MALONEY ASSOCIATES

Livv housing group

Livv Housing Group Streamlined Energy and Carbon Reporting 2023-2024 V2

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Version	Date	Changes	Author	Reviewer
V1	19/08/2024	Draft Report	Alvin Ayowei MSc	Lucy England
V1.1	29/08/2024	Integration of Transport Data	Alvin Ayowei MSc	Anthony Horsley
V1.2	29/08/2024	Integration of Building Energy Data	Alvin Ayowei MSc	Anthony Horsley
V1.3	29/08/2024	Completion of Draft Report	Alvin Ayowei MSc	Anthony Horsley
V1.4	29/08/2024	Amendments from Peer Review 1	Alvin Ayowei MSc	Anthony Horsley
V1.5	29/08/2024	Amendments from Peer Review 2	Alvin Ayowei MSc	AH/LE
V1.6	29/08/2024	Amendments from Peer Review 3	Alvin Ayowei MSc	Anthony Horsley
V1.7	30/08/2024	Internal Management Review	Alvin Ayowei MSc	KM/AH/LE
V2	30/08/2024	Client Issue (for comments)	Alvin Ayowei MSc	KM/AH

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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 **5,182,552 kWh** for the period 1st April 2023 to 31st March 2024. The total energy use includes building and transport energy.

The total carbon emissions for Livv Housing Group during the reporting period is **764 tCO$_2$e**.

The report has highlighted the 'Invest to Save' programme and proactive carbon reduction strategy has secured an energy and carbon reduction of **115,929 kWh** and **60 tCO$_2$e** respectively for the 2023/24 financial year associated with **building energy only**.

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 2023 – 31st March 2024.)

Scope	Activity	Fuel Use	Annual Energy (kWh)	Annual Carbon Emissions (tCO$_2$e)
1	Building Energy - Gas (kWh)	1,765,964	1,765,964	318
1	Transport Company Fleet – (Miles)	1,068,575	1,731,092	415
2	Building Energy - Electricity Metered Supplies(kWh)	1,261,123	1,261,123	0
2	Building Energy - Electricity Unmetered Supplies	311,504	311,504	0
3	Transport Grey Fleet - Expensed Mileage (Miles)	104,850	112,869	31
		Total	**5,182,552**	**764**

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

Figure 1 – Summary of Livv Housing Group Annual Carbon Emissions (1st April 2023 – 31st March 2024).
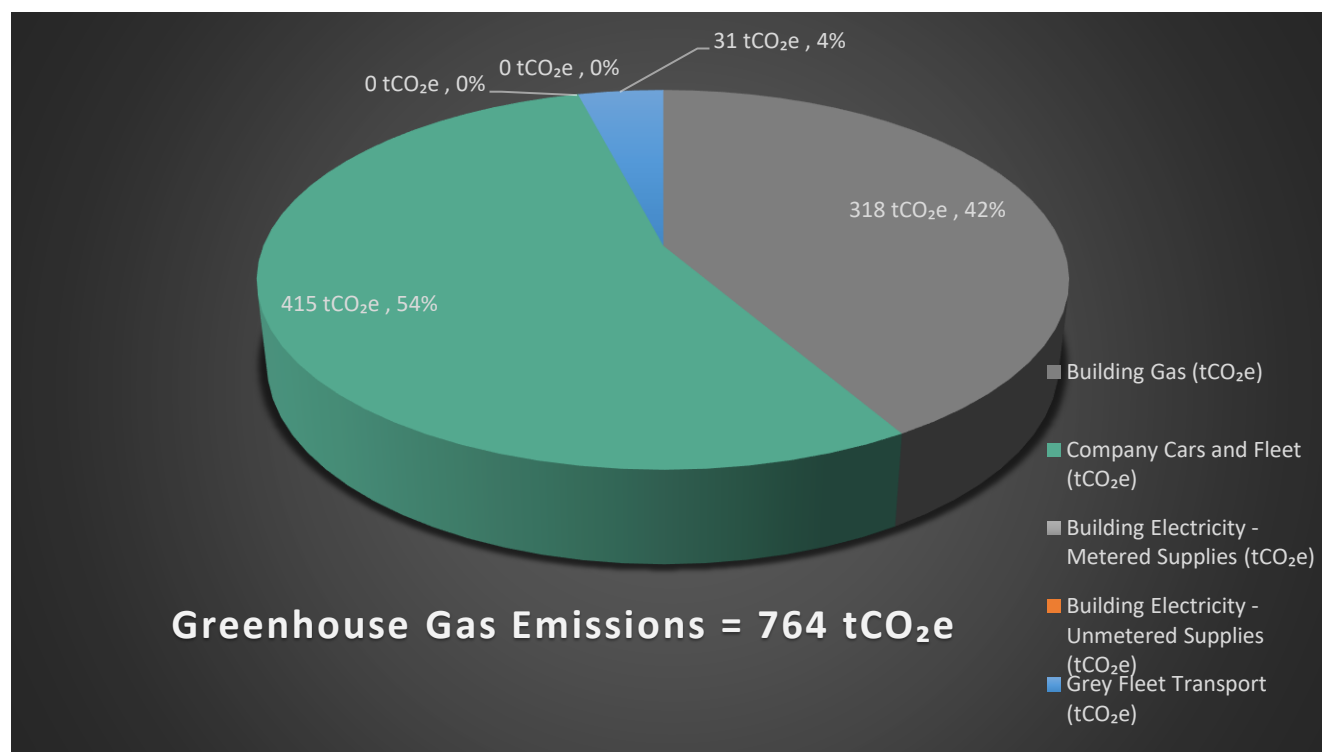
The profile shown in Figure 1 provides a summary of Livv Housing Group's annual carbon emissions for the 2023/24 financial year (reporting period). The profile above shows company cars and fleet miles (excluding grey fleet transport) is the major contributor to Livv Housing Group's carbon emissions constituting **54%** of the Group's total carbon emissions.

Overall, transport (including grey fleet expensed mileage, company cars and fleets) contributed to **58%** of Livv Housing Group carbon emissions for the reporting financial year (2023/24).

The report has highlighted an annual energy reduction of **2,422,212 kWh (32%)** has been achieved as result of the energy management programme since the recording of the SECR Baseline Year 2018/2019. This equates to a significant reduction of emissions of **1,104 tonnes (59%)**.

Livv Housing Group have a public reputation for being an energy and carbon management leader within the Social Housing sector. This is a result of a proactive strategy and management team that have embedded energy & carbon improvement as a key objective throughout the organisation. A sustained investment strategy supported with trusted delivery partners and expertise have resulted in significant energy and carbon achievements. These achievements are continually measured, verified and reported. Since the implementation of SECR, Livv Housing Group's energy and carbon management programme has achieved six consecutive year-on-year energy reductions.

The achievements have received public recognition with several prestigious awards including the 2023 Net Zero Award.

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 2023 to 31st March 2024. 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 Fleet Manager.

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 Group Payroll Manager.

Where there has been discrepancies or disputes on billed energy data, these accounts have been checked, reviewed and forecast data utilised as detailed within the Appendix.

3.3 Energy Performance – Building Energy (kWh)

As reported within the Executive Summary, the total energy use for Livv Housing Group in the 2023/24 reporting period totalled **3,338,591 kWh** (building energy including electricty (metered and unmetered use) and gas consumption.

The associated carbon emissions for this reporting period total **318 tCO$_2$e**. This is the equivalent to the emissions produced by **64 homes.**

Overall, Livv Housing Group has achieved a year-on-year building energy reduction of **115,929 kWh.** This is a **3.4%** year-on-year reduction in **building energy consumption.**

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 2023/24 financial year period and the 2022/23 financial year period. This highlights a year-on-year reduction of **7%** for electricity and a year-on-year **0.1%** increase for gas usage and a **3.4%** reduction in the total building enery consumption, 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 (kWh)
FY 2022/23	1,689,665 kWh	1,764,855 kWh	3,454,520 kWh	
FY 2023/24	1,572,628 kWh	1,765,964 kWh	3,338,591 kWh	115,929 kWh
Difference %	7%	-0.1%	3.4%	

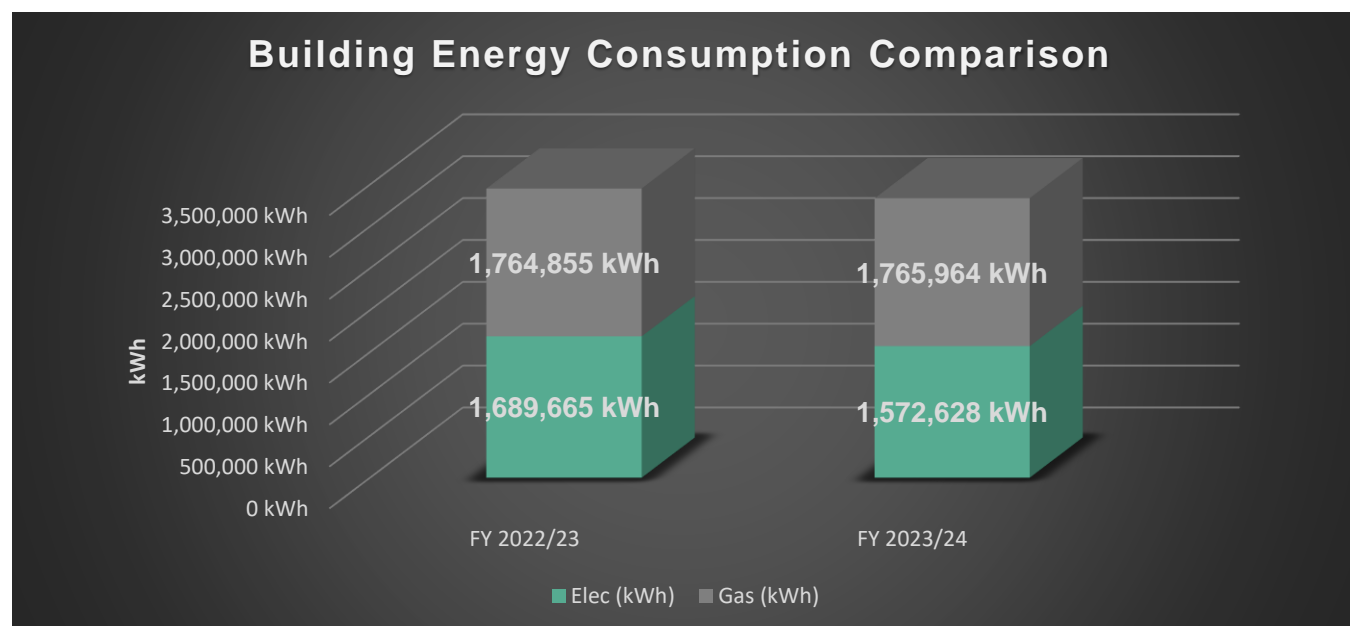**Figure 2 – Livv Housing Group Year-on-Year Building Energy Comparison**

Figure 2 above provides a comparison between the total building energy within the 2022/23 and 2023/24 financial year reporting periods. This shows that the overall building energy usage (gas and electricity) has reduced by **3.4%** during the 2023/2024 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 2022/23 financial year period and the 2023/24 financial year period. This highlights a year-on-year reduction of **60 tCO₂e**, equating to a **16%** total building emissions reduction, as shown in table 3 and figure 3 below.

	Elec (tCO₂e)	Gas (tCO₂e)	Total Carbon Emission (tCO₂e)	Total Carbon Emissions Year-on Year (tCO₂e)
FY 2022/23	60 tCO₂e	318 tCO₂e	378 tCO₂e	
FY 2023/24	0 tCO₂e	318 tCO₂e	318 tCO₂e	60 tCO₂e Reduction
Difference %	100%	0%	16%	

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

The electricity contract procured for the reporting period was strategically changed to a **100%** certified green contract for **all** electricity supplies (including unmetered supply). This has resulted in a decarbonisation of the electricity usage.

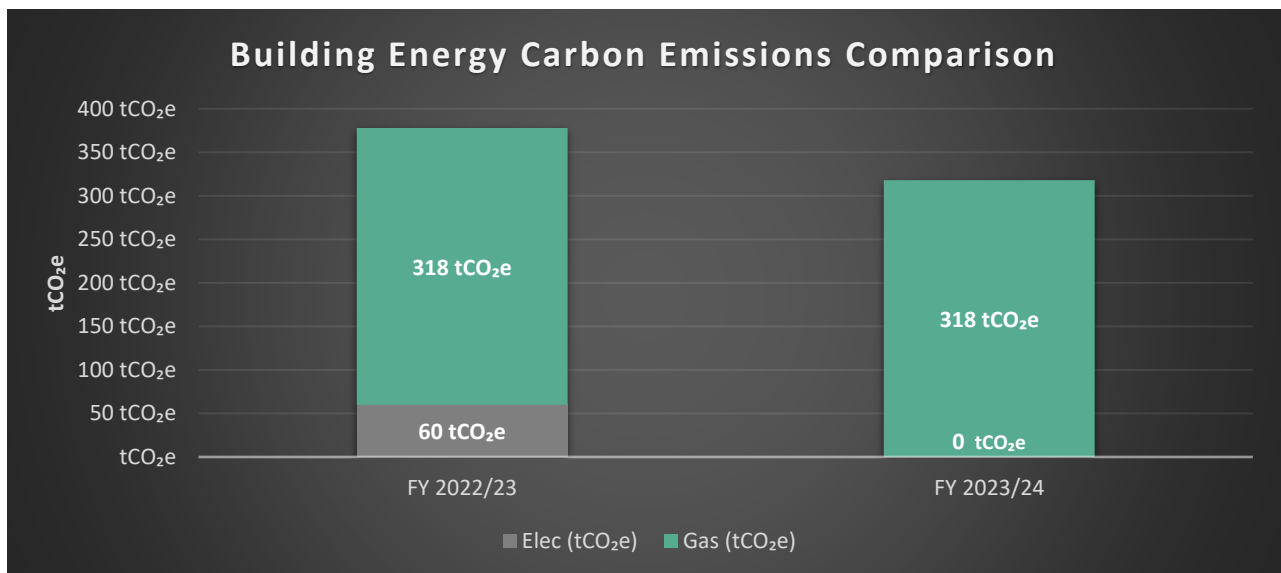**Figure 3 – Livv Housing Group Year on Year Building Energy Carbon Emissions Comparison**

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 has reduced by **16%** in 2023/24 in comparison to 2022/23.

3.4.2 Transport Energy Comparisons

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

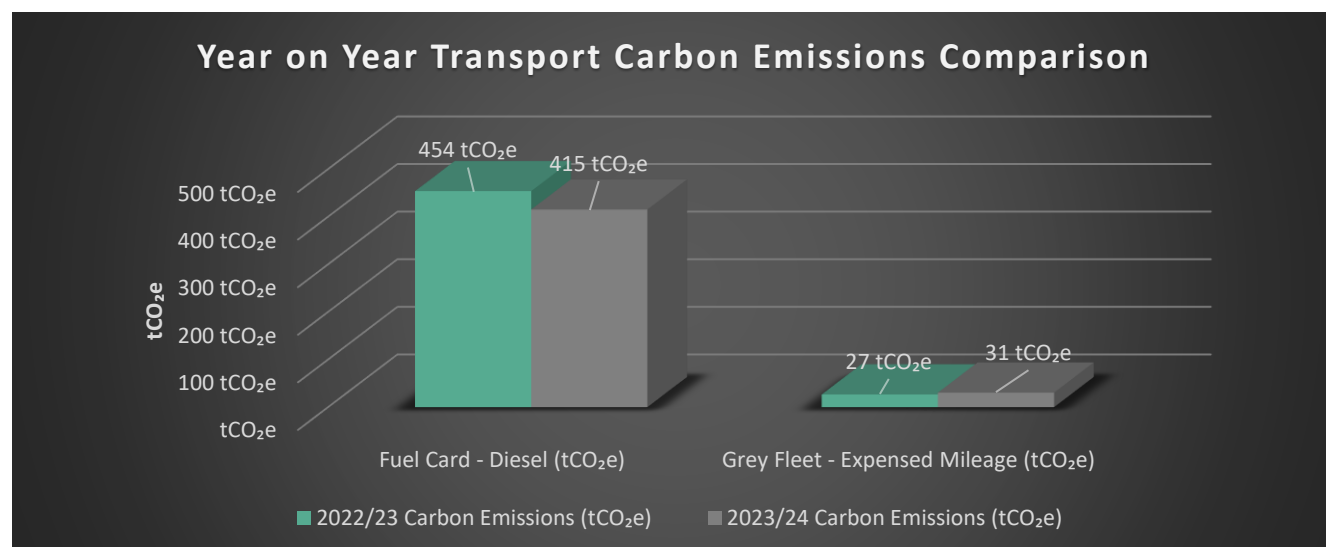**Figure 4 – Livv Housing Group Year on Year Transport Energy Comparison**
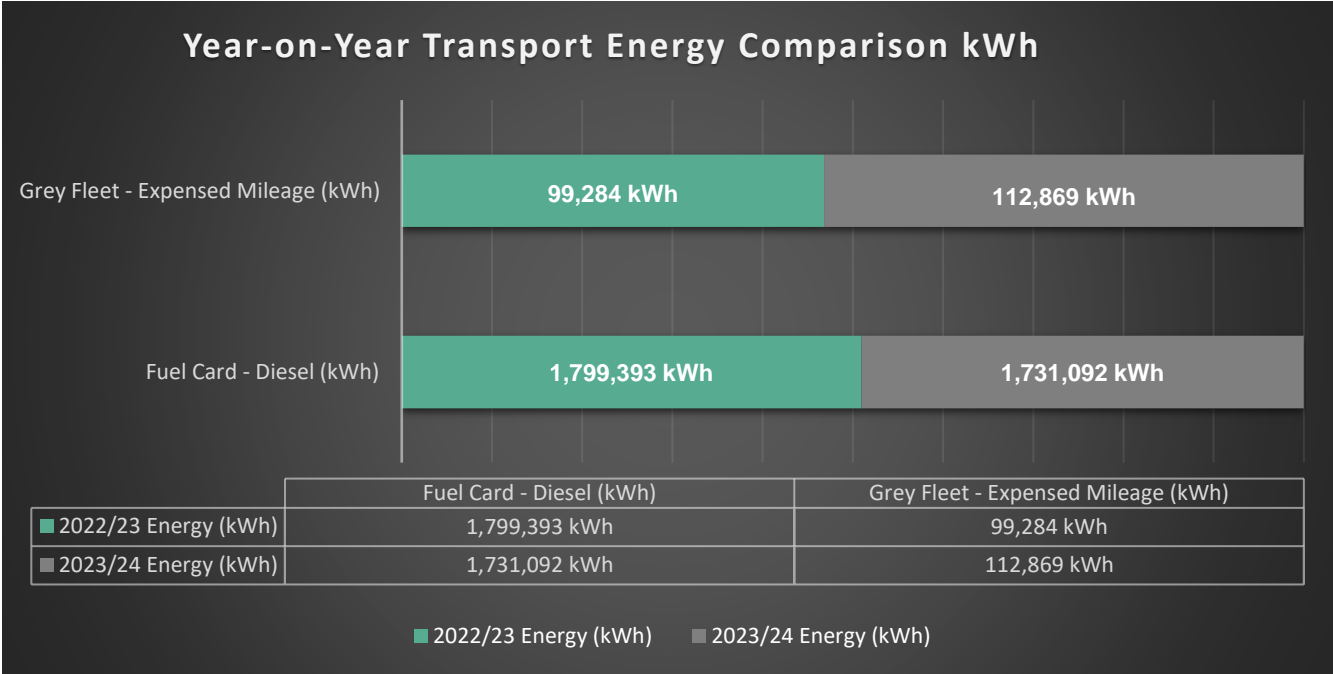
The profile shown in figure 4 above provides a summary of the comparison of the energy associated with Livv Housing Group's Transport usage including fleet transport and expensed mileage for the 2022/23 and 2023/24 financial reporting periods. The energy use associated with the transport energy totalled **1,898,677 kWh** in 2022/23 and **1,843,961 kWh** in 2023/24. This equates to a **3%** reduction on Transport energy use for the reporting period.

It should be noted that there was a significant year-on-year increase in grey fleet mileage of **14% (13,585 kWh)** in the 2023/2024 financial reporting year. This increase is reflective of key factors which include a restructured support operation, increased number of employees and a larger financial turnover for the reporting period.

It should be noted, there has been a **4%** year-on-year reduction (**68,301 kWh**) in energy consumption associated with company fleet. This is equivelant to a calculated reduction of **28,616 miles** for the financial year.

Figure 5 – Livv Housing Group Year on Year Transport Carbon Emissions tCO₂e Comparison

Year on Year Transport Carbon Emissions Comparison

- 454 tCO₂e
- 415 tCO₂e
- 27 tCO₂e
- 31 tCO₂e

tCO₂e axis: 500 tCO₂e, 400 tCO₂e, 300 tCO₂e, 200 tCO₂e, 100 tCO₂e, tCO₂e

Fuel Card - Diesel (tCO₂e) Grey Fleet - Expensed Mileage (tCO₂e)

■ 2022/23 Carbon Emissions (tCO₂e)   ■ 2023/24 Carbon Emissions (tCO₂e)

The associated carbon emissions resulting from transport has reduced by **35 tCO₂e** this is equal to an overall decrease of **7%.** Figure 5 above allows for the visualisation of the transport carbon emissions.

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. It includes a comparison with the 2018/19 Baseline SECR year. This has been summarised in the table below.

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

	Year 1 2018/2019	Year 5 2023/2024	Total Reduction kWh	Change %
Scope 1 Consumption	5,055,065	3,497,055	1,558,010	31 %
Scope 2 Consumption	2,499,451	1,572,628	926,823	37 %
Scope 3 Consumption	50,248	112,869	-62,621	-125 %
Total	**7,604,764**	**5,182,552**	**2,422,212**	**32 %**

Table 5 – Livv Housing Group Carbon Emissions (tCO₂e) Year-on-Year Comparison to Baseline Year

	Year 1 2018/2019	Year 5 2022/2023	Total Reduction tCO₂e	Change %
Scope 1 Emissions	1,039	733	306	29%
Scope 2 Emissions	768	0	768	100%
Scope 3 Emissions	61	31	30	49%
Total	**1,868**	**764**	**1,104**	**59%**

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

The energy consumption for scope 3 (grey fleet expensed mileage) has increased from **50,248 kWh** in 2018/2019 to **112,869 kWh** in 2023/2024.

It should be noted that, the associated carbon emissions have reduced from **61 tCO₂e** in 2018/2019 to **31 tCO₂e** in 2023/2024. This reduction in carbon emissions is due to the changes in the **DEFRA** emissions conversion factors.

The appraisal has highlighted an annual energy reduction of **2,422,212 kWh (32%)** has been achieved as result of the energy management programme since the recording of the SECR Baseline Year 2018/2019. This equates to a significant reduction of emissions of **1,104 tonnes (59%)**.

4.0 Intensity Metrics

This SECR report has included a full and detailed energy and emissions performance comparison in 'absolute' calculation terms.

A further detailed comparison has been undertaken to provide a performance comparison in 'relative' terms. The intensity metrics that are included have been agreed with the Management Team. Energy performance metrics include:

- Energy use (kWh) per £1m financial turnover and
- Carbon emissions (tCO₂e) per £1m turnover

The intensity metrics for the 2023/24 reporting period is illustrated in Figure 6 below

**Figure 6 – Livv Housing Group Intensity Metrics**

The profiles above show the following intensity metrics for the 2023/2024 reporting period: This utilises the published financial turnover for the period of **£74.01m**

- Overall energy usage is **70,025 kWh** per £1m turnover
- Carbon emissions equate to **10.3 tCO₂e** per £1m turnover

The above metrics include for all building and transport energy use including grey fleet expensed mileage.

Figure 7 – Livv Housing Group Intensity Metrics Year-on-Year Comparison
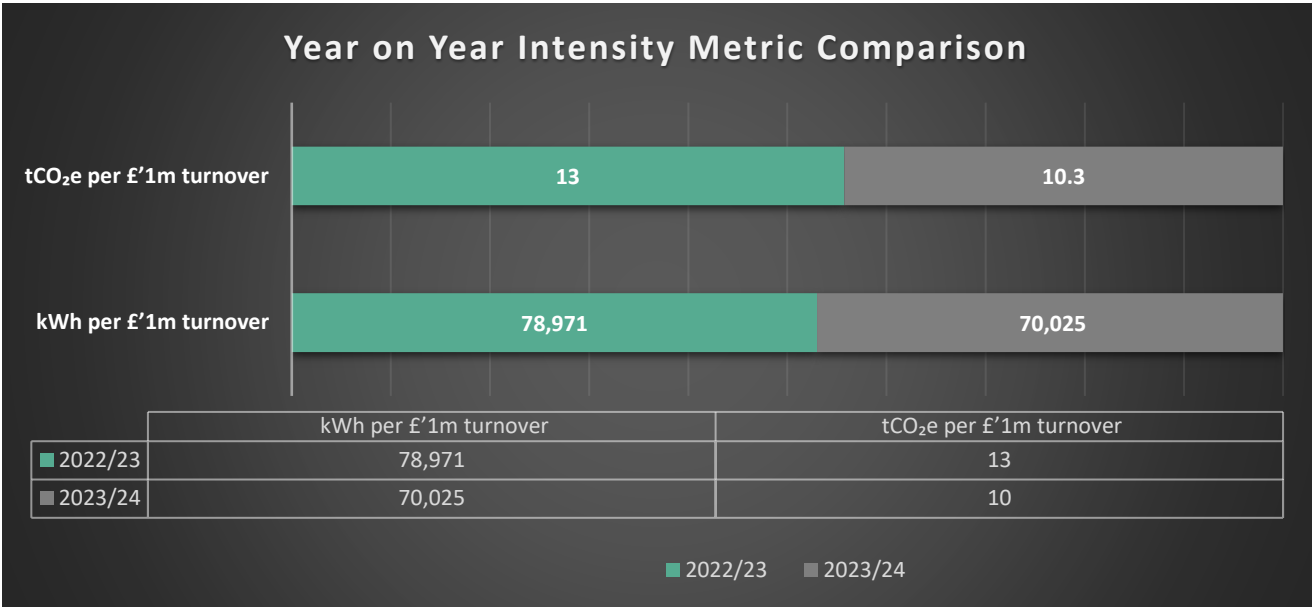
The above graph in Figure 7 illustrates the relative performance intensity metrics. This indicates the energy and carbon performance has improved for the reporting period whilst an increase in financial turnover and operation has been experienced. This equates to a calculated intensity metrics, kWh and tCO_2e per **£1m** reduction of **11%** and **21%** respectively.

5.0 Energy Efficiency Measures and Strategic Performance Improvement

Livv Housing Group have a public reputation for being an energy and carbon management leader within the Social Housing sector. This is a result of a proactive strategy and management team that have embedded energy & carbon improvement as a key objective throughout the organisation. A sustained investment strategy supported with trusted delivery partners and expertise have resulted in significant energy and carbon achievements. These achievements are continually measured, verified and reported. Since the implementation of SECR, Livv Housing Group's energy and carbon management programme has achieved six consecutive year-on-year energy reductions. Furthermore, resulting in a substantial reduction of **32%** in energy use and **59%** in carbon emissions.

The achievements have received public recognition with several prestigious awards including the 2023 Net Zero Award.

Livv Housing Group continually invest in energy saving and carbon reduction initiatives. A proactive 'Invest to Save' energy and carbon programme has been successfully delivered during financial year 2023/24. This has resulted in delivery of the reported significant energy savings and includes several renewable energy generation projects to energy intensive sites.

This includes a significant solar PV system at Crawford Gardens, additional solar PV systems have been delivered to the low-rise blocks at Beaconsfield, and the high rise Woolton Views,

Fairways and Ashton Park (WAFTA). To promote the awareness and success of the projects, a video has been produced capturing arial footage of the solar PV project at Crawford Gardens. It should be noted that the Watch Factory solar PV project was completed in June 2024, the full benefits will be reported within the FY 2024/25 performance report.

Livv Housing Group have been proactive in the implementation of a successful Decarbonisation Retrofit Programme. A major programme of over 2,500 dwellings have undergone accredited energy retrofit assessments. Over 670 dwellings have received considerable energy efficiency improvement measures.   These include 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 dwellings to an energy performance SAP rating of C and above.

A further innovative decarbonisation project has been undertaken at Park Close (community sheltered housing scheme) during the reporting period. Twenty (20) dwellings and the Community Centre have undertaken a major decarbonisation project that included the decommissioning of a communal gas heating system. The installation of energy efficient air source heat pumps (ASHPs) for providing heating and hot water. Dwellings were also provided solar PV renewable energy systems together with thermal insulation improvements including innovative 'Flutter Shutter' to improve thermal heat loss from windows and glazing.

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.
- The re-procured 100% certified green electricity has resulted in all electricity supplies now operating with zero carbon emissions.
- 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.
- Livv Housing Group continue to focus on driver training to increase fuel efficiencies.
- Livv Housing Group electricity contract includes 100% smart meter commitments from the supplier. This is being undertaken during this financial year.

An 'Energy Saving Opportunity Assessment' (Phase 3) was completed in July 2024. MA are planning a workshop to present the key findings and recommendations to the Executive Management Team. The workshop will include a strategic Invest Plan (with business case). This is being planned for October 2024, this will form the structure of the ESOS phase 3 Action Plan scheduled to be submitted in December 2024.

6.0 Appendix

The following strategic methodology and data sources were used to calculate the information in the above report:

Category	Methodology and Data Sources
Building Energy – Gas	Based on invoices provided by gas suppliers for a 12-month period using April 2023-March 2024 actual billed consumption.
Company Vehicle Emissions	Collated using data from direct purchase records for vehicles in mileage provided by Kieran Riley (Fleet Manager). This data has been converted utilising the 2023 DEFRA Guidelines. The data has been calculated from mileage reports to kWh and then to tCO_2e.
Building Electricity – Unmetered Supply (UMS)	Calculated utilising the (supplier) certified UMS database that was re-submitted to the supplier following LED Lighting upgrade that reduced the calculated energy consumption.
Purchased Electricity (for Livv Housing Group portfolio)	Based on invoices provided by electricity suppliers for a 12-month period using April 2023-March 2024 actual consumption. A new supplier for electricity has been acquired 1st April 2024. This has resulted in disputes on a number of accounts where closing reads and opening reads are not consistent. In the majority of these cases these inconsistencies have been identified by MA and challenged with the national data flows and suppliers. This issue is compromising the integrity of the data from Jan-24 to Mar-24 on a number of accounts. However, MA have undertaken data integrity and forecast models where this is required. The following assumptions and qualification methods have been used. • Forecast data used where disputes on the accounts prevent the correct invoicing for the reporting period. • Forecast data has been used where meter failures have occurred. • Both, Elm House and Signal Court had showed a credit for the 2022/23 reporting period. These have now shown actual consumption and therefore impact on 2023/24 reporting period.
Turnover	Financial turnover information was supplied by Tony Cahill – Executive Director Property via email on the 22nd of August 2024.
Grey Fleet Expensed Mileage	Collated from expensed mileage claims and business mileage, then converted according to DEFRA Guidelines. Data provided by Sean Bridges (Group Payroll Manager).

Expensed Mileage for Train and Bus Travel	Train and Bus Travel Energy Use and Associated carbon emissions has been excluded from this report. At present this element within scope 3 is voluntary. It is recommended, a process for recording these expenses is developed, to allow for the future reporting of train and bus energy use.
Conversion Factors	All conversions have been completed using the 2023 DEFRA Conversion Factors document. ghg-conversion-factors-2023-condensed-set-update.xlsx (live.com)