

Delivering a Positive Future

Clarion Housing Group's
Sustainable Development Roadmap to 2025



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Building Sustainable Communities

This is Clarion's first Sustainable Development Roadmap, which sets out our goals and ambitions up until 2025.

It marks a significant moment, a step change in the way that we build our new homes and communities. This roadmap builds on Clarion Housing Group's mission - to provide good quality, affordable homes and neighbourhoods to people failed by the market.

The approach has been informed by industry expertise both internal and external to the business and peer reviewed by industry experts. We have also consulted with our internal and external stakeholders to understand what is important to them in the field of sustainability.

To remain up to date, we will review this roadmap annually against our performance, emerging regulation and industry trends.

Introduction

I am proud to introduce Clarion's first Sustainable Development Roadmap; our vision of sustainability for our new homes up to 2025.

Sustainability is a passion of mine. I recognise the damage the construction industry can do to the natural environment, but also that it can be an incredible force for good. So in Clarion we will be embedding sustainability into everything we do. From the design and construction of our new homes, through the products we specify, to the way we communicate with our customers. If it is unsustainable, it's out.

With the impacts of climate change undeniably evident across the world, and these impacts worsening at an ever increasing rate, we know the time to act is now.

This roadmap sets out our ambitious route to net zero carbon compatibility on our pipeline of new developments. Delivering all new homes to net zero carbon in operation will not only help the planet, but also those living in our new homes by dramatically cutting their energy bills.

Carbon will not be our only focus, in fact we will focus on five pillars of sustainability to make sure all material issues are covered. They are:

Social value building inclusive communities and delivering economic growth through jobs and apprenticeships.

Healthy places putting the health and wellbeing of our residents first, creating healthy indoor and outdoor environments for all to enjoy.

Adaptable and resilient delivering safe and secure homes that are resilient to the changing environment and the evolving needs of people.

Planet friendly creating positive impacts to the natural world, increasing biodiversity and minimising the impacts of the materials we use.

Energy and carbon rapidly moving to deliver homes that are net zero carbon in operation and significantly reduce our embodied carbon footprint.

This all encompassing approach will deliver the step change needed in our home building activities; creating a happier, healthier and more sustainable environment for all who choose to live in a new Clarion home.

Richard Cook
Group Director of Development



Our aspirations

As Clarion is the country's largest Housing Association, we recognise our position as a leader in the industry. We must do the right thing for both people and the planet. We will make sustainability the driving factor in everything we do.

With the impacts of climate change becoming more apparent as each year passes, we must act with pace to deliver a greener future and protect the world for future generations. Our five year plan will set out ambitious goals to deliver net zero carbon homes in healthy and resilient communities.

While we are initially looking at aspirations and targets to 2025, our thinking remains long term to support the delivery of national 2050 targets and our long term development strategy.

The Environment

Stopping irreversible damage to the natural environment is of primary focus to Clarion. We have all seen the destruction of natural habitat on TV through human activities and climate change related natural disasters; we can be part of the solution.

We will limit our impact on the environment by delivering net zero carbon compatible homes and biodiversity net gain linked to robust sustainable procurement practices.

We commit to adopting a whole life approach to the development and maintenance of new homes, using solutions to reduce the impact we have on natural resources, lower our energy use and operational wastage.

Placemaking

We don't just build houses, we create places people call home. This goes further than the buildings, we build communities and places for people to thrive in.

Our placemaking strategies will take into account the needs of the local community. We will focus on creating healthy green environments that provide easy access for all, while trying to break the reliance on the private car through sustainable transport initiatives and walkable communities.

People

Our purpose is creating better lives for people, particularly those less fortunate. Therefore we are committed to working with organisations with the highest standards of ethical and responsible employment across our supply chain. This will include diversity and inclusion policies, fair pay and job creation. We will create work opportunities specifically aimed at those who are often left behind, focusing on investing in the next generation through work placements and apprenticeships.

Our designs will be also be people focused, driving the costs of living down while providing a home that supports their health and wellbeing.

Leadership

We will take a leadership position in the industry through actions not just words.



Long-term thinking

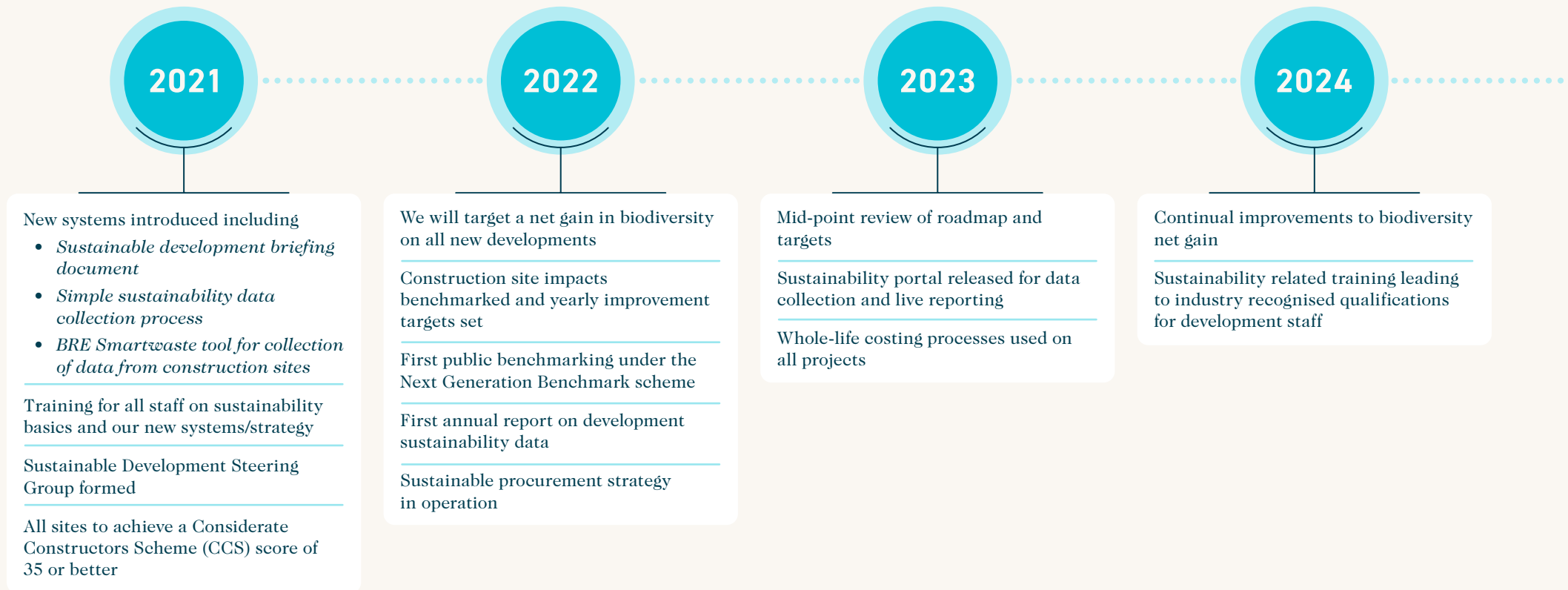
As a landlord we have a long term interest in the buildings we create. Our new homes will be designed with maintenance and running costs in mind. Where they are not built to net zero carbon standards, there will be a clear plan on how they can be retrofitted to get to net zero carbon in the future.

We will invest in research and innovation. We will utilise our small sites as test beds for new technologies and processes, before rolling them out across our development portfolio. We will continue to work with government, academic and industry partners on research programmes to help provide solutions for the whole sector, building on the work we have already been part of for Innovate UK, UK Green Building Council, BEIS and MHCLG.

Our standards are built on industry best practice, influenced by the main industry sustainability schemes such as the Next Generation Benchmark, UN Sustainable Development Goals, BREEAM and Home Quality Mark, Passivhaus and the LETI climate emergency design guide.

The planet cannot wait so we must act now. The countdown has started.

Our roadmap to a sustainable future



2025

Updated roadmap to 2030 released

All new homes delivered net zero carbon compatible

All sites achieving a CCS score of 40 or better

Target zero waste to landfill

75 % of all materials responsibly sourced

Our aspirations will be delivered through a framework of five pillars. These are explained in more detail later in this document.

Our sustainable development aims

- To be recognised as an industry leader in innovation and sustainability
- To deliver net zero carbon compatible homes as soon as possible
- To create sustained economic growth in the communities we work in
- To enhance biodiversity, creating developments that positively impact the local environment
- To future proof our new homes against the effects of climate change
- To create safe, secure and healthy places to live



Social Value



Healthy Places



Adaptable and Resilient



Planet Friendly



Energy and Carbon

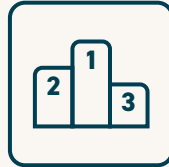
How we will meet our targets

Our aspirations and targets are meaningless if we cannot deliver them. So we have identified a series of actions and tools to ensure that our aspirations are realised and targets met. All of our tools, processes and procedures will come into use during 2021. These tools are:



Sustainable Development Framework and Brief

We will produce and implement a Sustainable Development Framework and briefing document to set out our requirements to Development Managers and consultants. This document will drive the Project Sustainability Plan on each of our developments.



Next Generation Benchmark

We will sign up to membership of the Next Generation Benchmarking scheme to compare our progress against other house builders.



Research and Trials

We will use our small sites to trial sustainable innovations before they are rolled out on larger projects. This will be linked to a robust evaluation and feedback process so we learn from what works and what needs further development.



Data Collection and Dashboard

We will develop a series of data collection tools to enable us to track performance on our projects and report progress. We will utilise BRE's industry leading Smartwaste tool to collect information from our construction sites, which will be combined with other information on Clarion systems to provide up-to-date reports on project and corporate level through a Data Dashboard.



Sustainability Training

We will upskill our staff by providing a series of sustainability related training courses. Starting with a Sustainability essentials course from UKGBC, then moving on to bespoke training targeted at the specialisms of our individual teams in the directorate. We will explore offering formal sustainability related qualifications for those of our colleagues interested.



Expert Panel

We will form a group of external industry sustainability specialists to help us maintain our standards and keep our targets at the cutting edge of the possible. They will peer review our strategic documents, provide updates on regulation and industry trends, and be a critical friend when needed.

How we manage sustainability

Sustainable Development Team

Setting sustainability standards for our new developments is the responsibility of a dedicated team within the Design, Technical and Innovation department. They are custodians of the documentation as well as subject matter experts within the business to support development teams in delivering sustainability on new developments and reaching our targets.

Sustainable Development Steering Group

We will form a steering group, Chaired by our Group Director of Development and made up of representative staff from across our development teams. The steering group will serve multiple functions. It will form part of the performance review and target setting process. It will facilitate the sharing of ideas, feedback project performance and gather information on new approaches.

Project Sustainability Champions

The Sustainable Development team will be supported at the project level by Project Sustainability Champions. They will be a dedicated person on the project team whose responsibility is to maintain and deliver the project sustainability plan.

Reporting & Benchmarking

Each project will be required to collect relevant project data for reporting via our data toolkit and dashboard. Project level reporting will be defined in our Sustainable Development Framework and Briefing document, with the following KPIs being used to generate both project and group level reporting:



*Considerate
Constructors Scheme
site score*



*Number of apprentices
taken on*



*Average area of private
outdoor space provided
per bedroom*



*Area of green amenity
space provided*



*Water efficiency
standards in litres per
person per day*



*Change in biodiversity
value using Defra
metrics*



*Average journey time
from new homes to key
amenities*



*Waste produced during
construction*



*Energy used during
construction*



*Water used during
construction*



*Transport to and from
site during construction*



*Construction waste
diverted from landfill %*



*% of responsibly sourced
materials (certified only)*



EPC ratings

CO₂

*Operational carbon
emissions (predicted) of
new homes*



*Embodied carbon in
new homes*

Our five pillars of sustainability

Our new developments will be designed and constructed using our five pillars of Sustainability. These pillars cover a holistic view of sustainability, capturing what is **important to Clarion, our residents and Planet Earth.**

The five pillars are:

- Social value
- Healthy places
- Adaptable and resilient
- Planet friendly
- Energy & Carbon

Social Value

Social value is integral to Clarion's purpose for being as a provider of affordable housing. Our developments will provide more than just a roof over people's heads. We will strive to generate real economic benefits for the surrounding community.

We will create new jobs during construction, and aim for lasting employment opportunities for all members of society. We will require our construction partners to be ethical and considerate, as well as keep our sites safe during construction.

Healthy Places

Health and wellbeing is now a vital part of sustainable development. Our homes and communities must provide healthy environments for those who live and work within them. We will look to create walkable communities, so amenities are nearby for those without a car. We will provide quality outdoor spaces to allow people to enjoy whether they are passing through or relaxing after a long day at work. And we will ensure the internal environments of our homes are quiet, stress free, with great daylighting and good air quality.

Adaptable and Resilient

The impacts of climate change are already apparent, with increased severe weather events, fires and floods. Even if we meet our Paris targets to keep global temperature rises below 2°C, these environmental changes will still be felt.

Therefore, we will design our new homes to mitigate against the impacts of climate change. We will also make our homes more resilient to reduce maintenance requirements, whilst also making them safe and secure places to live with peace of mind.

Alongside this we will have an ambitious programme of innovation trials, linked with evaluation and feedback process to keep us in a position of leadership in the industry.

Planet Friendly

We only have one Planet Earth, so we need to look after it. The loss of biodiversity is increasing, which must be addressed by improving the land we have available. Therefore, our developments will deliver net gain biodiversity, creating great places for both people and nature to thrive.

Our construction partners will be required to monitor and reduce the impact of activities on site, using BRE's Smartwaste tool. We will continuously benchmark the performance of our construction site, and push for year on year improvements.

We will develop a Sustainable Procurement strategy that focuses on the use of products from sustainable, ethical and responsible sources; so that we are comfortable that our new homes have not negatively impacted on the environment or society.

Energy and Carbon

With the impacts of climate change becoming more and more apparent, together with the targets that came out of the Paris agreement, we recognise the need to reduce carbon emissions significantly and at pace. We have set out an ambitious roadmap to deliver homes that are net zero carbon compatible within the next five years.




Operational carbon is only part of the picture, so we will be tackling embodied carbon by developing a robust calculation and reporting methodology to enable us to measure our year on year improvements.

We also recognise that there is an ongoing performance gap in new homes between the design intent and the in-use performance. To eliminate this problem and ensure our net zero carbon targets are delivered, we will create a robust approach of monitoring and post occupancy evaluation.

Pillar One

Social Value

Our social value goals are based on three main principles:

-  **Generating economic growth in the communities we work in**
-  **Having safe construction sites run by considerate and responsible contractors**
-  **Engaging with the community to understand their needs**

Generate sustainable economic growth for the communities we work in

We will integrate the targets from our charitable arm, Clarion Futures, for job creation, apprenticeships and training into our projects with a focus on local residents.

We will support the local economy by ensuring at least 10% of the contract spend is with local supply chain. In addition, our developments will provide new spaces for employers, creating more local long term job opportunities.

We will provide all homes with high-speed broadband enabling remote working, and support them accessing online services.

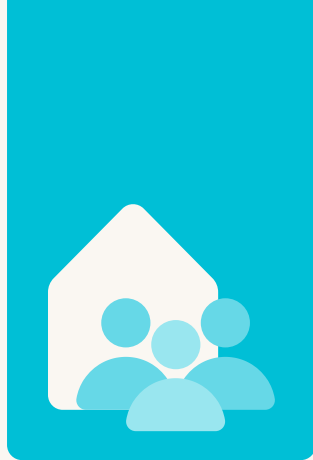
We will provide training on how best to maximise the efficiency of their new home to save residents money, as well as designing homes to have low running costs, eliminating fuel poverty.

Work with considerate and responsible contractors

We are an ethical organisation, so will expect our contractors, sub-contractors and consultants to do the same. Principally we will require all to pay their employees the Real Living Wage as defined by the Living Wage Foundation. We will also require all apprentices to be paid the adult minimum wage rather than the under 25 value. Same wage for the same job regardless of age.

By 2025 we will require all of our sites to achieve high scores of at least 40 under the Considerate Constructors Scheme.

Our contractors must also provide safe sites to work on and live near to. Therefore we will require them to operate to high standards of Health & Safety and set targets for significant reductions of AIIR (accident injury incident rates).



Actively support the local community in fulfilling their needs

We will require our supply chain partners to engage with local schools and colleges, promoting STEM careers and providing careers related support.

We will review the needs of the community and deliver relevant support to local community groups and initiatives.

Projects will also look to support and contribute to local charitable organisations and social enterprises.



Pillar Two

Healthy Places

Our social value goals are based on three main principles:

- ↑ Creating inclusive communities that are safe and secure
- ↑ Creating healthy, happy and stress-free environments, both inside and out
- ↑ Avoiding isolated developments, focussing on walkable communities to make access to amenities easy for all

Create inclusive, well-connected communities that make residents feel safe, secure and healthy

We will use the principles of the Building for a Healthy Life scheme, in addition to following the national design guide, to help produce a great environment to live in.

Adding to this, we will look to design spaces to be inclusive for all no matter what age or ability.

We will aim for all our developments to create walkable communities, so key amenities, such as food shops, transport hubs and places for social interaction, are within a 15 minutes walk from every home.

We will target secured by design certification on all of our developments to ensure everyone feels safe in their home.

Create happy places to live in with access to quality outside space

Access to the outdoors and green areas is important for people's good health. The coronavirus pandemic has highlighted the value of the outdoors even more.

We will therefore look to provide every home with some degree of private outdoor space, be it a garden, terrace or balcony.

Furthermore, all homes will have access to an area of quality green outdoor space. This will either be private gardens, communal gardens and parks, or green spaces near to the site such as a community park, forest or riverside with public access. This is part of our desire to create **15 minute** communities, where everything is within easy reach.



Provide healthy internal environments to high standards

We will provide good quality indoor environments through setting high standards for acoustic performance, indoor air quality, daylighting and thermal comfort.

We will introduce better acceptance testing of ventilation to ensure good performance and work to minimise the Volatile Organic Compounds (VOC) emissions from fitout materials.

We will require all habitable rooms to have good quality daylighting to limit the need for artificial lighting during the day. All new developments will go through a overheating risk assessment using dynamic computer modelling techniques.



Pillar Three

Adaptable and Resilient

Our social value goals are based on three main principles:

-  **Building to reduce the impacts of climate change to a minimum**
-  **Creating places that are designed and built with minimising maintenance and costs in mind**
-  **Keeping abreast of future trends, innovation and learning from past projects**

Deliver developments that are resilient to the impacts of climate change

All our projects will be risk assessed against the predicted local impacts of climate change. This will include flood risk, severe weather events, overheating and water stress.

In addition, taking into account recent events, we will assess our projects on impacts of lifestyle and society changes. This will include response to events such as pandemics and increases in working from home.

We will set a minimum water efficiency standard of 105 l/person per day, reducing to 90 l/person per day by 2025 or earlier where high water stress levels are shown in the area.

Create homes designed with resilience and long-term thinking in mind

Our homes will be designed with ease of maintenance in mind, whatever the tenure, with products selected on robustness over cost.

We will introduce whole life costing as part of the design and product selection process to ensure that ongoing costs are kept to a minimum for Clarion as a Landlord and private owners where home values allow.



Promote a forward-thinking and innovative approach that showcases Clarion's thought leadership and ambition

We will look to trial new products and innovative ways of working, with our small sites being the testbeds. The results will be published as case studies for our project teams to learn and integrate into future designs.

We will integrate formal feedback loops through post occupancy evaluations, and look to integrate Soft Landings principles in our processes.

We will review all new projects early in the design process to limit the impacts of possible regulatory and societal changes that could impact on design and operation. We will look to avoid the need for significant future retrofits and keep our homes at the leading edge of the industry.



Pillar Four

Planet Friendly

Our social value goals are based on three main principles:

-  **Creating places that are as good for wildlife as they are for people**
-  **Reduce the impact on the planet from our construction activities**
-  **Use materials and products that are ethically and responsibly sourced**

Promote local ecology and biodiversity

We will look to improve the biodiversity and ecological value of our sites, as measured by the Defra biodiversity tool.

We will target reaching net gains in biodiversity on projects as soon as possible, setting year on year improvements to 2025.

We will utilise the principles of the Building with Nature scheme on all developments, to help deliver environments that are usable by people, while still wildlife friendly.

As part of our biodiversity improvements, we will plant a new tree for every new household we build, also helping to offset their carbon emissions.

Promote Sustainable construction practices

We will introduce the BRE Smartwaste tool on all of our developments to measure and benchmark the impacts of our construction sites (CO₂ emissions, energy use, water use, transport to and from site and pollution). Once we have benchmarks set at the end of 2021, we will set year on year improvements to drive down the impacts of our construction activities.



Promote the use of materials that do no harm to the planet, societies and our future

Through the production of a sustainable procurement strategy, we will set targets for responsible sourcing of materials. This will use product certification such as FSC, ISO 14001, BES 6001 etc and we will encourage products to be selected on the basis of Environmental Product Declarations where possible.

We will require 100% chain of custody certification on timber products (i.e. FSC and PEFC), and will develop a black list of products/materials that are either harmful or come from unsustainable sources.

Our new developments will focus on efficient use of materials designing out waste from the start. Our construction activities will also reduce the amount of waste to landfill through increased recycling and reuse of materials.



Pillar Five

Energy and Carbon

Our social value goals are based on three main principles:

- **A roadmap to deliver net zero carbon compatible homes within five years**
- **Reduce the embodied carbon of our homes**
- **Reduce significantly the performance gap between designed performance and in use**

Deliver Net Zero Carbon compatible homes by 2025

We have set out a route to all new homes being net zero carbon compatible by 2025. This roadmap is shown on the next page, along with our definitions.

We will maintain a minimum Energy Performance (EPC) of Band B, linked to our sustainable finance framework requirements.

Our carbon strategy will be linked with work our asset management and group sustainability teams are doing to reinforce decarbonisation at group level. Any homes not zero carbon will have a clear route set out for asset management to deliver zero carbon standards through future retrofit works.

Reduce the embodied carbon in the production of new homes

As we reduce the operational carbon of new homes, the embodied carbon will become the dominant set of emissions. Therefore, we cannot forget this area, even though it will not be our initial prime focus.

We will establish a embodied carbon/whole life carbon calculation and reporting tool for projects to capture this information. This will be rolled out in London initially by the end of Q4 2021 with projects in the rest of the country being required to use it from 2022.



Ensure performance is delivered through energy monitoring and evaluation

Setting ambitious energy and carbon targets is pointless without a mechanism to prove that they are actually delivered. The performance gap between the design and in use is a known problem in construction, which we must look to eliminate.

To ensure that we are delivering homes that perform as expected, we will develop a standard approach to post construction energy monitoring alongside more detailed post occupancy evaluation.



Our roadmap to reduce carbon

By 2025 we will be delivering all new homes to at least a net zero carbon compatible standard. This means that any home not built to net zero carbon standards will be capable of become so in the future.

To start this journey we will be excluding fossil fuel heating from all new designs, making use of the rapid decarbonisation of the UK electricity grid.

We will follow the principles set out in the Government's Future Homes Standard, and set an incremental improvement each year from our minimum standard of 35% carbon reduction over building regulations from 2022.

Carbon Hierarchy

Our low carbon design principles

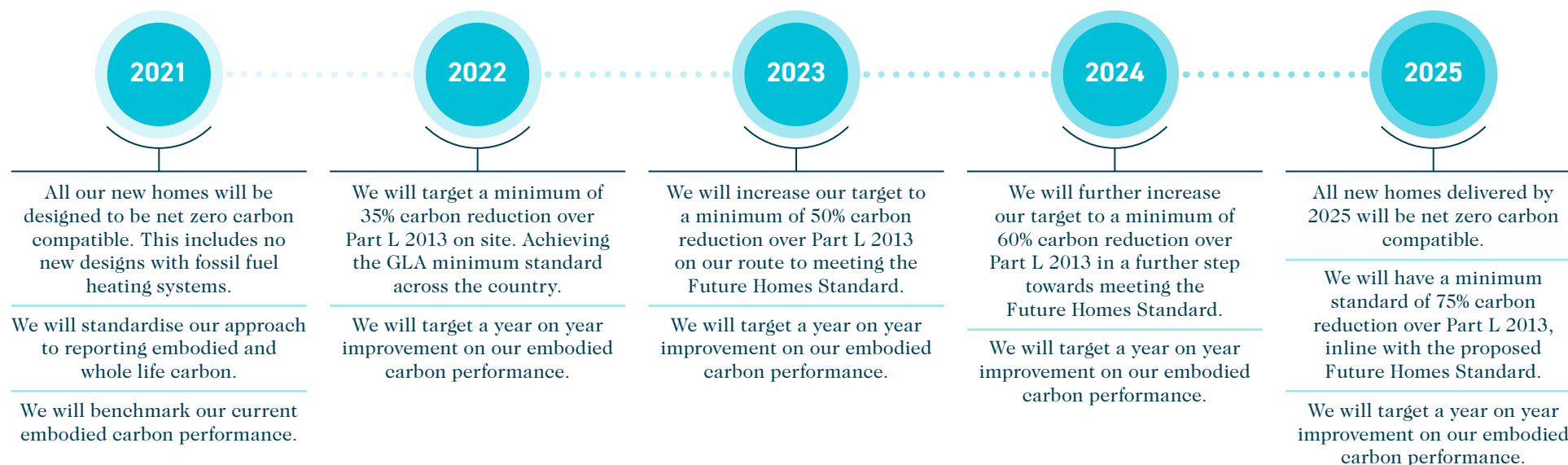
- 1 — Reduce energy demand on site
- 2 — Move to low carbon energy
- 3 — Generate clean electricity onsite (Solar PV)

How we will look at excess carbon emissions in the future

- 4 — Offset emissions on another Clarion new development
- 5 — Offset emissions on an existing Clarion asset



All projects delivered in each year will meet the standards listed in the timeline below:



Any queries regarding our Sustainable Development Roadmap should be directed to Clarion's Design, Technical and Innovation Team.

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Thank you for reading our

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