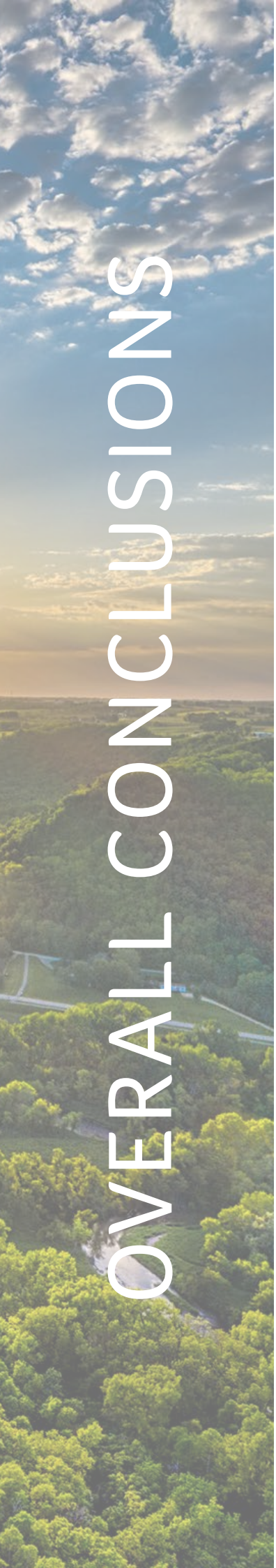
There is a notable absence in explicitly addressing the embodied and lifecycle energy and carbon impact associated with buildings, materials, and processes. Recognising the impact of production and importation, durability and replaceability (lifecycle energy, carbon, and cost to the occupant/ user) is crucial for a comprehensive understanding. Future regulations must incorporate these factors and move to circularity, plus protect skills, knowledge, resilience, and local economies.

## Local vs. Central Guidance

We expect potential conflicts between local and central guidance, especially on exceptions. Striking a balance between devolution and a nationally consistent approach is crucial to avoid complexities and ensure clarity. It is essential that the local authorities retain the ability to identify their needs, to innovate and use the Planning and Energy Act 2008. The current, proposed, direction of travel will restrict local authorities and might clash with local needs.

## Fabric Upgrades and Material Choices

The absence of emphasis on fabric upgrades raises questions about the broader implications for material choices. Local, durable, and cost-effective materials and processes upgrading current skills and knowledge might be sidelined, impacting long-term solutions. Focusing on airtightness, not substantiated by evidence as to for how long low airtightness levels may last for.



# OVERALL CONCLUSIONS

## Capital Cost Uplifts and Long-Term Implications

While the focus on capital cost uplifts is understandable, it prompts reflection on the long-term implications for homeowners and users. The standards should consider not only the immediate expenses but also the lifecycle costs and benefits, ensuring economic viability for both developers and residents.

## User Impact of Technological Emphasis

Consumer and user protection, quality assurance, supply chains, skills and knowledge, warrantees etc. need to be addressed and should have been discussed. Stricter quality controls and a golden thread in terms of documentation and controls would be welcome.

## Grid Infrastructure Resilience

The resilience and adaptability of the grid infrastructure, as well as the implication of new and existing buildings moving to all electric solutions, possibly without addressing energy efficiency as their priority needs to be addressed. There is a lot of emphasis on a decarbonised grid, but energy efficiency is key (as generation, decentralised solutions, heat networks etc.).

## Support and Updates for Existing Buildings

Additional support and updates for existing buildings, which will persist for many years, are essential. All new buildings will become existing at the point of hand over. Relying on grid decarbonisation only might miss opportunities to reduce energy wastage and enhance overall energy efficiency and security.

At McBains, as advocates for a robust, resilient, and sustainable built environment, we stress the importance of addressing these points to ensure that the Future Homes Standard and similar regulations, not only meet immediate goals but will stand the test of time.

## What is this About?

The Future Homes and Buildings Standards: 2023 consultation (FHS 2023) was released on December 13th, 2023. Long-awaited, it was expected to introduce ambitious environmental, sustainability and new energy and carbon efficiency targets for new homes, generate discussion around a Future Homes and Buildings Standard for non-domestic buildings and touch on existing buildings. Link: FHS Consultation.

Below we have summarised the consultation's key points followed by our critical review comments. We have also cross-examined relevant associated external information in terms of the Local Authorities scope too. Our comments often express our understanding and simplify and explain complex technical language where required too.

## FHS Summary

**Implementation timeline**: Options for transitional arrangements propose a 6- to 12-month gap between the legislation's laying (2024) and its enforcement (2025), followed by a subsequent 12-month transition. Transitions are proposed to apply where a building notice, initial notice, or an application for building control approval accompanied by the appropriate plans has been submitted to the local authority or Building Safety Regulator (as appropriate) in respect of that building before the new standards come into force and work on that building commences, as defined in new Regulation 46A of the Building Regulations 2010. Where work commences on an individual building after this transitional period, that building will have to comply with the new standards (even if a building notice, initial notice, or application for building control approval was submitted before the new standards came into force).

**Our comment**: We welcome the effort to minimise or eliminate the ability of the system to continue developing buildings under outdated standards and regulations. New home buyers, and building owners, need to be offered a product that, as a minimum, meets the latest health, safety, and performance targets. This creates clarity and consumer confidence.

**Post-Brexit Regulatory Shifts:** Although Regulation 26 remains mostly unchanged, the focus appears to be Regulation 11 which provides the ability for developers to ask for exceptions. Quoted: '' Regulation 11(3), however, provides that in relation to new buildings, regulations 25A, 25B and 26 cannot be relaxed. Regulation 26 is the requirement not to exceed the target CO2 emission rate for the building, calculated using the national calculation methodologies. We [UK Government] are proposing to repeal regulations 25A and 25B (see Section 12.3)''. Also, the proposal to get rid of Regulation 25A, which came from EU rules, indicates that the UK's thinking that extra analysis of alternative energy efficient systems may not be needed.

**Our comment:** The Planning and Energy Act 2008 so far allows a local planning authority in England to impose reasonable requirements for complying with energy efficiency standards that exceed the building regulations. The question is what would be reasonable as an exception and will this amendment create more complexities for Local Authorities, developers, and stakeholders in planning. There is a risk of clashing local and central guidance and misapplying it could lead to advocating for relaxed standards, leading local authorities to compromise on sustainability goals underscoring the delicate balance between economic viability and environmental and community responsibility.

# PRE-EMPTIVE STATEMENTS

## Planning and Energy Act 2008, Local Energy Efficiency Updates

Following up the announcement of the FHS consultation, on the 13th December, statements were made in the House of Common.

**Baroness Penn, Parliamentary Under Secretary of State for Levelling Up, Housing and Communities (Conservative)** Statement link

Our interpretation of the statement: The statement aims to discourage local plan-makers from exceeding national energy efficiency standards and suggests rejecting such proposals unless they have a well-justified rationale.

Extract: ''Any planning policies that propose local energy efficiency standards for buildings that go beyond current or planned buildings regulation should be rejected at examination if they do not have a well-reasoned and robustly costed rationale''

**Lee Rowley, Minister of State for Housing (Conservative)**
Statement link

Our interpretation of the statement: The statement aims to discourage local plan-makers from setting energy efficiency standards that go beyond current or planned national regulations, mentioning complexity and costs to building new homes. The statement outlines specific criteria for sound local plans, including the consideration of the impact on housing supply and affordability, and emphasises the need for flexibility in applying policies beyond regulations based on technical feasibility.

Extract: ''the [this] Government does not expect plan-makers to set local energy efficiency standards for buildings that go beyond current or planned buildings regulations.''

# OUR COMMENT

Considering the government's commitment to devolve power to local authorities, the decision to discourage local plan-makers from setting energy efficiency standards beyond national regulations appears contradictory. The complexity and opacity of the devolution process, as criticised in the House of Lords report (link), already pose challenges to local governance. By restricting local autonomy in setting additional energy efficiency and carbon standards, the government risks undermining its own devolution agenda and stifling innovation at the local level.

Moreover, the government's emphasis on levelling up and addressing regional inequality, as outlined in the levelling up white paper, contradicts the move to centralise energy efficiency standards. A one-size-fits-all approach may overlook regional variations and hinder the ability of local authorities to address specific environmental challenges in their areas.

A rigid adherence to national standards, which, as currently appears includes mainly no change from current fabric standards for new homes and the use of heat pumps and similar which are minimum requirements, can overlook regional variations, impact local and national energy security, ignore communities needs and added value offered, as well as hinder opportunities for skills, knowledge, and supply chains upgrades and diversification.

To assume that energy efficiency directly and significantly affects viability oversimplifies the complex factors influencing housing development. The current published evidence base of the Future Homes Standard consultation (analysis follows) indicated a 1-6% capital cost increase (within margin of error) for 2026 news homes, without considering lifecycle costs and alternative solutions.

We would advocate for a more flexible approach, allowing for localised innovation, quality assurance and accounting for regional needs, which we believe is essential for the success of housing projects nationwide.

# FHS - EXPLAINING THE PARTS

How it compares to the current version of the Approved Documents (2021, L):

## New Homes

The Future Homes Standard proposes to eliminate fossil fuel heating systems, promoting the adoption of highly efficient air source heat pumps, or equivalent electric solutions, encouraging widespread use of solar PV panels (possible not mandating).

Attention is given to decentralised mechanical extract ventilation systems and pushing for good airtightness levels. The introduction of the Home Energy Model, SAP's replacement also is a significant change. Fabric notes (notional): No recommendation is made for any substantial improvements to fabric standards for new homes. The decision stems from proposed factors such as the 2021 fabric standard's effectiveness and the possible diminishing cost-effectiveness of further fabric improvements in the context of an expected rapidly decarbonising electricity grid.

## Non-Domestic New Buildings

The Future Buildings Standard proposes that non-domestic buildings performance targets be based on whether spaces are top-lit or side-lit. It emphasises good fabric practices, with specific enhancements for certain spaces, prioritising airtightness to support low-carbon heating systems. The standard proposes heat pump solutions, radiant electric heating, and highlights efficiency in lighting and heat recovery. Stakeholders can choose between Option 1, recommending 40% solar PV panel coverage for side-lit and 75% for top-lit spaces, and Option 2, not recommended, with more conservative solar PV coverage.

## Existing Buildings:

The consultation primarily focuses on new constructions but also addresses existing buildings through specific sections. The consultation explores proposals under Material Change of Use (MCU), emphasising enhanced energy efficiency standards for converting buildings. The shift from elemental to whole-building performance targets, categorisation of MCU buildings, and notional specifications for different conversions are key considerations. Updates to guidance and minimum standards for existing buildings are also discussed, seeking stakeholder input. Additionally, there's a focus on improving the real-world performance of homes through changes to Approved Document L and F, with an invitation for input. The introduction of Part O in 2021 also prompts a call for evidence on its real-world impact in addressing overheating in new residential buildings.

# FHS - EXPLAINING THE PARTS

How it compares to the current version of the Approved Documents (2021, L):

**What is excluded:** Embodied carbon, while acknowledged as a substantial factor in a building's overall carbon footprint, it is not within the immediate scope of this consultation and existing Building Regulations. However, there is an acknowledgment of its importance, and a future consultation is expected to be planned to specifically address the measurement and reduction of embodied carbon. Lifecycle assessments and quality assurance are also not explicitly mentioned.

**Our comment**: Without significant changes to fabric performance and metrics, the focus is on airtightness and ventilation systems, plus electric services for heating and hot water as in the case of heat pumps. We expect additional discussions and guidelines around overheating, MCU and existing buildings as these are not addressed sufficiently in this current consultation. The absence of explicit consideration for embodied energy and carbon, lifecycle assessments and materials impact (energy and environmental) in the standards is a notable gap.

We believe that suggestions should have been supported by lifecycle and whole life impact and embodied energy and carbon assessments for the approach to be robust. It is hard to assess the impact of the expected life of any M&E component; where are they produced, what is their energy and carbon impact during production, importation, installation, and use, how the user will benefit from more frequent replacement and repair cycles, installation skills etc. This could be a substantial omission if these elements are not to addressed within the future regulations in tandem with the FHS.

# COST BENEFITS - A FORECAST

**New Homes**: The Future Homes Standard introduces various capital cost uplifts, offering two options for enhancing energy efficiency in homes. FHS Option 1 presents a capital cost increase of approximately £6,200 (4%), while FHS Option 2 incurs a lower uplift of around £1,000 (1%) compared to the 2021 standard. These figures represent additional expenses for developers embracing the proposed standards. In terms of user costs, annual heating, and hot water bills, these are expected to decrease in FHS Option1, average decrease of around £120 compared to Part L 2021. In the case of FHS Option 2, these are expected to increase by a minimum of £580 per year compared to Part L 2021.

Non-domestic New Buildings: Two options are presented, with Option 1 being the government's recommended choice due to its greater overall societal benefit compared to Option 2, which incurs a net cost. The options differ in the coverage of solar PV panels, with Option 1 recommending 40% coverage for side-lit spaces and 75% for top-lit spaces, while Option 2 suggests more conservative coverage at 20% for side-lit spaces and 40% for top-lit spaces. Estimates of the cost impact on common building archetypes: For Option 1, the increases in capital, maintenance, and replacement costs are as follows: deep-plan, air-conditioned office (2.1%), shallow-plan, naturally ventilated office (3.9%), hospital (1.4%), hotel (3.7%), secondary school (3.1%), retail warehouse (5.8%), and distribution warehouse (5.6%). For Option 2, the corresponding increases are: 1.9%, 3.4%, 1.3%, 3.3%, 2.4%, 2.5%, and 2.2%.

**Our Comment:** It is not clear, linking back to the possible implications of Regulation 11 (see beginning of the article), how the noted capital cost uplifts (1% in some cases) could link to the repeal. In connection to the discussion in our previous points about the replacement, maintenance and repair costs, and lifecycle costs of components to the homeowners, there's a risk of increased reliance on processed, imported goods with shorter lifespans and higher replaceability cycles. It is not clear how these are incorporated into the predicted savings.

There is a focus on capital cost which is understandable but these new homes, post their development, will become existing homes. Some of these elements, especially when learning from reviewing existing homes retrofitting, operations, performance evaluations and so on, could benefit from a more detailed analysis.

Embodied and Lifecycle cost and energy assessments should have been addressed. We would expect that moving forward additional regulations or other mechanisms to address those gaps need to be considered and for these costs also to be appreciated and singled out as they are of impact to both the user/occupier, communities, and the environment. Currently, while the results are positive, and within a volatile energy market, this analysis is a good starting point to analyse things in more detail.

26 Finsbury Square
London EC2A 1DS

mcbains.co.uk
+44(0) 7786 7900
info@mcbains.co.uk

McBains