Future Homes Hub

One Plan: Scaling up delivery

Building a generation of high quality, affordable and sustainable homes and communities, together

Future Homes Conference
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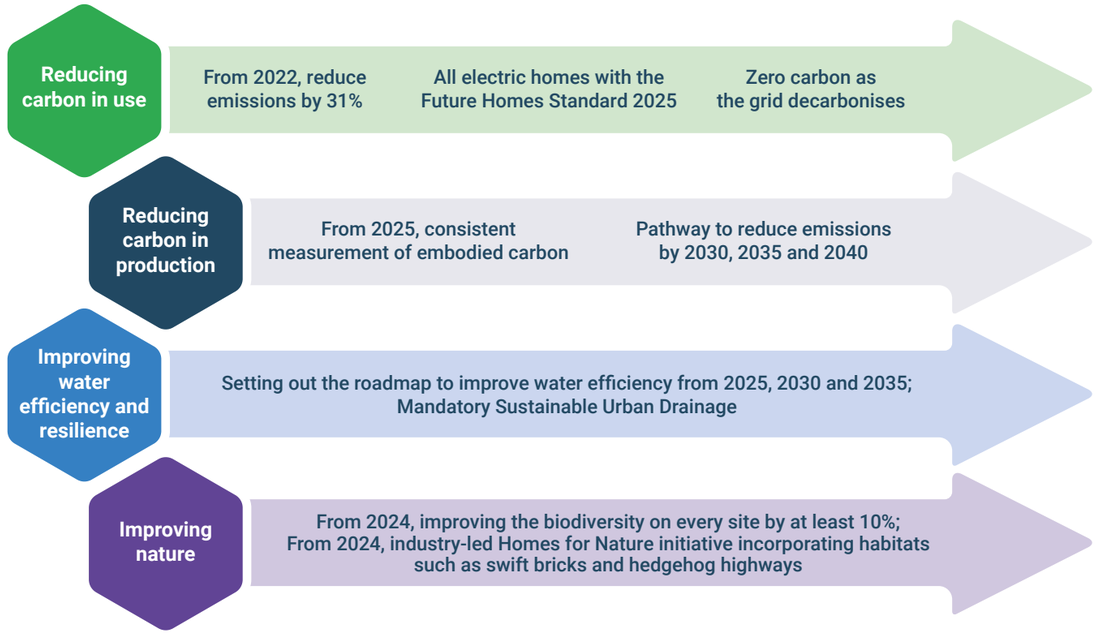
1. Scaling up delivery: the new context

Scaling up delivery takes stock of the new homes community's progress towards UK climate and environmental targets, setting out changes, achievements, challenges and the priorities for sector-wide partnership, focussing on carbon, water, nature and places.

Last year, the Future Homes Hub published Future Homes One Plan setting out the imperative for working in partnership to tackle the big environmental challenges of our times. This built on homebuilders' commitment to the Future Homes Delivery Plan in 2021.

New homes are making rapid progress on net zero homes and sustainable places.

Since then, the new homes sector is gaining momentum on the journey to meeting climate and environmental targets, and by collaborating through the Hub, has made substantial progress in preparing for the future:



Scaling up housing delivery: the opportunities and risks

With the new Government's commitment to build more homes, the stakes are now higher. We need sustainability and scale to go hand in hand. There are immense opportunities to create better homes and places than ever before: that are ready for the future and sustain value for the longer term.

There are also substantial risks. Change can be disruptive. Customers need to adapt to new ways of living. We need new supply chains. We need energy, transport and water infrastructure to adapt at pace. We need new skills at every point in the homebuilding process. We need financial institutions to recognise and reward higher performing new homes. We need new models to maintain natural and community assets for the longer term.

How we build sustainable places at pace and scale is a central question for 2025

The over-riding risk is not planning ahead and not acting on the science. Nutrients and water neutrality are warning signals of the disruption caused through lack of foresight.

The Five Cs to build sustainable homes at scale

Certainty: working with the new Government to gain greater confidence in the long-term plan so we can plan and invest in innovation, new designs, new supply chains and new skills.

Consistency: converging around national level standards that create economies of scale in design, skills and supply chain, and enable factory production.

Coherence: avoiding tensions and duplication between standards for energy efficiency, health and safety and a holistic approach to high quality placemaking, speeding up the planning process.

Customer and community-focus: unapologetically focusing on the needs of people and communities.

Collaboration: working together as the whole homebuilding community to a shared plan.

One plan and collaboration

Converging around a single plan, reflecting the 'Five C's' set out in *One Plan, Future Homes* remains fundamental to success in scaling up delivery and quality simultaneously. The Future Homes Hub is rapidly increasing the scale of collaboration, working with all other bodies to:

- Create consensus around the long-term roadmap.
- Work in partnership with Government through implementation boards so the design and implementation of important policies responds to practicalities on the ground.
- Measure and understand progress and sticking points.
- Bring the main partners together to solve problems.
- Provide a platform for sharing solutions, especially with SMEs.

The Hub has published standard metrics for home builders and the sector to measure progress consistently

2025: a pivotal year for building sustainable homes at scale

Important parts of the script will be written in 2025, for example on the Future Homes Standard, embodied carbon and water efficiency. The central question of how we create new neighbourhoods and new towns sustainably at pace and scale is also fundamental.

Success will depend on how well we all work together with a widening circle of supply chain, finance, local authority and other expert partners, bound by shared goals.

The Future Homes Hub team is hugely grateful for the support and spirit of collaboration with which the sector is embracing sustainability. We greatly look forward to working with you in 2025.

We should all be proud of our part and our progress on this mission.

David Thomas
Chairman of the Future Homes Hub and CEO of Barratt Redrow plc

Ed Lockhart
Chief Executive of the Future Homes Hub

2. Future Homes Standard and beyond

See the **low carbon trials and demonstrators map**

Roadmap — 2025 — 2028 — 2030

2025	2028	2030
Introduction of Future Homes Standard	Transition period – 90% homes built to new standard	Potential future regulation to address peak loads, energy measurement and performance, and align local requirements with national policy

Metric:

See page 13 for details

Core	Average annual operational carbon intensity of completed homes	$KgCO_2e/m^2/year$
Extended	Average Energy Use Intensity design of completed homes	$kWh/m^2/year$
Extended	Average SAP rating	#
Extended	Average kWp per completed area	$kWp/100m^2$

Policy context

- Consultation on Future Homes and Buildings Standard (FHS) and Home Energy Model.
- Government to publish FHS regulations in 2025, including transitional arrangements.

Progress so far

The 2021 Building Regulations introduced significant improvements in fabric efficiency, reducing operational carbon by 31% and set out measures to confirm quality of construction, reduce the risk of overheating, improve indoor air quality and provide access to electric vehicle charging points.

Opportunities

1. Reducing energy demand and potentially cost
2. Avoiding the need for future retrofit
3. Creating healthier and more comfortable living space
4. Enabling smart living using clean tech

Key changes to come

- Space and water heating expected to be delivered, in the main, from heat pumps.
- Standard Assessment Procedure to be replaced with Home Energy Model.
- Increased connection to heat networks.
- Voluntary scheme to demonstrate performance in-use.

Challenges

Transition to all electric homes will increase demand on the grid as well as requiring increase in skills to design, install and maintain clean tech. It is imperative that residents are confident and capable to benefit from the low-energy heating systems and that the functional Home Energy Model is delivered on time.

Sector-wide collaboration

In addition to the FHS implementation board (see overleaf), the sector is

- Sharing learnings through site visits, case studies and technical networks.
- Providing evidence to reflect energy efficiency in the valuation process.
- Identifying how transition and affordability may affect implementation.

The FHS Implementation Board

The Future Homes Standard implementation board, co-chaired by industry and government, provides oversight to all areas that are affected by and can influence the standard, and supports actions that enable the standard to be implemented at scale.

There are eight focus areas, overseen by subject experts to support implementation, described below.

		The ambition:
1	Heat pumps	• To be confident that the supply chain for heat pumps is robust, responding to the demand from all sizes of developer. • That there are skilled designers, installers, maintenance and refurbishment contractors and regulators, to be able to meet demand. • That consumers are confident in the operation and use of heat pumps.
2	Consumer	• That sales teams understand consumer needs and can provide the right information at the right time. • That we understand and respond to consumer feedback on clean tech homes.
3	Fabric	• That the energy-assessed design is buildable and clearly communicated to site operatives to deliver energy-efficient fabric.
4	Building performance evaluation	• That an effective, voluntary scheme is broadly taken up by developers to demonstrate the in-use performance of homes when built.
5	Grid capacity and energy flexibility	• That home construction is not delayed or made more costly by lack of capacity from the electricity grid. • That the peak demand from homes can be reduced through storage, smart controls, micro-grids and other technologies, that reduce cost to the consumer and the impact of all-electric homes on the grid.
6	Heat networks	• That the practical implications for heat networks from the Home Energy Model are understood and can be effectively implemented.
7	Home Energy Model and the Notional Building	• That a functioning and correct model is provided in good time to enable assessment of homes designed to the Future Homes Standard.
8	Ventilation	• That a practical and effective competency scheme is established and that ventilation is designed, installed and maintained to a high quality.

3. Embodied carbon

See the **whole life carbon conventions and simple tool**

Roadmap	2025	2030	2035	2040
Mainstream measurement of embodied and whole life carbon (WLC)	Developers routinely measure WLC using sector conventions EPDs available for carbon intensive products			
Embodied carbon delivered to site	Reduction pathway modelled in net zero transition plan	Indicative 25% reduction by 2030	Indicative 55% reduction by 2035	Indicative 75% reduction by 2040.
On-site construction	Phase out of fossil fuel generators	Phase out of direct purchase of fossil fuel, and for groundwork	Phase out of all fossil fuel including for contractors	

Metric:

See page 13 for details

Core	Total emissions (scope 1 & 2)	MWh
Extended	Upfront embodied emissions (A1-A5, homes only):	$kgCO_2e/m^2$
Extended	Whole life embodied emissions (A1-C4, homes only):	$kgCO_2e/m^2$
Extended	Whole life embodied emissions (A1-C4, development wide):	$kgCO_2e/m^2$

Policy context

Government committed to achieving net zero greenhouse gas emissions by 2050 in the climate change act, with carbon budgets being reported every 5 years.

Government is expected to consult with the new homes sector on embodied carbon during 2025.

Progress so far

The sector has agreed conventions for measurement and developed tools for assessment, with increasing engagement from developers and manufacturers to set and achieve targets that include embodied carbon of their products.

Opportunities

1. Designing highly engineered homes with reduced cost of wasted resources
2. Using materials from a resilient and auditable supply chain
3. Reducing dependence on volatile energy sources

Key changes to come

- Increased use of modern methods of construction.
- Specification of low-carbon materials.
- Elimination of fossil fuels on site.

Challenges

Consistent means of measuring and reporting embodied carbon that enables effective decision making.

Confidence in the materials decarbonisation pathways to deliver functional low-carbon alternatives.

Sector-wide collaboration

The new homes sector will clearly signpost its commitment to reduce embodied carbon through the net zero transition plan (see overleaf).

The Future Homes Hub proposes to set up an embodied carbon implementation board to bring the new homes sector, supply chain and Government together to agree the measures required to reduce embodied carbon.

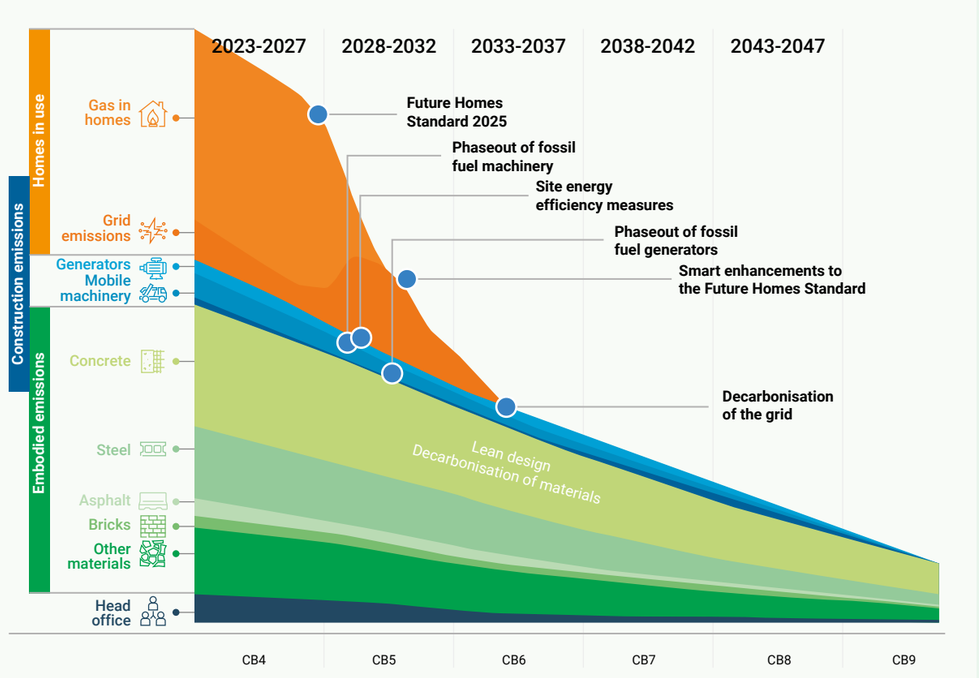
Sector net zero transition plan

The Hub will publish a sector-level transition plan in early 2025 to ensure the mechanisms are in place, as soon as possible, to support a smooth net zero transition for the whole new homes sector. This is especially important given the Government's commitment to accelerating delivery of new homes.

This first version of the plan will identify:

- The breakdown of carbon emissions.
- The emissions reduction pathway required to align with the Government's Carbon Budgets and overall Net Zero strategy.
- The levers and actions required to meet that pathway.
- The structures for collaborative work across homebuilders, supply chain, Government, and other stakeholders to solve problems and overcome barriers to achieving the pathway.

Initial Transition Pathway



4. Water efficiency and reuse

View the **Water Ready report**

Roadmap 2025 — 2030 — 2035

2025	2030	2035
105 LPPPD achieved through fittings approach **100 LPPPD** in water stressed areas **90 LPPPD** in seriously water stressed areas to enable sustainable growth	**100 LPPPD** achieved through fittings approach and innovation **90 LPPPD** in water stressed areas To be determined in seriously water stressed areas to enable sustainable growth	**90 LPPPD** achieved through fittings approach and further innovation **80 LPPPD** in water stressed areas To be determined in seriously water stressed areas to enable sustainable growth

Metric:

See page 13 for details

Core	Average internal water efficiency of completed homes in the last year	lpppd

Policy context

The Government's 2023 Environmental Improvement Plan committed to working with the Future Homes Hub to establish a water efficiency roadmap for new development.

A consultation on Part G of the building regulations is expected during 2025.

Progress so far

The sector has proposed the roadmap for water efficiency with reduction plans to 2035.

Opportunities

1. Mitigating the risk of development delay as pressures on water availability increase
2. Reducing customer bills as water costs increase
3. Increasing resilience to floods and droughts
4. Reducing connection charges by relieving the strain on water-infrastructure

Potential changes to come

- Higher performance requirements for fittings to meet water reduction aims.
- New regulatory framework for dual-supply pipework for reuse and recycling.
- Guidance and framework to enable sustainable growth where there is a demand-supply imbalance.

Challenges

Ensuring change works for customers.

Creating a single national framework of standards and defining the shared responsibilities between water companies and developers.

Sector-wide collaboration

Following publication of the consultation on Part G, the sector will establish implementation groups to ensure the targets can be met.

In addition, work is ongoing with water companies to reduce consumption and incentivise developers through the enabling water smart communities project.

5. Nature recovery

See the **Biodiversity Unit Finder**

Roadmap 2024 — 2027 — 2029

2024	2027	2029
Biodiversity net gain becomes mandatory Homes for Nature initiative launched	BNG implemented and achieving 10% gains Homes for Nature measures installed	Homes for Nature impact review. Implement further measures where needed BNG policy review

Metric:

See page 13 for details

Core	Average biodiversity net gain	%
Extended	Total biodiversity units gained	#
Extended	Number of nature interventions - as described by FHH nature measures	#

Policy context

Mandatory 10% improvement in biodiversity introduced in 2024.

Progress so far

In addition to the introduction of 10% biodiversity net gain, the sector has established the Homes for Nature voluntary scheme that provides on site nature measures, including swift boxes and hedgehog highways.

Opportunities

1. Making developments attractive for residents and enhancing the local area
2. Improving health and wellbeing for residents
3. Contributing to national nature restoration and achieving multiple benefits simultaneously
4. Helping to overcome nutrient neutrality as a constraint on building

Key changes to come

Collaboration on measures and standards to incorporate the benefits of green and blue infrastructure, offset polices and long term stewardship.

Challenges

BNG is widely supported, but residual risks to its effective delivery remain; these include skills and resources, limited integration with environmental policies, a functioning offsite market and clear guidance in support of the policy. These challenges are not insurmountable, but require a partnership approach between government and industry to solve them.

Sector-wide collaboration

The BNG implementation board has been established to resolve these challenges through collaboration between developers, the planning community, consultants, and local and national government. This board coordinates the identification of challenges and their resolution to enable positive outcomes for biodiversity.

6. Sustainable places

The challenge and opportunities

A central sustainability challenge for 2025 is how we create new neighbourhoods and new towns at the pace and scale required, whilst contributing to improved outcomes for climate, nature and water.

Key questions to answer include how do we:

- Achieve clarity and certainty of the requirements.
- Integrate simultaneous requirements for green and blue infrastructure such as Biodiversity Net Gain, Sustainable Urban Drainage, Public Open Space and street trees.
- Fast track planning permission for well-designed proposals.
- Achieve a functioning market for multi-benefit offsets for example biodiversity units and nutrient credits.
- Develop a consistent national framework for the long-term stewardship of natural assets.

There are several opportunities in 2025 that, if joined up, could create the conditions for building sustainable places at scale, including: the Housing Strategy, Government's revision of the National Design Guide and National Model Design Code, Government's consultation on management companies, the revision to Building for a Healthy Life, National Planning Policy Framework consultation, the Planning and Infrastructure Bill and the New Towns TaskForce report.

The Hub is organising a series of site visits to collate what works and the sticking points to help answer these questions.

7. Metrics

Homebuilders, financial organisations and influential stakeholders, including the NextGeneration Initiative and Homes England, have developed a single set of sustainability metrics. This will enable consistent and robust measurement across companies and the sector. The next phase of work is to finalise and publish measurement methods for core metrics in 2025 and extended metrics in 2026, with a lead in period for reporting.

Core metrics	A smaller core set of metrics for developers of any size
Extended metrics	Larger homebuilders (over 1000 homes per annum) that are currently reporting sustainability metrics can also report the extended metrics.

	Topics	Metric	Unit
Homes that are	ZERO CARBON IN USE	**Average annual operational carbon intensity of completed homes**	**$kgCO_2e/m^2/year$**
		Average Energy Use Intensity design of completed homes	$kWh/m^2/year$
		Average SAP rating of completed homes	#
		Average kWp per completed area	$kWp/100m^2$
		Completed homes where company has means in place to compare predicted and actual energy consumption	%
		Completed homes which have been supplied by non-fossil fuel sources	%
	WATER EFFICIENT	**Average internal water efficiency of completed homes in past year**	**lpppd**
Places that are	WELL DESIGNED, CONNECTED AND ACCESSIBLE	Completed homes built within 800m of a public transport node, accessible through active travel modes	%
		Completed homes with key amenities located within 1000m of the home via safe pedestrian routes	%
		Company has a publicly available placemaking policy and/or strategy that helps to integrate sustainable community considerations into the design and planning stages of development	Yes / No
	NATURE POSITIVE	**Average project biodiversity net gain**	**%**
		Total biodiversity units gained	#
		Number of nature interventions - nature interventions as described by Future Homes Hub nature measures	#
	CLIMATE AND WATER RESILIENT	Company has a publicly available climate change adaptation policy and/or strategy that helps to ensure developments are designed to be resilient to the risks of a changing climate – such as water scarcity, extreme heat and flood risk	Yes / No
Production and construction that is	LOW EMBODIED CARBON	**Total emissions (Scope 1 & 2)**	**tCO_2e**
		Total corporate energy use (Scope 1 and 2)	MWh
		Upfront embodied emissions (A1-A5, homes only)	$kgCO_2e/m^2$
		Whole life embodied emissions (A1-C4, development wide)	$kgCO_2e/m^2$
		Whole life embodied emissions (A1-C4, homes only)	$kgCO_2e/m^2$
		Company has a publicly available net zero carbon target verified by SBTi	Yes/No
	RESOURCE AND WATER EFFICIENT	**Normalised waste generation for the latest reporting period**	**$tonnes/100m^2$**
		Consumption of metered mains water on sites and site offices	$m^3/100m^2$
		Proportion of construction waste diverted from landfill	%
	RESPONSIBLE	Company has a publicly available sustainable procurement policy and/or strategy, covering ESG (Environment, Social and Governance)	Yes/No

8. The Sector Roadmap

Delivery of low carbon homes and sustainable places at scale requires partnership between industry and Government The Roadmap provides a framework to enable the new homes sector to collaborate with wider industry, signposting change and defining the enabling activities to smooth the path of transformation.

Regulation, where required, will support this change, but industry, collaborating through the Future Homes Hub, can determine the long term pathway and implement the change required.

Legend: Outcomes | Industry-led | Government-led

	Topics		2024 and 2025	2026-2030	2031-2035	Beyond 2035
Homes that are	ZERO CARBON IN USE	Outcomes	• Reduced carbon emissions by 31% • Charging points for electric vehicles	• Zero-carbon ready homes (75% reduction in emissions)	• Homes zero carbon in operation	
		Enablers	• Publish 2025FHS and HEM	• Potential future regulation to reduce peak loads, address energy measurement and performance and to align local requirements with national policy	• Grid fully decarbonised	
			• Embedding and improving the Part L 2021 regulation			
			• Delivering solutions through the FHS implementation board			
	HEALTHY SAFE AND COMFORTABLE		• Consultation on parts K and M • Regulation on overheating and ventilation	• Future approach to levels for overheating, air quality, sound, space and accessibility, safety and daylighting		
	WATER EFFICIENT	Outcomes		• 105 lpppd & 100 lpppd in water stressed areas	• 100 lpppd & 90 lpppd in water stressed areas	• 90lpppd & 80 lpppd in water stressed areas
		Enablers	• Consultation on Part G			
			• Water sector and new homes sector proposals for water-smart communities	• Deliver recommendations for water-smart communities		
			• Establish implementation board to support regulatory requirements		• Scale up water re-use and recycling	
Places that are	WELL DESIGNED, CONNECTED AND ACCESSIBLE	Outcomes	• 10% biodiversity net gain	• Places that are low carbon, nature rich, resilient and well designed		
		Enablers	• New towns commission established • Updates to the National Design Guide and National Model Design Code	• Collaborate on measures and standards to deliver sustainable and resilient places at scale, including designing for mulitple benefits, considering long term stewardship and nature and water offset policies.		
	NATURE POSITIVE	Enablers	• BNG implementation board			
			• Industry-led nature positive measures			
	CLIMATE AND WATER RESILIENT		• Mandatory SuDs consultation			
Production and construction that is	LOW EMBODIED CARBON	Outcomes		• 25% reduction in embodied carbon	• 55% reduction in embodied carbon	• 75% reduction in embodied carbon
		Enablers	• Consultation on whole life carbon			
			• Delivering solutions through the proposed embodied carbon implementation board			
			• Mainstream measurement of embodied carbon			
			• Collaboration with materials suppliers to define procurement roadmap of low carbon materials • Design rationalisation to remove carbon-intensive products			
				• Phase out of fossil fuel generators on site	• Phase out of direct purchase of fossil fuels onsite • Head office sites and cars off fossil fuels	• Phaseout of all fossil fuel on site and head office
	RESOURCE AND WATER EFFICIENT			• Approach to reducing waste on site • Approach to managing water in construction		
	RESPONSIBLE			• Approach to improving site air quality		

Future Homes Hub

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