



Orbit to Zero

Our Net Zero Carbon Roadmap



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FOREWORD

Mark Hoyland,
Group Chief Executive



The recent report from the Intergovernmental Panel on Climate Change (IPCC) was a red flag moment for the world. Even with a significant drop in global carbon emissions in the next two decades, the IPCC predict that it is unlikely that we can limit global warming to 1.5°C, breaching the ambition of the 2015 Paris climate agreement and causing increasingly intense and extreme weather conditions for us all.

We need to take urgent action, with the IPCC stating we must cut global emissions in half compared to 2017 levels by 2030, and reach net zero carbon by 2050 if we are to stop temperatures rising further.

The UK government has committed to reducing greenhouse gas (GHG) emissions by 78% compared to 1990 by 2035, and to becoming net zero carbon by 2050. Contributing some 14% of the UK's total greenhouse gas emissions, housing is a key part of achieving these ambitious goals. As a landlord and developer of new homes, we must play our part.

We have a responsibility to reduce our emissions and to contribute to a sustainable future. But to do this, it is important that we reduce our environmental impact not just across our portfolio of homes and the homes we build, but also in our operations and supply chain.

The need for action has also been emphasised by our recent customer research where customers told us overwhelmingly that they wanted to see more action on climate change and that up to one in four have gone without heating to save money in the past 12 months. We need to deliver a decarbonisation programme that keeps energy affordability and experience at the heart of what we do.

We have therefore made a firm commitment to achieving net zero carbon in our own operations by 2030, and becoming net zero carbon in our customer homes and supply chain before 2050.

This Roadmap sets out how we will achieve this, and we will monitor progress and regularly revisit this plan to ensure we are on track to meet our net zero carbon commitments.

Mark Hoyland
Group Chief Executive

INTRODUCTION

Our vision is simple - we lead in building thriving communities. We believe everyone is entitled to a good quality home that they can afford, in a place where they are proud to live.

To achieve this, we are working to create a better society, building affordable homes and communities, and doing so in more socially responsible and sustainable ways. All of this will be delivered in full acknowledgement of the global environmental crisis, ensuring that Orbit reduces its impact across homes, services and offices.



Whilst it is important to acknowledge the competing and costly demands being placed on housing associations, such as of the Building Safety Bill, the Social Housing White Paper and the great need for new housing supply, it is also important that we make firm commitments to decarbonise.

To help us achieve this, we have established our environmental sustainability programme, Orbit Earth. Under this programme, we will actively enhance our environment, creating and improving places and spaces for communities to thrive. Our objectives are to achieve net zero carbon emissions, enhance our green spaces to improve their quality and biodiversity and transition to a circular economy where resources are sourced, produced, used and disposed of sustainably.

Orbit's Net Zero Carbon Commitment



**To become Net Zero Carbon
in our own operations by 2030
(Scope 1 + 2)**



**To become Net Zero Carbon
in our homes and supply chain
before 2050 (Scope 3)**

We will achieve this by pursuing an ambitious 1.5°C aligned science-based target, reducing our GHG emissions by 50% compared to 2018 by 2030, and then continuing to reduce whilst offsetting the residual each year.

SETTING OUR ROADMAP TO NET ZERO CARBON



“
**THE FOUNDATION
OF A ROBUST AND
SCIENTIFICALLY
BASED NET ZERO
CARBON STRATEGY
IS GOOD DATA**

David March,
Head of Environmental Sustainability



Establishing a base-line

In 2018 we calculated our total greenhouse gas footprint with the support of the Carbon Trust. This created our baseline and identified the greenhouse gas (GHG) emissions from our offices, construction sites, fleet and communal spaces (Scopes 1 and 2), and our customer housing and supply chain (Scope 3).

Since measuring our baseline, we have already seen a 21% reduction in our carbon footprint (Scope 1 and 2) between 2018 and 2021.



**21% REDUCTION
IN OUR CARBON
FOOTPRINT
SINCE 2018**

Modelling the future

Using the Science Based Target Initiative's (SBTi) tool to determine the reduction needed to align our Scope 1 and 2 carbon emissions with the 1.5°C maximum level of 'safe' global warming, we have modelled our future emissions to give us our 'business as usual' projection.

Our Carbon Forum was set up to tackle Orbit's carbon footprint. Members led a series of workshops involving representatives from across the organisation, that identified the actions that we will take to accelerate our transition to net zero carbon, looking at our operations and communal

spaces, our homes, and our supply chain and construction.

By combining all of these variables we have developed a Roadmap to reducing our GHG emissions by 50% by 2030 and then continuing to reduce whilst offsetting the residual each year.

This Roadmap will be regularly reviewed and updated, with progress on our commitments reported in our annual Environmental Social Governance (ESG) report.

Driving our 50% GHG emissions reduction to 2030 within our direct operations



Our Customers

We aim to work together with our customers to shape our services and involve them in the journey to net zero carbon.



In 2021 we spoke to 900 of our customers - both owner-occupiers and renters - to better understand their attitudes and priorities to reaching net zero carbon, and what matters to them in relation to their environment. Titled '**Working with Customers to Make Net Zero Carbon a Reality**', the report is one of the first in-depth pieces of work of this kind and provides insight that will help the housing sector consider how to shape decarbonisation plans.

Our research identified that energy affordability is a critical issue for our customers, with 1 in 4 reporting they have chosen to go without heat to save money in the past 12 months, and 54% of customers spending more than 10% of their take-home income on energy bills – over double the average UK spend of 3.9% according to Ofgem.

Concerns also centre around practical considerations, with 97% of customers concerned about having heating that is easy to use.

Through our project in Stratford-on-Avon where we are improving the thermal performance of 69 homes with a whole house retrofit approach as part of the Government's Social Housing Demonstrator Fund, customer concerns have further confirmed the importance for customers of understanding the impact of new or renewable technology on their energy bills and how technology, such as smart thermostats, can help them control and understand them.

Building upon this, we have undertaken further research exploring how the retrofit programme will impact our customers in situ, both during the retrofit works and post-works, with a particular focus on fuel poverty, thermal comfort, and mental and physical wellbeing.

Undertaken as part of a Master's placement with the University of Leeds, 'How will the retrofit programme to achieve net zero carbon impact customers?' set out to identify the benefits and challenges of a whole-house approach and consider the role of communication, awareness and technology in creating opportunities to minimise disruption to the customer and facilitate adaptation to retrofit changes.

The research found that 88% of customers are prepared to change their own behaviours to become more energy efficient, and highlights the importance of increasing customer participation ahead of and during the retrofit programme to ensure a positive outcome for both customers and the environment.

We understand the urgent need to help reduce fuel poverty for our customers. We will therefore strive to strike a balance between energy affordability and ease of controlling heating systems, with the necessity to reduce our carbon footprint.

We need to work with customers to promote awareness about retrofit work and to empower them to feel proficient in using new technology. In turn, this will encourage adoption of further measures to improve the energy efficiency of their home.

Our research also found that customers are aware of climate change issues and, in many cases, already taking action to reduce their impact, but they also want more information and want to contribute to future discussions about the decarbonisation agenda.

- 77% of customers want us to show how decarbonisation will benefit their health, their wellbeing, their communities and their finances
- 59% of customers surveyed want to see and feedback on Orbit's environmental plans

- 1/3 of customers want to be made aware of training or career opportunities in the environmental industries

However, there is a general lack of understanding about the concept of net zero carbon, with 17% of customers having never heard the term, and 40% of those who have, not being clear on what it means.

We must ensure that communication and engagement on the issue of climate change, energy affordability and retrofit work is clear and consistent and accessible to every customer, from start to finish, and involve and engage customers in decarbonisation plans.

Our commitment to customers

We will:

- Put affordability for our customers at the top of our agenda and work to protect our customers from fuel poverty
- Raise awareness on climate change, net zero carbon and what this means for our customers and their homes
- Provide energy saving tips and advice to support our customers' pre-existing desire to reduce their environmental impacts and save money
- Empower our customers to help shape our services and how we communicate with them
- Reduce disruption as much as possible by aligning retrofit and standard maintenance programmes
- Provide ongoing support to our customers in using new intuitive technologies in their homes
- Promote tariff swapping and green energy tariffs with our Switch and Save programme
- Lead by example, improving Orbit's own environmental performance through our Orbit Earth programme

Our Homes

We are committed to ensuring our homes are good quality, affordable and safe.



We invest in the maintenance and continuous improvement of our existing properties to improve the thermal comfort for our customers and the energy efficiency of our homes to meet the net-zero challenge.

As a builder and developer, all our new homes are built to EPC B or above. We are committed to embracing new technologies and modern methods of construction to reduce our impact on the environment, ensuring that all the new homes we create are fit for the future too.

Orbit's Design Standards are in place to create well designed and well built quality homes, which enable thriving communities. Homes will be safe and secure as well as inclusive and accessible. Environmentally friendly designs that consider sustainability is a key element in the design process.

Using different construction methods including MMC is one of the ways Orbit is ensuring new build homes are built to be energy efficient and warm. As well as the internal environments of Orbit's new build homes, the Design Standards also give due importance to the overall landscaping whilst considering the biodiversity and ecology.

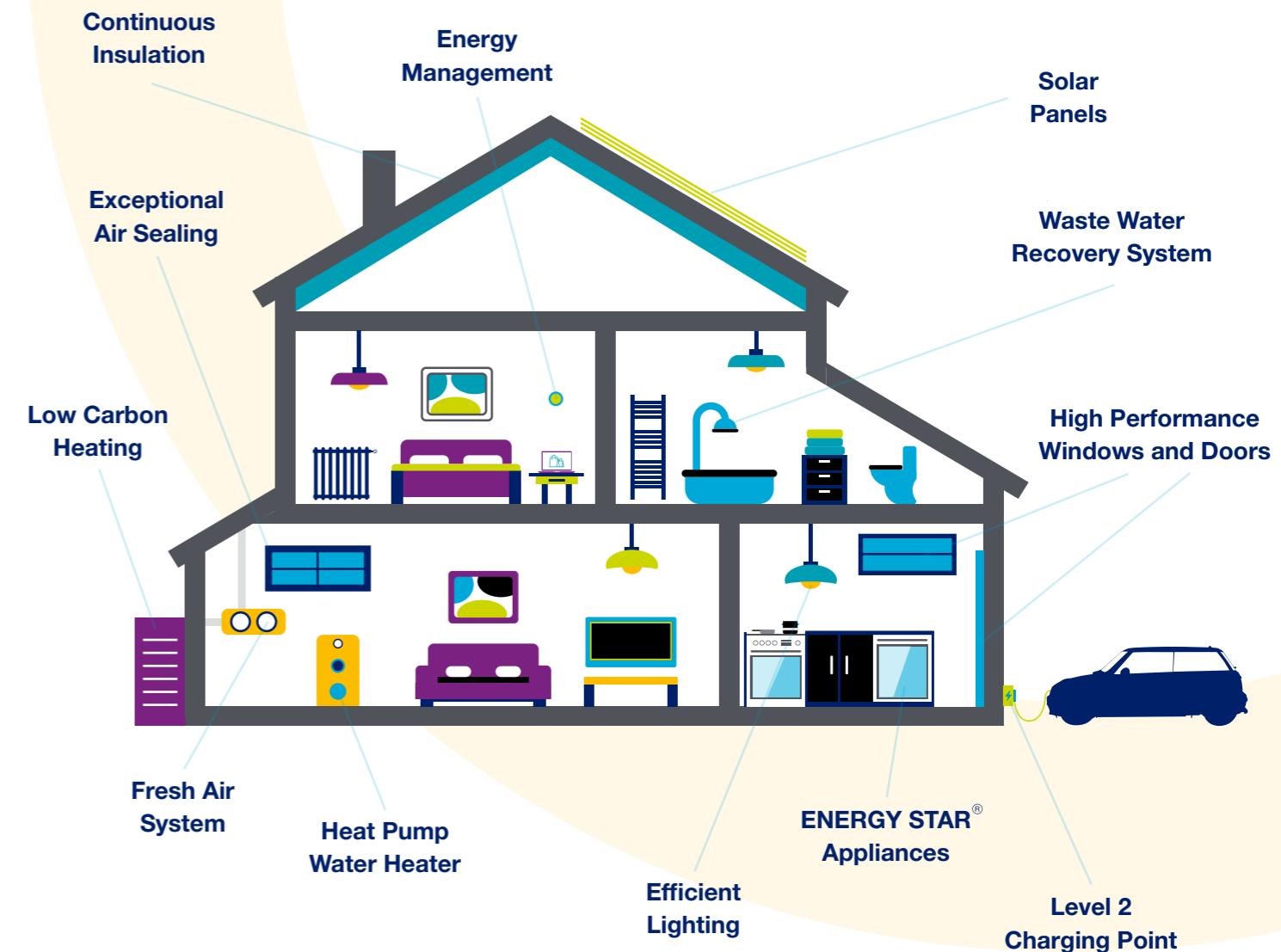
Our commitment for our new build homes

- We will support our customers by building homes which are easy to live in, which are affordable for our customers, and which enable them to live a low carbon lifestyle
- We will develop a strategy and customer advice for the roll-out of electric vehicle charging infrastructure across our new and existing properties
- We will reduce our carbon footprint during the construction process by progressively, sustainably and affordably enhancing energy efficiency measures
- We will future-proof the homes we build so that, wherever possible, they can be easily adapted to alternative heating technologies and provide the opportunity to substitute fossil fuel energy supply with sustainable electricity and/or self-generating power systems

Our commitment for our existing homes

- We will develop a 30-year investment plan, with key milestones in line with government targets, to ensure all our homes are net zero carbon by 2050. And we will do this as efficiently and as cost effectively as possible, based on improving the fabric of homes and by providing renewable heating and hot water sources
- We will take a responsible approach to managing our assets, ensuring assets are replaced as efficiently as possible, eliminating the need to write-off any components before they reach their end of life. This means we will replace components with 'net zero carbon compliant' versions if the life of the replaced product extends beyond 2050

Examples of what a Net Zero Carbon / Sustainable Home could include:



Social Housing Decarbonisation Fund Demonstrator - Stratford-on-Avon

Work has continued to improve the energy efficiency of our housing stock as we progress towards the UK's 2050 net-zero carbon target, and in conjunction with Stratford District Council, we have been awarded £1.45 million by the Government's Social Housing Decarbonisation Fund (SHDF) Demonstrator to install sustainable technologies in a number of our homes in Stratford. The SHDF Demonstrator is a UK-wide scheme which will upgrade around 2,000 social homes currently EPC rating D or below, using a whole house retrofit approach,

with energy efficiency products such as floor and wall insulation and low carbon heating. Alongside the SHDF fund, we are investing a further £2.2 million into the project to help us better understand the scale of the challenge ahead and explore the impact of selected sustainable technologies in a retrofit application. This project will generate knowledge and insight, which we can work into our ongoing home improvement programmes and share with the social and new build sectors.

Our Operations

We will lead by example, further reducing greenhouse gas emissions in our own operations.



Measures already taken include:

- The purchase of green electricity for our offices and communal spaces
- The implementation of agile working practices that have allowed us to consolidate office space and reduce travel
- The installation of EV charge points at several of our offices

As a result of these measures we have seen a 21% reduction in our carbon footprint since 2018.

We aim to reduce our carbon footprint further, with the goal of a 50% reduction from our 2018 base line by 2030. Residual emissions will be offset after this time whilst we continue efforts to reduce emissions further.

89% of our employees agree that Orbit is committed to reducing our impact on the environment

74% of our employees have found it easy to work from home, greatly supporting our commitment to our agile working policy moving forward

Our Commitments for Construction:

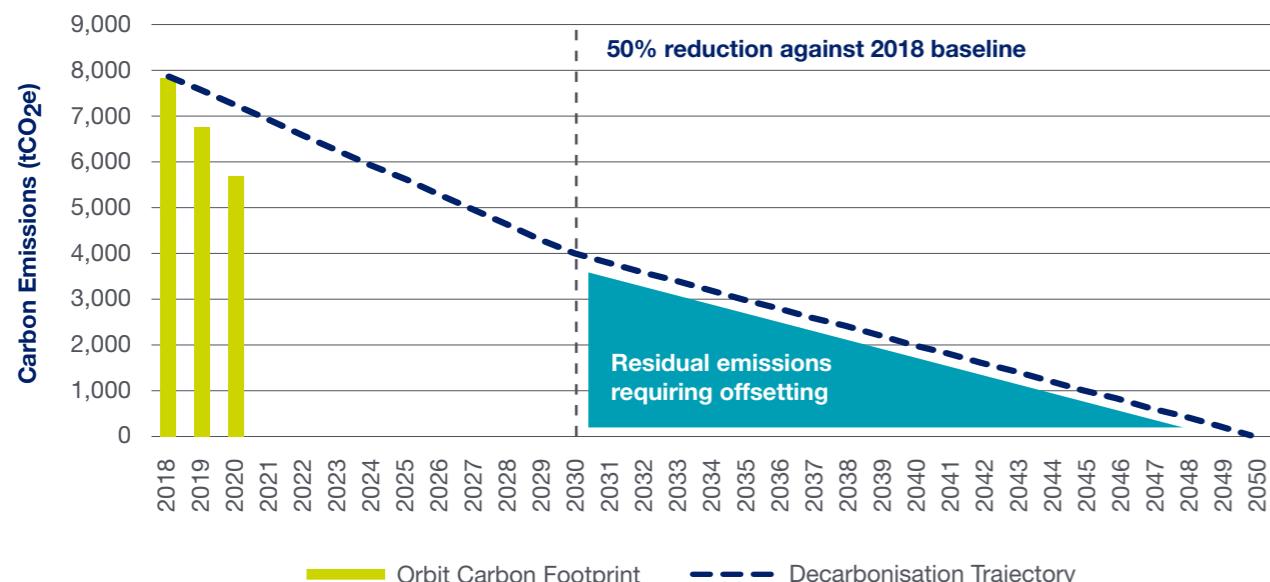
- We will set temperature guidance for show homes and void properties, ensuring we don't use unnecessary fuel
- We will power all construction sites by the National Grid wherever possible, reducing the use of diesel generators, and explore solar and other renewable energy sources on our construction sites
- We will incorporate enhanced energy efficiency measures into site welfare cabins
- We will pilot electrically-powered plant equipment, for example forklift trucks and excavators
- We will incorporate environmental requirements into our contractor specifications and provide environmental training to subcontractors



Our Commitments for our Operations:

- We will continue to develop and review our Agile Working policy
- We will explore options to help employees minimise travel requirements and further develop smart scheduling to reduce travel to customer properties
- We will encourage the use of sustainable transport alternatives and accelerate the roll-out of our EV charge point infrastructure

Decarbonisation Pathway for Direct Operations



Our Commitments for our Communal Spaces:

- We will roll out a Building Management System programme across our property portfolio. The programme has been targeted to improve the environmental performance of key buildings whilst also saving our customers money on their communal energy bills
- We will train and support area managers to take action on energy performance in our communal spaces
- We will deliver an energy efficiency programme, identifying and implementing opportunities to save energy and ultimately reduce the service charge for our customers

Our Supply Chain Partners

We believe there is real value in partnerships to create more innovative and high performing businesses, and to help better serve our customers and fulfil our vision, to lead in building thriving communities. But by working with our partners, we're implicitly supporting their business practices, so it is important to us that we work with like-minded partners who share our vision, values and commitment to the environment.



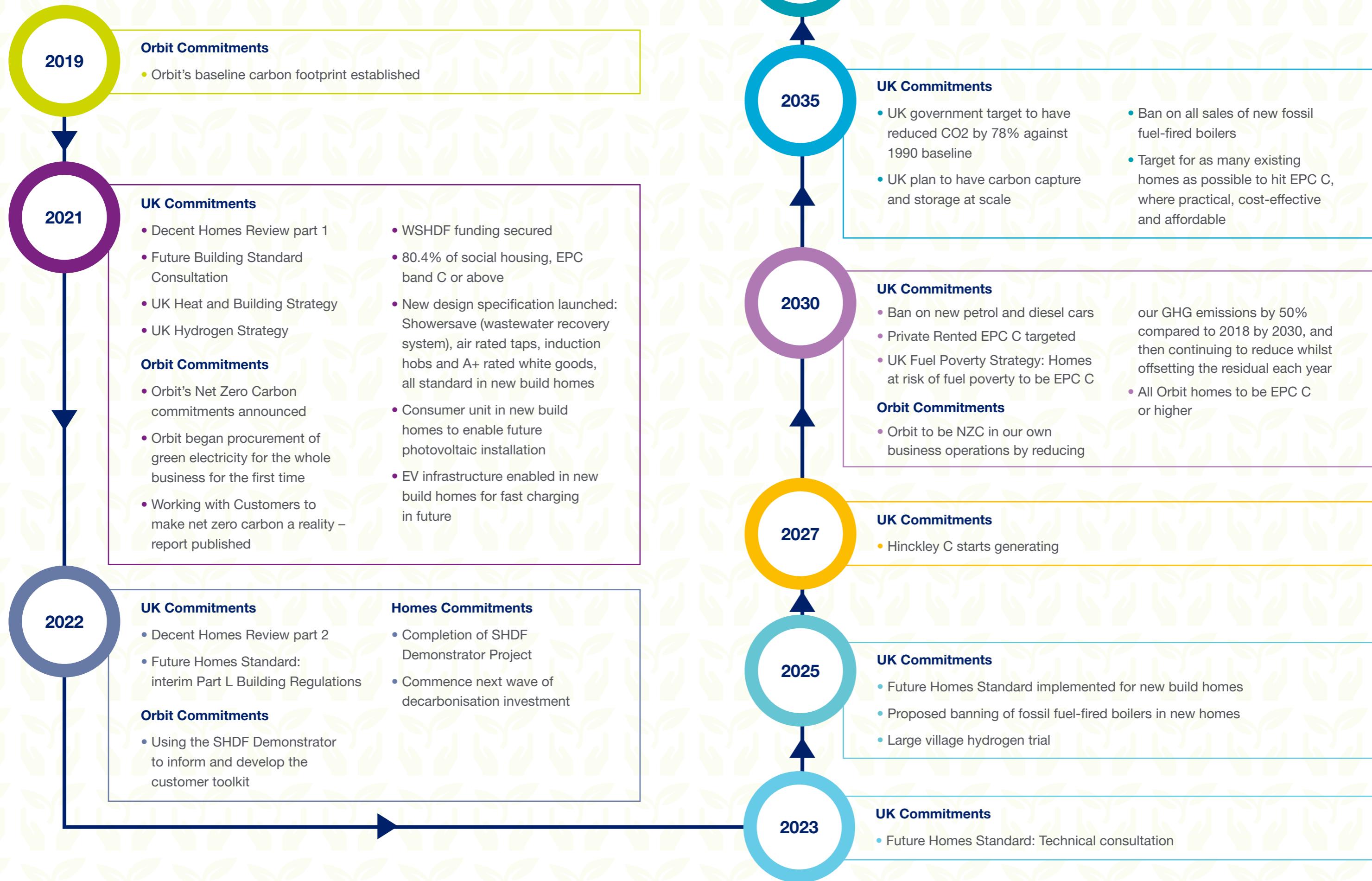
Our partner commitment

We strive to influence our sustainability impacts beyond our direct operations and will do this by:

- Conducting CO2 heat mapping to identify the most carbon-intensive categories of spend and suppliers, and collaborate with them to put carbon reduction plans in place
- Ensuring that all tenders assess the supplier's carbon credentials and move the cost-carbon balance in favour of low carbon solutions
- Incorporating decarbonisation and broader environmental requirements in contract and specification documents, such as measurement and reporting of carbon emissions, carbon targets to be achieved and environmental innovation and process
- Developing and providing training for our procurement and contract management teams to support them to engage with our suppliers on the net zero carbon journey
- Communicating our decarbonisation strategy with our partners through literature, workshops and dialogue, and request that our partners share their net zero carbon commitments and progress with us
- Focusing on continuous improvement in carbon performance



Orbit's Roadmap to Net Zero Carbon



Definitions

Biodiversity	The variety of plant or animal life in a particular area.	Photovoltaics (PV)	Photovoltaics, also known as solar panels, or solar PV. A technology installed on a roof or on a self-standing structure (large-scale versions are often called solar farms) which enables sunlight to be converted into electricity. Solar power is a renewable source of energy.
Carbon offsetting	The compensation for carbon emissions released into the atmosphere with activities that will absorb the equivalent about on carbon. An example of this would be tree planting.	Renewable resources	A natural resource or source of energy that can be repeatedly used and replaced naturally, such as water, wind, or solar power.
Climate change	Climate is the weather of a place over time. Climate change is a shift in those average conditions caused by the rise of greenhouse gases in the atmosphere particularly since the burning of fossil fuels in the industrial revolution.	Science based targets	Environmental targets adopted by businesses to reduce greenhouse gas emissions They are scientifically created and are in line with the level of decarbonisation required to keep global temperature increase below 2°C compared to pre-industrial temperatures.
Decarbonisation	Eliminating carbon from an activity, operation, or product.	Scope 1, 2 and 3 emissions	<p>GHG emissions are categorised into three groups, or “scopes”, by international reporting standards such as the GHG Protocol. Scope 1 and 2 cover our own operations, whilst Scope 3 covers our housing and supply chain.</p> <p>Scope 1 emissions: direct emissions from resources that Orbit directly controls (such as fuel used in company vehicles and natural gas in our buildings).</p> <p>Scope 2 emissions: indirect emissions from energy bought for use in Orbit’s operations (such as electricity in our offices).</p> <p>Scope 3 emissions: indirect emissions outside of the operational control of Orbit. This includes our customers’ energy use in their homes, purchased goods and services, business travel and employee commuting.</p>
Fossil fuel	A natural fuel such as coal or gas, formed from the remains of living organisms millions of years ago. Fossil fuels are non-renewable energy resources which are harmful to the environment because they release carbon emissions when they are burnt.	Social housing decarbonisation fund (SHDF)	A government fund that aims to upgrade a significant amount of the social housing stock – currently below Energy Performance Certificate (EPC) Band C – to increase energy efficiency, tackle fuel poverty and reduce carbon emissions.
Global warming	The increase in the earth’s temperature generally due to the greenhouse effect caused by increased levels of GHGs and other pollutants in the atmosphere.	Sustainability	A balance between economic, social, and environmental needs to ensure the needs of today do not compromise those of future generations.
Greenhouse gases (GHGs)	Gases that can absorb and emit solar radiation (sunlight). The most common GHG is carbon dioxide but there are seven in total which all have different levels of efficiency in absorbing heat.	Tonnes of carbon dioxide equivalent (tCO₂e)	The total greenhouse gases emitted, measured in tonnes of carbon dioxide. Other greenhouse gases, such as methane, are converted to CO ₂ according to their global warming impact to allow for a single figure to be presented.
Modern methods of construction (MMC)	A process that focuses on offsite construction which offers an alternative to traditional building techniques as most of the product is made in a factory. This type of construction can be quicker as well as producing less waste than traditional, on-site building methods.	Whole house retrofit	A complete approach to making homes more energy-efficient and limiting their impact on climate change, focusing on the fabric of the house first including the walls, roof, floors, windows and doors, to strategies for ventilation, heating efficiency and cooling in the summer months.
Net zero carbon (NZC)	A term which refers to the balance between the amount of carbon emissions released and the amount removed from the atmosphere. Net zero carbon is reached when the amount we add is no more than the amount absorbed or taken away.		

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