



STREAMLINED ENERGY AND CARBON REPORTING FOR 2022/2023

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Version 2

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V1	26/05/2023	Initial Draft	Alvin Ayowei (MSc)	Keith Maloney	Anthony Horsley
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1.0 Executive Summary

As part of the Streamlined Energy and Carbon Reporting (SECR) framework, it has been identified that the total energy use for Livv Housing Group totals **5,353,197 kWh** for the period 1st April 2022 to 31st March 2023. The total energy use includes building and transport energy.

The total carbon emissions for Livv Housing Group during the reporting period is **859 tCO₂e**.

The report has highlighted the 'Invest to Save' programme and proactive carbon reduction strategy has secured energy and carbon reduction of **812,574 kWh** and **108 tonnes of CO₂e** respectively for the 2022/23 financial year associated with building energy only.

Livv Housing Group has now achieved a significant energy and carbon reduction of **2,251,567 kWh** and **1,009 tonnes of CO₂e** respectively since the baseline year of 2018/2019 financial reporting year. This includes for scope 1, 2, and 3 emissions.

Table 1 provides a summary of the energy usage and the associated carbon emissions. The methodology used to calculate this information has been explained in Section 3 of this report.

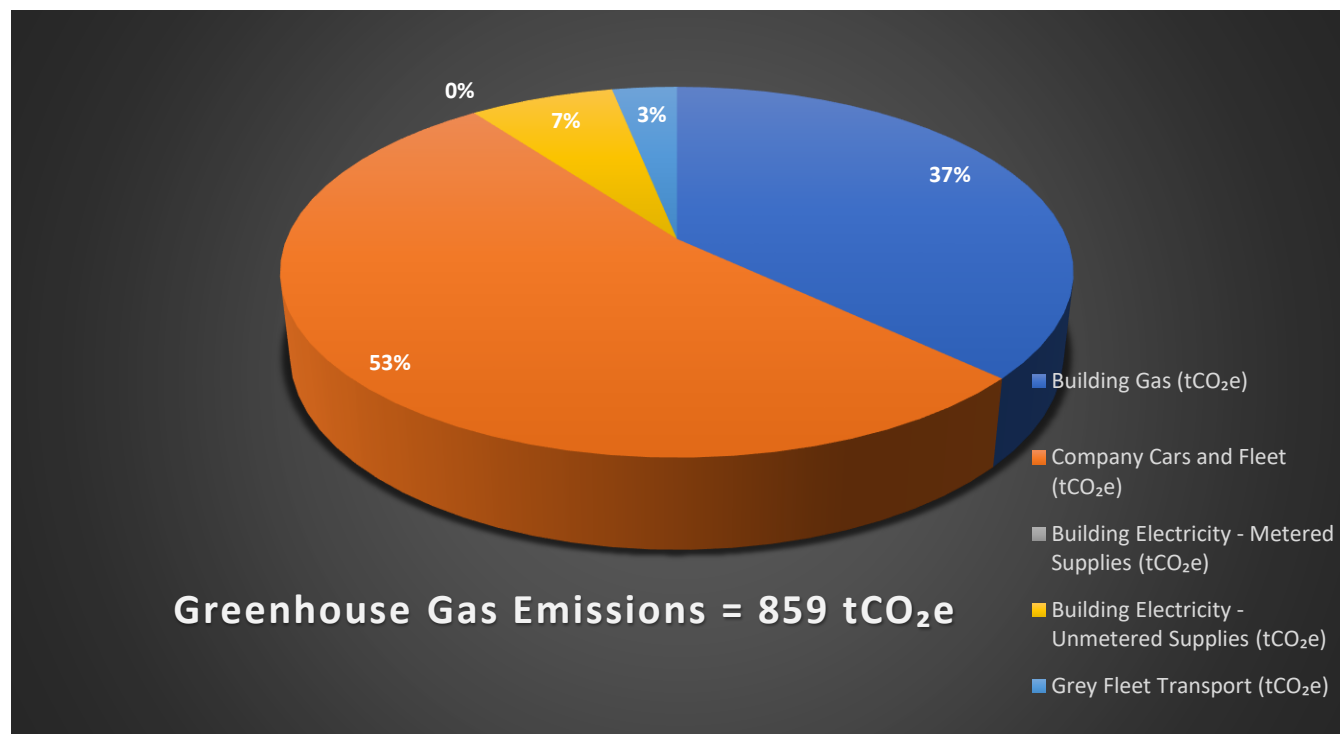
Table 1 – Summary of Livv Housing Group Annual Energy Use and Associated Carbon Emissions (1st April 2022 – 31st March 2023.)

Scope	Activity	Fuel Use	Annual Energy (kWh)	Annual Carbon Emissions (tCO ₂ e)
1	Building Energy - Gas (kWh)	1,764,855	1,764,855	318
1	Transport Company Fleet – Miles	1,097,191	1,799,393	454
2	Building Energy - Electricity Metered Supplies(kWh)	1,378,161	1,378,161	0
2	Building Energy - Electricity Unmetered Supplies	311,504	311,504	60
3	Transport Grey Fleet - Expensed Mileage (Miles)	92,230	99,284	27
	Total		5,353,197	859

**Note: Building Energy (metered supplies) have been purchased with a 100% green electricity contract with zero carbon emissions associated.*

The profile shown in Figure 1 provides a summary of Livv Housing Group's annual carbon emissions for the 2022/23 financial year (reporting period). The profile below shows company fleet miles (Transport) is the major contributor to Livv Housing Group's carbon emissions constituting 53% of the Group's total carbon emissions.

Figure 1 – Summary of Livv Housing Group Annual Carbon Emissions (1st April 2022 – 31st March 2023).



2.0 Organisation Boundary

Livv Housing Group provides 13,000 homes across the Liverpool City Region and undertakes local projects to build flourishing communities. Services include the management, maintenance and construction of homes that meet the needs of local people, whilst providing support to enable them to unlock their potential.

Livv Housing Group comprises of Livv Homes, Livv Maintenance, and Livv Investment. Livv Housing Group is a charitable registered society under the Cooperative and Community Benefit Societies Act 2014.

3.0 Energy and Carbon Emissions Data

3.1 Reporting Period

For the purpose of this report, the year is 1st April 2022 – 31st March 2023. This is in line with the Group's financial reporting period.

3.2 Methodology

Livv Housing Group have chosen to report on the following key items within their boundary:

- **Scope 1 Emissions**
 - Gas consumption
 - Transport – Company Fleet
- **Scope 2 Emissions**
 - Electricity consumption
- **Scope 3 Emissions**
 - Transport – Grey Fleet

Livv Housing Group's building energy data has been calculated using invoices provided by the energy supplier on a monthly basis.

Fuel usage associated with the fleet vehicles has been populated from the use of fuel reports provided by the Director of Operations, Livv Maintenance.

Grey fleet data has been sourced from mileage claims that have been submitted by employees during the reporting period. This information has also been provided by the Director of Operations, Livv Maintenance.

3.3 Energy Performance – Building Energy (KWh)

As reported within the Executive Summary, the total energy for Livv Housing Group in the 2022/23 reporting period totaled **5,353,197 kWh** (building energy including Unmetered supply electricity and transport energy).

The associated carbon emissions for this reporting period total **859 tCO₂e**. This is the equivalent to the emissions produced by 172 homes.

Overall, Livv Housing Group has achieved a year-on-year building energy reduction of **812,574 kWh**.

This is a **19%** year-on-year reduction in building energy consumption. The following initiatives have resulted in this reduction:

- Decommissioning of Gaywood Green High Rise blocks.
- Additional solar PV installations to Lakeview, Crawford Gardens, and Beaconsfield Low-Rise Blocks.
- Further Low-Energy LED Lighting Installations.
- Installation of smart-meters to eradicate estimated consumption.
- Ongoing Solar PV Maintenance and repairs within landlord supplies (low-rise blocks).
- Rationalisation of sheltered accommodation BMS.

3.4 Year-on-Year Energy and Carbon Comparisons

3.4.1 Building Energy Comparisons (Metered & Unmetered Supplies)

The following information has been provided at the request of Livv Housing Group, to provide a comparison between the building energy in the 2022/23 financial year period and the 2021/22 financial year period. This highlights a year-on-year reduction of **14%** and **23%** for electricity and gas respectively as shown in Table 2 and Figure 2 below.

Table 2 – Building energy kWh year-on-year comparison.

	Elec (kWh)	Gas (kWh)	Total Energy (kWh)	Total Energy Reduction
FY 2021/22	1,974,310 kWh	2,292,784 kWh	4,267,094 kWh	
FY 2022/23	1,689,665 kWh	1,764,855 kWh	3,454,520 kWh	812,574 kWh
Difference %	14%	23%	19%	

Figure 2 – Livv Housing Group Year-on-Year Building Energy Comparison

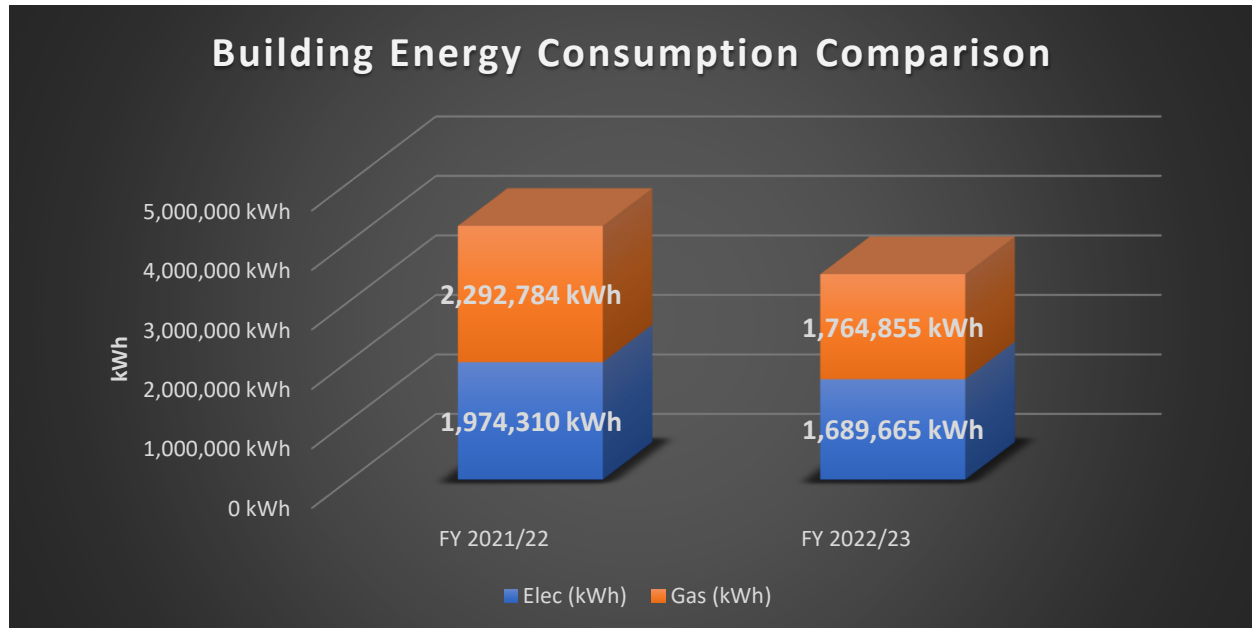


Figure 2 above provides a comparison between the total building energy within the 2021/22 and 2022/23 financial year reporting periods. This shows that the overall building energy usage (gas and electricity) has reduced by **19%** during the 2022/2023 reporting period as stated in section 3.3 above.

Table 3 – Building Carbon Emissions tCO₂e year-on-year comparison

The following provides a visual representation of the comparison between the building carbon emissions (tCO₂e) for the 2021/22 financial year period and the 2022/23 financial year period. This highlights a year-on-year reduction of **9%** and **24%** for electricity and gas respectively. Shown in table 3 and figure 3 below.

	Elec (tCO ₂ e)	Gas (tCO ₂ e)	Total Carbon Emission (tCO ₂ e)	Total Carbon Emissions Year-on Year
FY 2021/22	66 tCO ₂ e	420 tCO ₂ e	486 tCO ₂ e	
FY 2022/23	60 tCO ₂ e	318 tCO ₂ e	378 tCO ₂ e	108 tCO ₂ e Reduction
Difference %	9%	24%	22%	

*Note that percentages and figures are rounded up or down to not show decimal points.

The newly secured 100% certified green electricity contract (1st April, 2023), also states that the supplier will achieve 100% smart meters across the account. This will be a great benefit to Livv Housing Group for monitoring and importantly for the recharging to customers for communal area lighting etc.

Figure 3 – Livv Housing Group Year on Year Building Energy Carbon Emissions Comparison

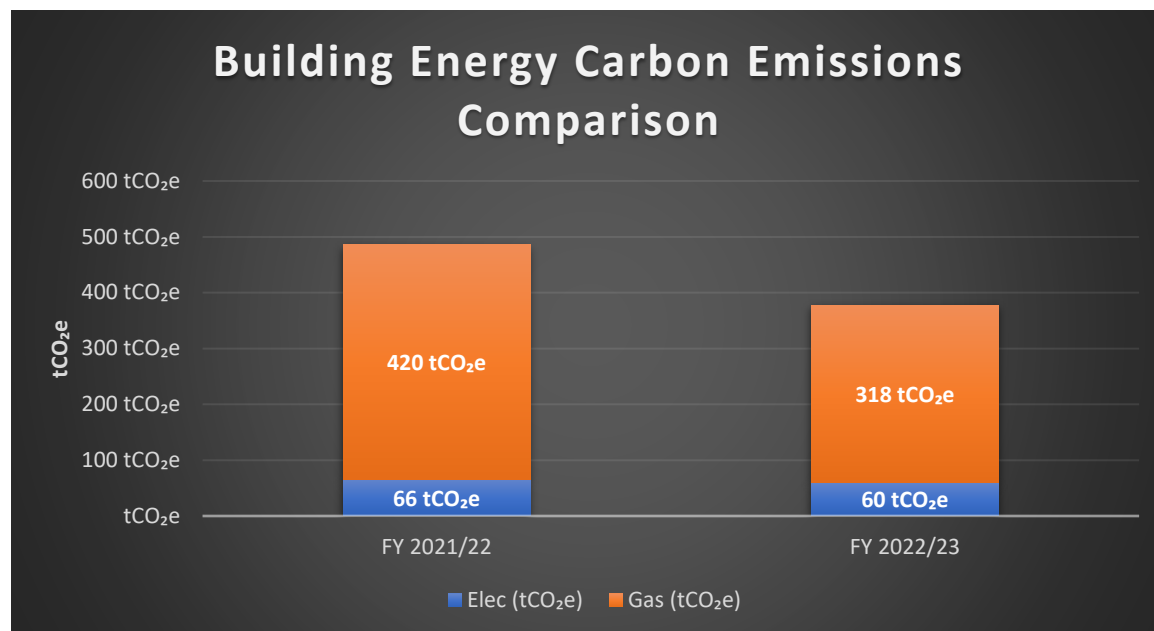


Figure 3 above provides a year-on-year comparison of the carbon emissions associated with building energy usage. This shows that building energy carbon emissions have **reduced by 19%** in 2022/23. In terms of Livv Housing Groups Buildings' carbon emissions reduction, Livv Housing Group has achieved a **6 tCO₂e** reduction in electricity carbon emissions, equivalent to a 9% reduction compared to the 2021/2022 financial reporting year.

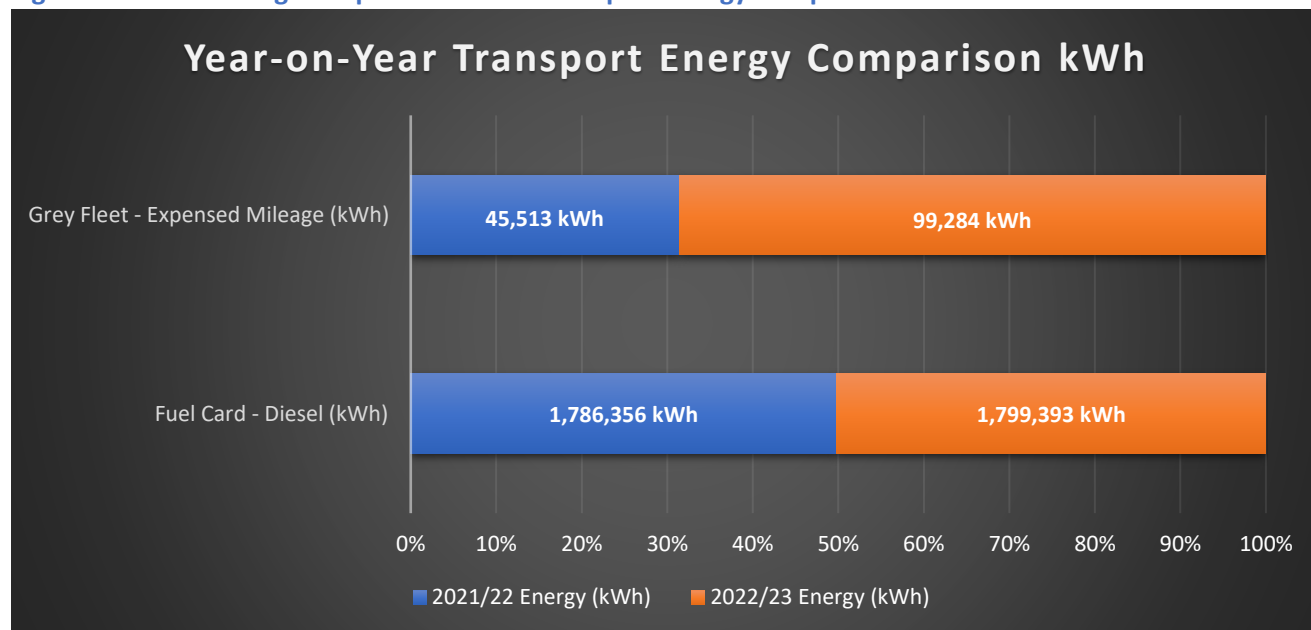
Also, for carbon emissions associated with gas, Livv Housing Group has achieved a **102 tCO₂e** reduction, equivalent to a **24%** reduction compared to the 2021/2022 financial reporting year.

It should be noted that the carbon reduction associated with the unmetered electricity supply is as a result of the changes to the annual DEFRA emission conversion factor for electricity.

3.4.2 Transport Energy Comparisons

The following has been included within the report to provide a comparison of the year-on-year transport data, and associated energy and carbon emissions.

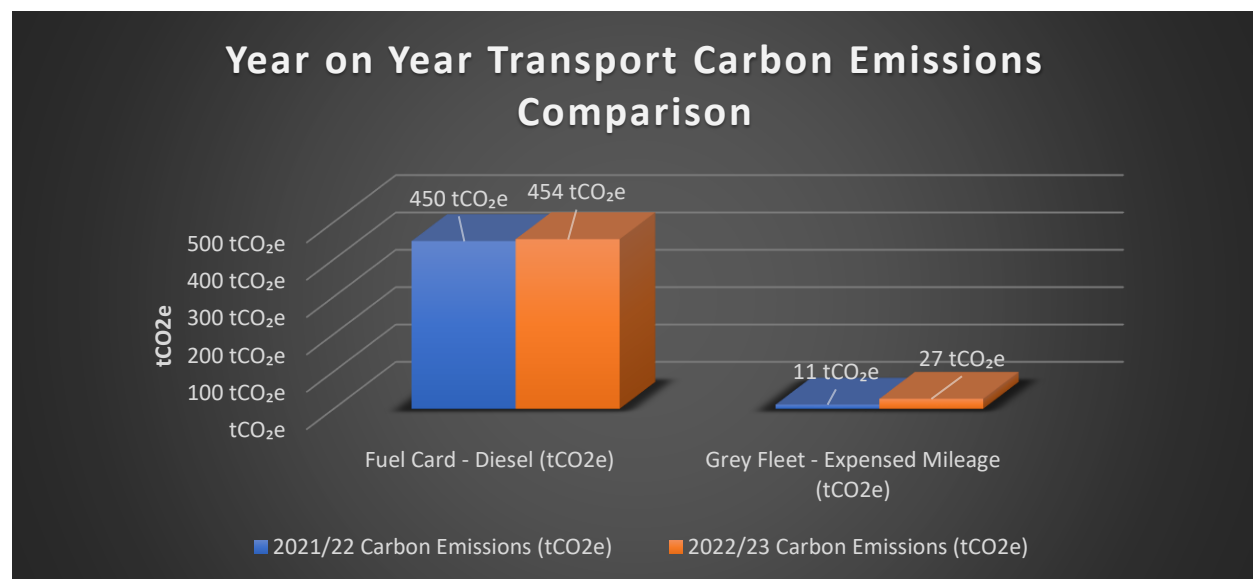
Figure 4 – Livv Housing Group Year on Year Transport Energy Comparison



The profile shown above provides a summary of the comparison of the energy associated with Livv Housing Group's Fleet fuel usage including fleet transport and expensed mileage for the 2021/22 and 2022/23 financial reporting periods. The energy use associated with the fleet fuel usage totaled **1,831,869 kWh** in 2021/22 and **1,898,677 kWh** in 2022/23.

There has therefore been a year-on-year combined increase of **4%**. It should be noted that there was a significant year-on-year increase in grey fleet mileage of **118% (53,772kWh)** in 2022/2023 financial reporting year in comparison to 2021/2022 financial year. This increase has been confirmed by the Director- Operations, Livv Maintenance as a result of restructured customer insight teams whereby housing advisors and managers spend more time outside in the community interacting with customers.

Figure 5 – Livv Housing Group Year on Year transport carbon emissions tCO₂e comparison



The associated carbon emissions resulting from transport have increased by **20 tCO₂e** this is equal to an overall increase of **4%**. Figure 5 above allows for the visualisation of the transport carbon emissions.

It should be noted that train travel emissions for Livv Housing Group for the 2022/2023 financial reporting year amounted to **1.5 tCO₂e** using the amount spent on train travel. However, for consistency and reliability of data, we have excluded emissions from train travel from the group's total emissions.

Furthermore, it is permissible within the ambit of SECR guidelines to include previously excluded emissions in the reporting period. It is therefore recommended that train travel emission be included in the consequent report if the distance travelled for all train journeys are recorded and provided.

3.4.3 Livv Housing Group Year on Year Energy Performance and Carbon Emissions Comparison to the Baseline Year (2018/2019)

A summary analysis of the energy performance has been performed. This includes a comparison of with the 2018/19 Baseline SECR year (2018/2019). This has summarised in the table below.

Table 4 – Livv Housing Group Energy Performance (kWh) year-on-year comparison to Baseline Year

	Year 1	Year 4	Cumulative	Change %
	2018/2019	2022/2023	reduction kWh	
Scope 1 Consumption	5,055,065	3,564,247	1,490,818	29%
Scope 2 Consumption	2,499,451	1,689,665	809,786	32%
Scope 3 Consumption	50,248	99,284	-49,036	-98%
Total	7,604,764	5,353,197	2,251,567	30%

Table 5 – Livv Housing Group Carbon Emissions tCO₂e year-on-year comparison to Baseline Year

	Year 1	Year 4	Cumulative	Change %
	2018/2019	2022/2023	reduction tCO ₂ e	
Scope 1 Emissions	1,039	772	267	26%
Scope 2 Emissions	768	60	708	92%
Scope 3 Emissions	61	27	34	56%
Total	1,868	859	1,009	54%

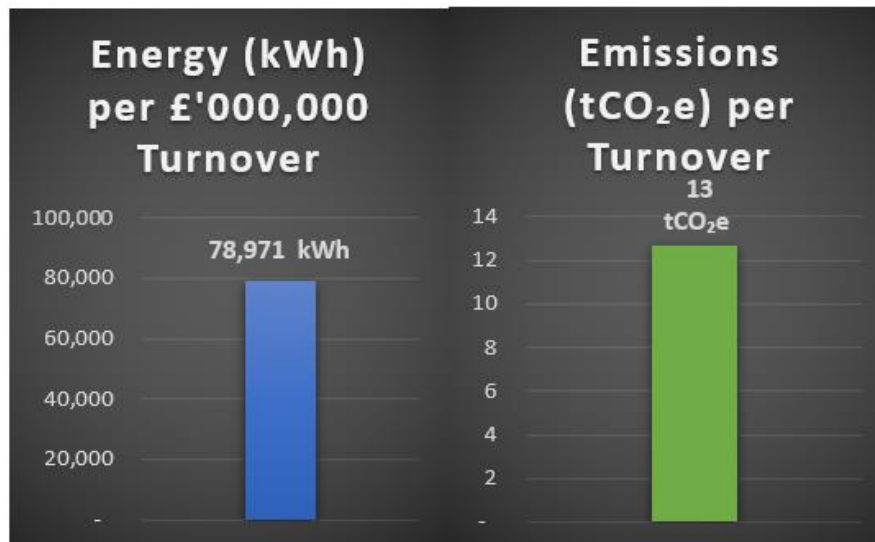
Tables 4 and 5 above have been included to provide a visual representation of the significant cumulative energy and carbon reduction in comparison to the baseline year.

The appraisal has highlighted an annual energy reduction of **2,251,567 kWh (30%)** has been achieved since the Baseline Year 2018/2019. These reductions together with the green accredited electricity contracts have resulted in a significant reduction of emissions of 1,009 Tonnes equating to a 54% emissions reduction.

4.0 Intensity Metrics

The intensity metrics that are being used for this current report are energy (kWh) per £1m turnover and carbon emissions (tCO₂e) per £1m turnover. The intensity metrics for the 2022/23 baseline reporting period have been shown in Figure 6.

Figure 6 – Livv Housing Group Intensity Metrics



The profiles above show the following intensity metrics for the 2022/2023 reporting period: This utilises the published financial turnover for the period of £67.787m

- Overall energy usage is **78,971 kWh** per £1m turnover
- Carbon emissions equate to **13 tCO₂e** per £1m turnover.

The above metrics include for all building energy use together with business travel.

Figure 7 – Livv Housing Group Intensity Metrics Year-on-Year Comparison

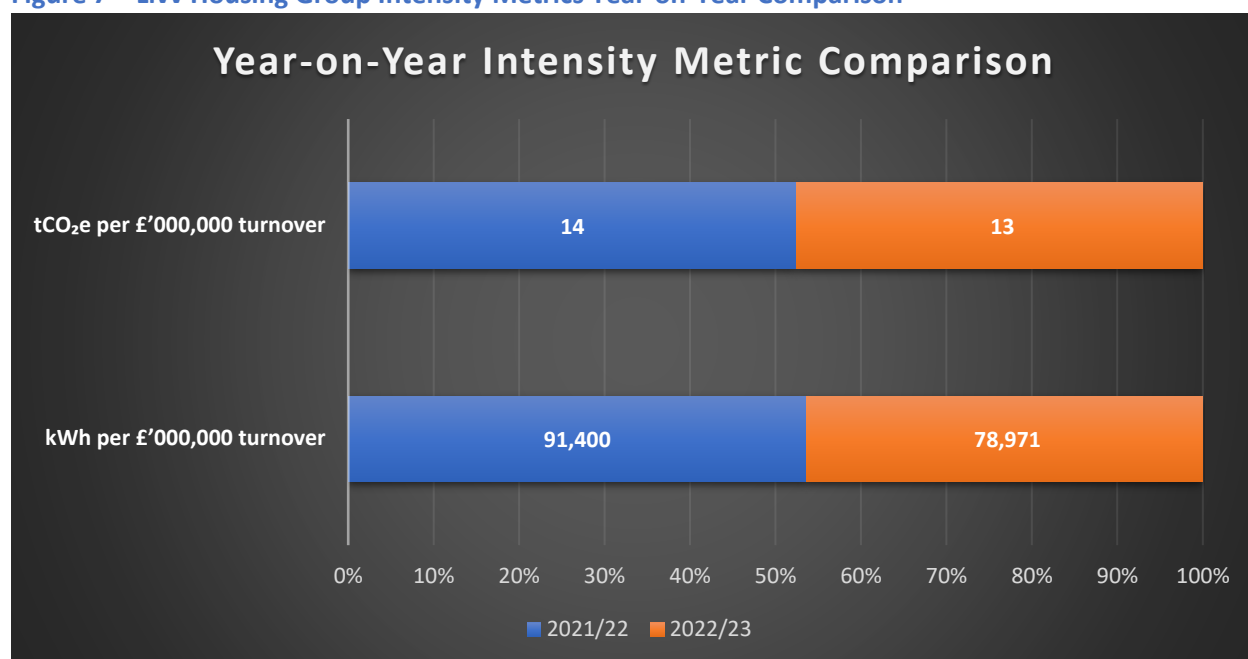


Figure 7 above provides a visual representation of the intensity metrics year-on-year. This shows that despite the increased turnover of **£1,634,000** the intensity kWh's and tCO₂ per £1m have reduced by **14%** and **9%** respectively. This is a great positive result for Livv Housing Group and also proves that the portfolio is putting in place energy conservation measures to improve performance and also reduce energy consumption.

5.0 Energy Efficiency Measures

Livv Housing Group continually reinvests in energy saving and carbon reduction initiatives. A proactive 'Invest to Save' energy and carbon programme has been successfully delivered during 2022/23. This has resulted in delivering the reported significant energy savings and includes several energy generation projects, to energy intensive sites including Crawford Gardens. To promote the awareness and success of the projects, a video has been produced of the solar PV projects. This is being completed for the end of June to accompany this report.

Livv have also been proactive in securing Social Housing Decarbonisation Grant funding. During the financial year 556 dwellings underwent energy improvement measures. This included thermal insulation improvements, solar pv generation systems, LED lighting and more. The output of the project has resulted in the improved energy performance rating of all 556 dwellings to an energy performance SAP rating of C and above.

Below are several ongoing and planned energy conservation measures.

- Through the Environment and Sustainability Management Group, Livv Housing Group has been extremely proactive. The Sustainability Group is chaired by a member of the Executive Management Team and provides a highly effective forum for championing sustainability strategy improvements throughout the whole Group.

- There are plans to complete the installation of further Solar PV systems at the Watch factory, Woolton Views, Fairways and Ashton Park.
- The recently re-procured 100% certified green electricity has resulted in all metered supplies effectively now operating with zero carbon emissions despite the market prices leading many organisations for the cheaper 'brown electricity'.
- Energy reporting data continues to include performance reports on energy use, business travel, and renewable energy.
- Investment into additional renewable opportunities using solar PV including thermal insulation improvements for domestic properties. Livv Housing Group are continually striving to improve the energy performance of their portfolio to fight against fuel poverty for vulnerable customers.
- Completing an extensive programme to install low-energy LED lighting in all commercial buildings (offices and community hubs) and communal areas in tenanted developments.
- The Group continues to be updating the fleet to lower emission vehicles and continues focusing on driver training and more efficient vehicle use.
- There are plans to procure a 100% REGO-backed certified green electricity contract for the unmetered electricity supplies. This will reduce the group's carbon emissions by 7%.
- Livv Housing Group electricity contract includes 100% smart meter commitments from the supplier.

6.0 Appendix

The following methodologies were used to calculate the information in the above report:

Category	Methodology
Building Energy – Gas	Based on invoices provided by gas suppliers for a 12-month period using April 2022-March 2023 actual billed consumption.
Company Vehicle Emissions	Collated using data from direct purchase records for vehicles in mileage provided by Lynne Barlow (Director-Operations, Livv Maintenance). This data has been converted according to Defra Guidelines.
Building Electricity – Unmetered Supply (UMS)	Calculated from the UMS database submitted to the supplier following LED Lighting upgrade.
Turnover	Financial turnover was supplied by Tony Cahill on 19 th June 2023 (draft)
Purchased Electricity (for Livv Housing Group portfolio)	Based on invoices provided by electricity suppliers for a 12-month period using April 2022-March 2023 actual consumption.
Business Travel	Collated from expensed mileage claims and business mileage and converted according to DEFRA Guidelines. Data provided by Lynne Barlow (Director-Operations, Livv Maintenance).
Conversion Factors	All conversions have been completed using the 2022 DEFRA Conversion Factors document. ghg-conversion-factors-2022-condensed-set.xls (live.com)