Appendix 1

Baseline

In 2023/24 we used our energy modelling software to estimate that the emissions associated with our housing stock was 72,861.47 tonnes of carbon dioxide. Our existing homes represent a considerable proportion of our carbon footprint (45%).

At the end of the 2023/24 financial year, our social tenure homes achieved the following Energy Performance Certificate (EPC) performance:

Energy Performance Certificate (EPC) band	Number of Social Tenure Homes
A	190
B	8126
C	16229
D	3391
E	131
F	22
G	2
Total Number of Homes	**28089**

Date Source: Lodged EPC reports.

Targets

- Achieve EPC C for all homes by 2030 by prioritising insulation and ventilation measures.

Measures of success in our existing homes

Although we will continue to measure EPC performance, we know that under the existing system, this is not the best measure of a home's carbon emissions. The better insulated a building is, the lower its heating demand will be and therefore the more energy efficient it is. Addressing heating demand gets to the core of a building's energy efficiency.

To reflect the varied nature of the homes that we manage, we've identified 3 different targets covering distinct groups of homes:

- Deep Retrofit (20-25 kWh/m2/annum)
- This will only be possible in a small number of homes
- Standard Retrofit (65 kWh/m2/annum)
- This will be the standard we apply to most of our homes
- Constrained Retrofit (90 kWh/m2/annum) - applied only to conservation area, listed or other heritage properties with town planning constraints.

Appendix 2

Baseline

In 2023 we measured the current quality of our green spaces against our metrics.

Our current performance is:

Measure	Baseline
Biodiversity Net Gain (BNG)	414 units: Habitat 51 units: Hedge
Urban Greening Factor (UGF)	0.26

Targets

We have split our targets, with separate targets for new developments and our existing estate.

For **new developments**, our targets are:

Measure	Target		
	Short-term (3 years)	Medium-term (7 years)	Long-term (12 years)
Biodiversity Net Gain (BNG)	10% *	15% *	20% *
Biodiversity Net Gain (baseline BU < 1)	1.5 BU / ha	2 BU / ha	2 BU / ha
Urban Greening (UGF)	0.4 *	0.4 *	0.4 *

To ensure that we apply a rigorous uplift for sites where biodiversity starts very low, we are using two biodiversity uplift targets depending on the baseline condition of the site.

Note: Section 106 developments will be subject to a phased introduction of the target. We'll initially require Section 106 development to meet the statutory BNG uplift of 10%, with a phased introduction of a higher biodiversity uplift in the short, medium, and long term. This will be subject to discussions with development partners to understand implications and reinforce best practice.

For **existing estates** our targets are:

Measure	Target		
	Short-term (3 years)	Medium-term (7 years)	Long-term (12 years)
Biodiversity Net Gain (BNG)	+3.7%	+8.6%	+15%
Number of larger, estate level projects	10	40	100

We conducted a customer survey in January 2024 to gather insights into residents' perspectives, usage, and desires concerning green spaces. The survey was sent to 28,391 customers, from which 501 responses were received (2% response rate).

We learnt that a significant portion of our customers (67.53%) visit green spaces either daily or weekly, telling us they value spending time outdoors. The primary reasons for visiting green spaces were:

- mental health and well-being (60.16%)
- physical health and exercise (54.98%)
- getting fresh air (56.77%),

highlighting the importance of these spaces for residents' overall wellness.

Appendix 3

Baseline

In 2023/24 we estimated that the emissions associated with building our new homes was 87,503.51 tonnes of carbon dioxide.

We took a conservative approach when deriving this figure, using an estimate that assumes there is no consideration or action taken to reduce embodied carbon. Despite this, new build homes still represented the largest proportion of our carbon footprint (54%).

We need to move away from estimation to understanding actual data. We know that many large development companies are not only measuring the embodied carbon associated with their builds but are reducing it.

2023/24 was also the first year that we measured the amount of waste that we generate and how its disposed of or processed. We were able to collect data about waste from our offices, and all repairs, maintenance and grounds works carried out by VIVID staff. These activities generated 33 tonnes of carbon dioxide.

Disposal route	**Weight** (tonnes)	**%**
Recycled	2447.8	88.31
Burnt for energy	323.9	11.69
Landfilled	2.4	0.09

Although a good first step, we know that this ignores a significant waste generator – our supply chain, including waste from construction.

Targets

- Reduce the waste from our offices and all grounds and maintenance works carried out by VIVID staff by 10% by 2030, and set further targets for future years, with the goal of halving our waste by 2040.

- Understand the waste generated from new build by 2028 and set further targets to reduce this.

- Increase our understanding of our supply chain emissions, include a wider scope in our carbon reporting, and set specific reduction targets.

Notes

Even if we only buy what we need, dealing with waste uses energy to collect and transport it, using fossil fuels which when burned release greenhouse gases (including methane and carbon dioxide), contributing to climate change.

The LETI Primer, Business as Usual for Residential homes carbon factor of 800 kgCO2e/m2.

Construction creates an estimated third of the world's overall waste, and at least 40% of the world's carbon dioxide emissions. Source: EU Commission Report 2021.

Appendix 4

Baseline

Our water consumption data only currently relates to our two office buildings. We will work to understand our options for measuring and reporting the water performance of our homes.

In 2023 / 24 our offices used 2,271m3 which contributed 1.7 tonnes of carbon to our overall footprint.

Targets

- Increase our understanding of water use across our estate and develop new metrics that enable us to track and monitor our progress

- Achieving the highest practical water efficiency standards for our fixtures and fittings, and water consuming equipment.

Notes

https://www.gov.uk/government/publications/water-stressed-areas-2021-classification

Appendix 5

Baseline

We have screened our homes to understand which are in locations that will expose them to future climate change risks. This gives us a hazard rating. Currently 147 of our homes have a high flood hazard rating, and none are at a very high risk of overheating.

Based on future climate models, this will change to 419 home units with a high flood hazard rating in the future with all our homes moving to a very high hazard rating for over-heating.

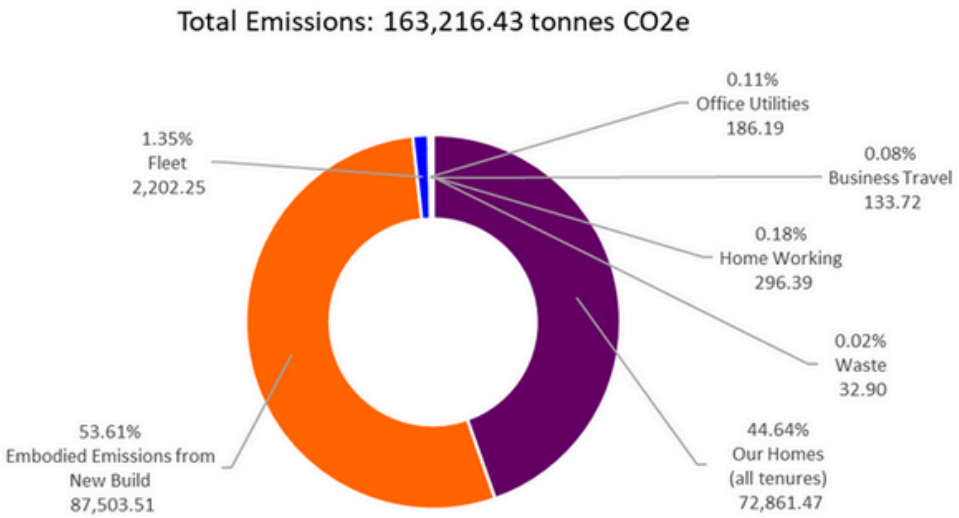
Although only a first step, our climate hazard screening gives a good starting point to understand which homes are most likely to be affected. We will build on this, adding understanding about any particular vulnerabilities the homes and our customers might have to cope with these hazards.

Targets

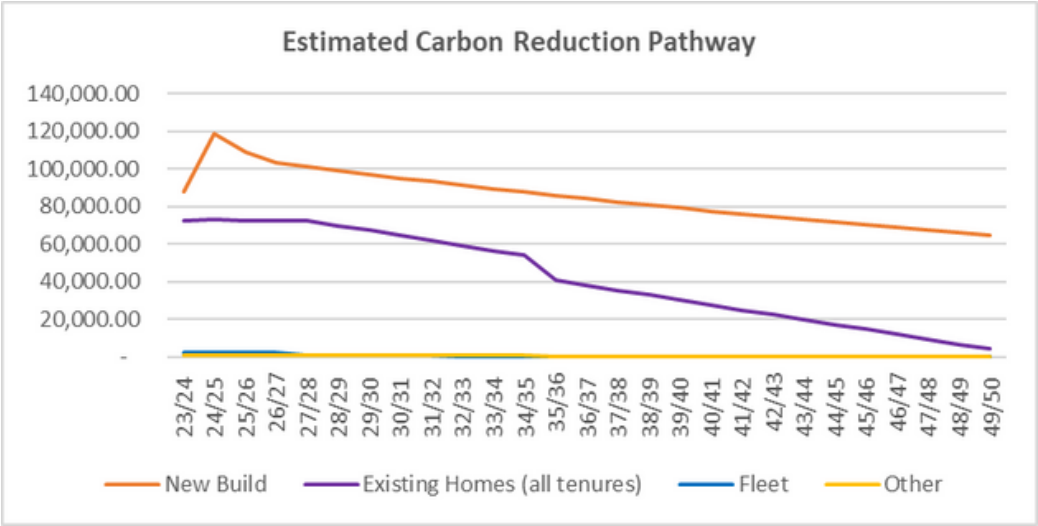
- Increase our understanding of the risk climate change poses to our portfolio of homes and develop new metrics that enable us to track and monitor our progress to address this.

Appendix 6

At the end of March 2023 our carbon emissions were:



Excluding our supply chain emissions outside of new build, this investment results in an estimated carbon reduction pathway of:



This graph shows more clearly how any remaining emissions in 2050 will be allocated across our business.