

OCTAVIA 



**Towards a
Sustainable Future**
Environmental Sustainability
Strategy 2022-2025

Foreword

I am delighted to be launching Octavia's sustainability strategy, which sets out our commitment to achieving a more sustainable future for ourselves, our children and future generations.

For over 150 years, Octavia has stayed true to our social purpose, providing good quality affordable homes, support and care for people in central and west London. Operating in some of the most expensive parts of the capital, we have built on this legacy through a unique offer that puts people and communities first.

Our founder, Octavia Hill, was a passionate campaigner on environmental issues. For her, the environment was the link between where we live and how we live, and she believed strongly in "the life-enhancing virtues of pure earth, clean air and blue sky". From pioneering the Green Belt to founding the National Trust, sustainability was at the heart of Octavia Hill's values and is embedded in our DNA.

This long-term commitment comes with significant responsibilities and we take great pride in the active role we play in building safe, sustainable and affordable homes without costing the earth.

Following consultation with residents and communities, partners and colleagues, Towards a Sustainable Future responds to their environmental concerns. From urgent sustainability issues such as climate change and carbon emissions, to more specific societal problems like air quality and fuel poverty, Towards a Sustainable Future sets out how Octavia will address these challenges by presenting a transparent roadmap to net zero with clear targets to accelerate positive change.

Building upon our legacy to deliver that change is an inspiring challenge, which will require collaboration and innovation. We look forward to working together with our partners, residents and communities, and to sharing our progress, as we ensure better lives for all, now and for generations to come.

Sandra Skeete
Chief Executive
Octavia



"We take great pride in the active role we play in building safe, sustainable and affordable homes."



Octavia Hill commemoration plaque

Our strategy

We will build on our legacy by creating sustainable affordable homes, with the aim to be net zero carbon in new homes by 2030 and existing homes by 2050.

We are committed to tackling inequality and fuel poverty, with the aim to reach minimum EPC 'C' for existing homes by 2030. We are also committed to helping tackle the ecological crisis facing our capital.

We will do this by providing sustainable homes and places; enabling green lifestyles; and putting sustainability at the heart of our decision-making.

Our sustainability strategy reflects our proud legacy, addressing future environmental challenges and supporting the delivery of our corporate strategy **Better Lives for All 2021-24**, by focusing on four key areas:

- Reducing energy use to deliver affordable warmth and prepare for net zero
- Providing green spaces that serve communities and promote biodiversity
- Using resources responsibly
- Adapting to the impacts of climate change





Background

The social housing sector is facing a monumental challenge. In response to the threat of climate change, UK Government has established legislation to reach net zero carbon by 2050. For Octavia, net zero carbon means near elimination of emissions from our carbon footprint, with any final remaining emissions being offset to achieve a net zero balance.

We must also address fuel poverty in our communities by making homes warmer. The twin challenges of net zero carbon and fuel poverty means Octavia must continue retrofitting homes to make them warmer and low energy. The volume, type, age and efficiency of Octavia's housing stock means this is a big challenge. We have started on this journey already and will continue to build on our experience with this new strategy.

We are also facing an ecological crisis. There are stresses on natural resources, pollution is harming our planet and communities, we are seeing biodiversity loss in London, and the production of waste is impacting our ecosystems.

Octavia has responded to the climate and ecological crisis by putting this at the heart of our corporate strategy. We have committed to 'Build our legacy' by creating sustainable affordable homes with the aim to be net-zero carbon in existing homes by 2050. We are committed to tackling inequality in our



communities and providing affordable warmth to our residents. As of March 31 2021, 69% of our homes were rated EPC C or above.

Octavia has a proud history of pioneering work in the sustainability sector. We have delivered a new Passivhaus development, a Passivhaus retrofit project, and we have started delivering retrofit at scale to over 200 Victorian street properties.

Octavia holds the Sustainable Homes Index for Tomorrow (SHIFT) Gold accreditation for our commitment to environmental sustainability. In 2021, we achieved SHIFT Gold status for the fourth year in a row and signed up as an early adopter of the Sustainability Reporting Standard for Social Housing (SRS). The SRS identifies the key Environmental, Social and Governance (ESG) criteria that Octavia will need to report to investors.

Where are we now?

Driven by our people-centred approach, resident engagement is at the heart of everything we do.

We have spent time engaging with residents and baselining our environmental performance. This has established our current position and identified the most significant issues to tackle in our new strategy.

We will continue to consult with residents and communities, and report on our progress as we deliver against our strategic aims.

To develop our strategy, we carried out a materiality assessment. This assessment baselined our environmental performance, measuring all activities which have an environmental impact to prioritise the importance of those impacts.

This has helped us establish our current position and to identify, rank and focus on 13 areas which our new sustainability strategy will target, including:

- Carbon Dioxide (CO₂) emissions from energy use. Our annual operational emissions are 12,929 tonnes/CO₂/year. 11,925 of which are from existing homes
- Our development programme adds 5,600 tonnes of CO₂ to our carbon footprint each year. These embodied carbon emissions typically come from construction activities
- We are emitting 6.2 tonnes of Nitrogen Oxides (NOx) into our communities from gas boilers and maintenance vehicles
- Octavia's construction waste is 82,000 tonnes a year (9,000 tonnes / 11% of which is sent to landfill or incinerated)
- Octavia's water use from all activities is 613 million litres/year, which is equivalent to 240 Olympic size swimming pools
- 97% of our land is not protected for biodiversity

“It was really great to be involved in the development of Octavia’s environmental sustainability strategy. In understanding the views and needs of residents, and then focusing on specific, measurable goals to achieve net zero, Octavia has demonstrated its commitment to building on its legacy.”

Greta Kendall, Octavia resident and Your Voice member



Octavia's carbon footprint

CO₂ is the primary greenhouse gas leading to global climate change. Octavia's CO₂ emissions come from several sources across our business activities.

Almost **61%** of our carbon emissions come from energy use in our existing homes, with a further **28%** from embodied carbon in new homes.

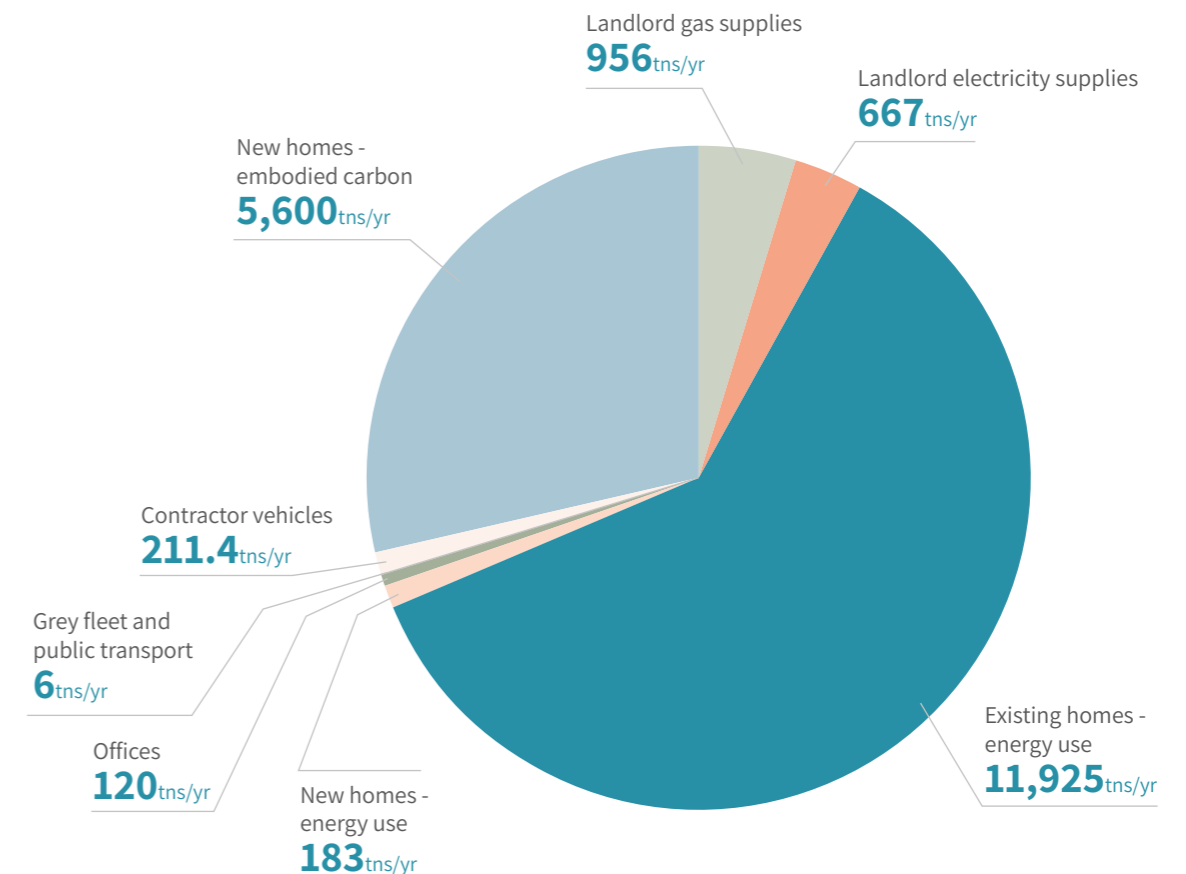


Figure 1: Octavia's 2021 carbon footprint. We measure 'whole life carbon' emissions which include both embodied emissions (from constructing homes) and operational emissions (heating and powering homes).

We report on our environmental performance and carbon footprint through our annual Environmental, Social & Governance (ESG) report, SHIFT sustainability audit and the government's Streamlined Energy Carbon Reporting (SECR) scheme.

“We too readily sit down, under imperfect conditions instead of setting ourselves to think over what may or may not be done to alter them.”

Octavia Hill

Where do we want to be?

Having identified, ranked and prioritised our top 13 environmental impacts, we have set out targets for the next four years to address and improve these impacts.

Net zero and affordable warmth

Operational carbon emissions from existing homes:

All homes to be EPC D or above by 2025. All homes to be EPC C or above by 2030 (where practicable).

Embodied carbon emissions from developing 100 new homes a year:

Reduce embodied emissions in new homes by 10% by 2025.

Landlord's electricity and gas use (heat networks):

10% reduction in landlord electricity consumption by 2025.

Operational carbon emissions in new homes:

Build a low carbon development and learn lessons in preparation for 2030 net zero target.

Enabling low carbon lifestyles:

Provide affordable warmth advice to all residents through our website, newsletters and local events.

Deliver Green Doctor consultations to 5% of residents.

Map resident demand and install electric charge points on at least ten more Octavia car parks.

Green spaces and biodiversity

Land protected for biodiversity:

Double the amount of land protected from biodiversity from 3 to 6% by 2025.

At least five resident-led biodiversity improvement projects on Octavia green spaces delivered by 2025.

Responsible resource use

Air quality (NOx):

Begin the transition from gas boilers by piloting renewable energy heat pumps on a new scheme by 2025.

Air pollution, vehicle NOx emissions (contractor vehicles):

Work with contractors to support their move towards electric cars. Our target is to reduce contractor vehicle's NOx by 10% by 2025.

Virgin materials usage (new build):

Start collecting data by 2023 on Octavia schemes. Once data is available, set a waste reduction target by 2023.

Waste (new build construction):

Measure Octavia's construction waste by 2022. Once data is available, set a waste reduction target by 2023.

Water consumption (Existing homes):

Reduce household water consumption to 140 litres per day per person (5% reduction from existing).

Climate change adaptation

Flood risk:

Develop a flood risk mitigation strategy to protect homes and residents.

Overheating:

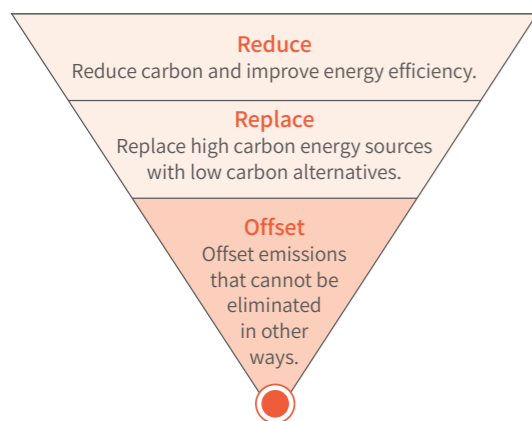
Develop Overheating Action Plan by 2025.



How will we get there?

Our approach to net zero carbon

Carbon reduction hierarchy



Net zero carbon means the near elimination of emissions from Octavia’s carbon footprint, with any final remaining emissions being ‘offset’ to achieve a net zero balance.

Our long-term strategic approach to reaching net zero carbon is based on the energy hierarchy. We will prioritise energy efficiency to reduce demand, and then transition from fossil fuels to using low carbon energy. This approach balances the need to reduce emissions whilst ensuring homes are affordable for residents to heat and power. Carbon offsetting, as a last resort, may be required to eliminate final emissions to reach net zero carbon.

Our sustainability roadmap

Our Environment Sustainability strategy covers the next four years, but has been developed with a long-term roadmap and targets in mind:

- All homes to be EPC D or above
- Reduce embodied emissions in new homes by 10%
- 10% reduction in landlord electricity consumption
- Build one low carbon development
- Sustainability advice and engagement - 100% passive/5% active
- EV charging available at ten sites
- 6% of land protected for biodiversity
- Five resident-led biodiversity improvement projects

- Zero NOx emissions pilot scheme using renewable energy heat pumps
- 10% reduction in NOx emissions from contractor vehicles
- Strategy for responsible sourcing of construction materials
- New home construction building waste reduction target
- Water consumption reduced to 140 lppd

- Flood risk action plan in place
- Overheating Action Plan in place

2025

- All homes EPC C or above (where practicable)
- Reduce embodied carbon emissions by 30%
- 50% reduction in landlord electricity consumption
- All new Octavia developments to be net zero carbon from 2030

- Ambition to stop installing gas boilers in existing homes from 2030
- 100% reduction in NOx emissions from contractor vehicles
- Zero Avoidable Waste (ZAW)
- Water consumption reduced to 130 lppd

2030

- All homes net zero carbon
- 19% of land protected for biodiversity

2040-2050

Energy efficiency

Low carbon heat & power

Carbon offset

Our strategy and our corresponding delivery plan is fully integrated into Octavia’s business operations, focusing on four key areas:

1 Net zero and affordable warmth

1.1 Retrofit

The Government’s Fuel Poverty Strategy sets an ambition for all fuel poor homes to be EPC D by 2025 and EPC C by 2030. Octavia aims to meet these targets for all properties in our stock, where practicable. We will prepare for deep retrofit by collecting data on our stock; building a retrofit delivery team; upskilling our staff and contractors; and monitoring and trialling low carbon heating technology. We will engage with residents to ensure they are at the heart of the retrofit journey. We have worked with specialist consultants to establish metrics for success in reducing energy demand in existing homes towards net zero carbon. These metrics are based on energy performance targets (kWh/m2/annum) which will set the strategic direction for fabric first retrofit, with EPC ratings as interim targets.

1.2 Low carbon heat

From 2030 onwards we aspire to stop installing new gas boilers in our homes and transition to low carbon heating technology. We realise this target is dependent on the continuous evolution of the low carbon heating sector which we will monitor closely. Our priority is the provision of affordable and reliable heat for residents; we will only transition from gas heating when we are assured that a suitable low carbon alternative is available.

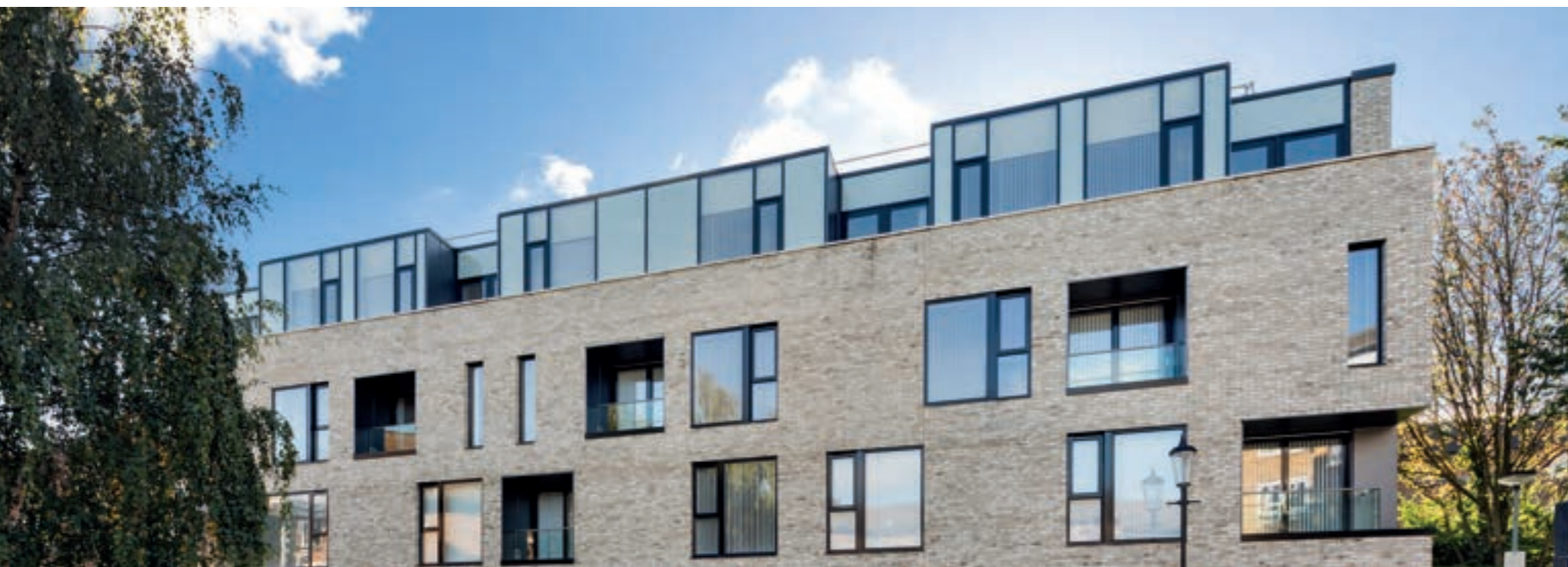
Octavia currently manages 24 sites with a communal heat network. We are committed to modernising the management of these sites using technology and data to unlock their low carbon and low cost potential. For example, we have pioneered a ‘Heat Manager’ service which captures data and uses smart processes to target savings and provide better outcomes for residents. When gas boilers require replacement on these sites, we will aim to install low carbon alternatives.

1.3 New homes

Our homes will be built to modern specifications that support sustainability. For Octavia-led schemes, our ambition is to build all new homes to a net zero carbon standard from 2030. The Government’s ‘Future Homes Standard’ will promote a transition away from gas heating and hot water from 2025. Octavia will prepare for this transition by piloting a development with renewable energy heat pumps. We are setting targets to reduce the embodied carbon from constructing new homes. We will address this by developing data capture mechanisms to start measuring our footprint and then setting reduction targets.

1.4 Affordable warmth

We are committed to tackling inequality and delivering affordable warmth. We will do this by building a better understanding of fuel poverty amongst residents by improving the quality of data we capture. We will work with residents, installing smart heating controls to assist them in managing their fuel bills and to help them reduce instances of condensation and mould. We will provide specialist energy saving advice and guidance through the Green Doctors scheme. Finally, we will prioritise our retrofit programme, so that the worst performing homes are improved first.



2 Green spaces

Octavia Hill was passionate about protecting and managing green spaces for Londoners. She understood the many benefits to residents, the community, and nature that these spaces can bring. Green spaces also impact air quality, help reduce the impact of flooding, and provide cooling during heatwaves.

Our strategy aims to improve how we proactively manage our green spaces, with a people-centred approach to deliver at least five resident-led projects. With help from SHIFT, we have set science-based biodiversity improvement targets for our green spaces. This metric aligns with ESG reporting and is based on above ground land protected for biomass. We currently have 3% of land protected for biodiversity and we are targeting 6% by 2025.

We will optimise our impact by working with our grounds maintenance contractor, local authorities, and charities to access funding and resources to support residents and the community.

3 Responsible resource use

3.1 New homes

We will investigate how Modern Methods of Construction (MMC) can be used to reduce local air pollution and embodied carbon emissions during the construction process. We will work with developers and contractors to start collecting smart and robust data to baseline against virgin material use and waste management. Once we have established our baseline, we will use our influence to work with contractors to manage and reduce these impacts.

3.2 Air quality

Octavia Hill was one of the first campaigners for the Clean Air Act which was eventually passed in 1956. Today, air quality in London remains a concern and tackling this issue is high on the London Mayor's agenda. One of the biggest contributors to poor air quality in Octavia's communities is Nitrogen Dioxide (NOx) which is emitted from gas boilers and from fossil fuel burning cars.

Our strategy takes both a short and long-term view to reducing NOx in our communities by transitioning away from fossil fuel burning activities. In the short-term, we will work with our contractors to transition away from diesel cars towards electric vehicles.

We will enable the use of electric vehicles for colleagues and residents by retrofitting charging points at existing Octavia car parks. We will work with Local Authorities to champion increased installations of electric charging infrastructure on streets where Octavia has properties.



4 Climate change adaption

Octavia recognises that climate change is a risk to our communities and our homes. To improve our resilience to these risks, we are taking a strategic approach to climate change adaptation. We have started to collect data to understand our current and future risks and we will use this information to develop processes and interventions to mitigate these risks.

Flood risk data has been assessed at individual properties across our housing stock using GIS analysis and Environment Agency flood risk maps. This included the risk of fluvial and surface water flooding. We will develop a flood risk action plan to understand the measures which can be used to mitigate flood damage and develop processes to inform, protect and support residents during flooding that may occur in the future.

This strategy also sets a target to develop an overheating action plan. We are developing our data to understand where the biggest risks are. High risk properties will be addressed in future planned maintenance works. Octavia assesses overheating risk in new homes during the design phase and high-risk factors are mitigated at this stage.



UN Sustainable Development Goals



The 17 Sustainable Development Goals were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development which set out a 15-year plan to achieve the Goals.

It is important that our strategy reflects both the local and global context. We are aligned with the Paris Agreement, the Mayor's London Environment Strategy, and support seven of the UN Sustainable Development Goals (UN SDGs).

Goal 1: "End poverty in all its forms everywhere."

Goal 6: "Clean water and sanitation."

Goal 7: "Ensure access to affordable, reliable, sustainable and modern energy for all."

Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable."

Goal 12: "Responsible production and consumption."

Goal 13: "Take urgent action to combat climate change and its impact."

Goal 15: "Life on land."



In detail, our targets in order of importance are as follows:

Environmental impact	Performance indicator	2020 baseline	2025 target	Long term target	UN SDG
Net zero and affordable warmth Operational carbon emissions from existing homes	<ul style="list-style-type: none"> Tonnes CO₂/year EPC ratings 	<ul style="list-style-type: none"> 11,925 tonnes CO₂ A:1%, B:13%, C:55%, D:29%, E or less: 1% 	All homes minimum EPC Band D by 2025 (Fuel Poverty Strategy for England target)	All homes minimum EPC Band C by 2030 (Government Fuel Poverty Strategy) Achieve net zero carbon emissions by 2050	
Green spaces and biodiversity	• % of land protected for biodiversity	• 3% of land protected for biodiversity	6% of land protected for biodiversity At least 5 resident led improvement projects on Octavia Green spaces	19% of land 'protected' by 2043	













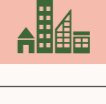

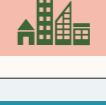
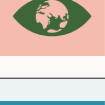



Environmental impact	Performance indicator	2020 baseline	2025 target	Long term target	UN SDG
Responsible resource use Air quality, gas boiler NOx emissions	• Tonnes of NOx emissions/year (from gas boilers)	• 3.6t NOx emissions (estimated)	New homes: Pilot a low carbon development which uses renewable energy heat pumps with zero NOx emissions. We will use learning from this to begin our transition to non-gas heating.	To address local air quality issues, our ambition is to stop installing new gas boilers in existing homes from 2030 (where technically feasible). We recognise that this target is an aspiration which is dependent on the development of technology towards 2030. We will monitor this emerging area closely.	 
Net zero and affordable warmth Embodied carbon emissions from our new homes development programme	• Tonnes CO ₂ /year	• 5,600 tonnes CO ₂ /year (estimated)	Measure embodied carbon on all Octavia new build schemes by 2023 to establish our baseline. We will endeavour to reduce emissions by 10% on all Octavia schemes by 2025.	We will endeavour to reduce embodied emissions by 30% on all Octavia schemes by 2030.	
Responsible resource use Air pollution, diesel vehicle NOx emissions (contractor vehicles)	• Tonnes of NOx emissions/year (from contractor vehicles)	• 1.3 tonnes NOx emissions/year	10% reduction	100% reduction by 2035	 
Net zero and affordable warmth Landlord energy use: electricity (communal areas) and gas (heat networks)	• Tonnes CO ₂ /year (electricity) • KPIs for landlord's gas use on heat networks will developed over the next four years.	• 667 tonnes CO ₂ /year (electricity)	• 10% reduction electricity • Develop and start delivering a 'Heat Networks Strategy' aimed at targeting energy consumption, carbon emissions, and running costs on networks.	50% electricity reduction by 2035 Long term targets for heat networks to be developed over the next four years.	  
Responsible resource use Virgin materials usage (new build)	• Proportion of construction materials responsibly sources	No data	Start collecting data by 2023 on Octavia schemes. Review specifications and amend to include cost neutral improvements	To be developed in the future	
Responsible resource use Waste (new build construction)	• Total tonnes of waste/year and % sent to landfill or incinerated	• 82,500 tonnes/waste/year. 11% (9,075 tonnes sent to landfill) (Estimated)	Measure Octavia's construction waste by 2022. Once data is available, set a waste reduction target by 2023.	Endeavour to achieve zero avoidable waste (ZAW) by 2035	
Responsible resource use Water consumption (existing homes)	• Litres per person per day (lppd)	• 147.3 lppd	5% reduction	130 lppd by 2030	
Net zero and affordable warmth Operational emissions in new homes	• Tonnes CO ₂ /year	• 183 tonnes CO ₂ /year (estimate)	Build a low carbon development and learn lessons in preparation for 2030 net zero target.	All new homes built to net zero emissions by 2030	
Climate Change Adaptation Flood risk	• % homes at low risk of fluvial and surface water flooding	• 11% of properties are at medium to high risk of fluvial flooding • 19% of properties are at medium to high risk of surface water flooding	Develop and deliver a Flood Action Plan to protect and support residents and homes at risk.	To be developed in the future	 
Climate Change Adaptation Overheating	• % homes at low risk of overheating	• 74% of Octavia's stock is at low risk of overheating	Develop an overheating Action Plan. Amend Employers Requirements for new homes using best practice overheating mitigation measures	To be developed in the future	 
Net zero and affordable warmth Enabling low carbon lifestyles	• Passive and active engagement with residents. Providing fuel poverty and sustainability advice • No. Octavia car parks with charge points	• 100% passive engagement • 1.4% active engagement • Electric charging infrastructure installed at two sites (new developments)	• 100% passive engagement year on year • 5% minimum active engagement year on year • Develop an Octavia electric car charging policy • Map demand and install electric charge points on at least ten more Octavia car parks	To be developed in the future	  

Table 1: Octavia's top 13 environmental impacts to be addressed in the new strategy.

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