

Energy consumption and carbon emissions

The GHG emissions for the Group, broken down by Scope 1, Scope 2 and some Scope 3 emissions, for 2021 and 2022, are set out in the table below. In 2022, the Group reported a decrease in total absolute Scope 1 GHG emissions and a decrease in total operational energy consumption of 6% (based on the MWh of energy used across all of our businesses' locations).

The increased Scope 3 emissions reflect the expansion of data collection across the Group in 2022 versus 2021, and we expect this percentage to fluctuate in future years as the quality of our reporting improves. In 2022, despite there being increases in absolute Scope 2 and 3 emissions, operational energy consumption decreased and both intensity ratios decreased compared to 2021. This is reflective of the fact that revenue has increased at a higher rate than energy consumption year-on-year, as well as the additional Scope 3 category reported (Category 3: Fuel and energy-related activities that are not covered in Scopes 1 and 2). Increases in Scope 2 emissions are also due in part to the higher country specific emissions factors compared to previous years. The Group's chosen intensity ratio is energy consumption and emissions reported above normalised megawatts usage ("MWh") and tonnes of CO₂e per £1,000 of turnover⁽¹⁾, which we believe remains the most appropriate intensity ratio for Melrose given our business model and structure.

Total Melrose Group energy consumption and GHG emissions for the period 1 January 2022 to 31 December 2022

	2022			2021 ⁽²⁾			Change (2022/21)
	UK	Global (excl. UK)	Total	UK	Global (excl. UK)	Total	
Energy (MWh)⁽³⁾							
Total operational energy consumption	103,902	2,523,360	2,627,262	123,654	2,662,113	2,785,767	-6%
Company's chosen intensity measurement:							
Energy consumption reported above normalised MWh per £1,000 turnover ⁽¹⁾	0.014	0.335	0.349	0.018	0.387	0.405	-14%
Emissions⁽⁴⁾ (CO₂e)⁽⁴⁾							
Scope 1: Direct GHG emissions ⁽⁵⁾	7,716	151,656	159,372	9,394	160,476	169,870	-6%
Scope 2: Indirect GHG emissions ⁽⁶⁾	11,934	603,728	615,662	15,313	590,382	605,695	2%
– Total purchased electricity	11,934	602,528	614,462	15,313	587,452	602,765	2%
– Other purchased energy	–	1,200	1,200	–	2,930	2,930	-59%
Total Scope 1 and Scope 2 emissions	19,650	755,384	775,034	24,707	750,858	775,565	0%
Company's chosen intensity measurement:							
Emissions reported above normalised tonnes CO ₂ e per £1,000 turnover ⁽¹⁾	0.003	0.100	0.103	0.004	0.109	0.113	-9%
Scope 3 emissions:							
Category 3: Fuel- and energy-related activities (T&D) ⁽⁷⁾	1,194	40,178	41,372	1,355	44,054	45,409	-9%
Category 3: Fuel- and energy-related activities (WTT) ⁽⁸⁾	4,172	25,481	29,653	1,611	26,467	28,078	6%
Category 6: Business travel and business travel (WTT) ⁽⁹⁾	–	–	14,953	–	–	6,873	118%
Total Scope 3 emissions	5,366	65,659	85,978	2,966	70,521	80,360	7%

(1) The data has been standardised from the source units in which it was initially collected. The turnover figures used to calculate the intensity ratio include continuing businesses only and do not include any share of revenues from entities in which the Group holds an interest of 50% or less.

(2) 2021 data has been restated.

(3) Data include continuing businesses only.

(4) CO₂e – carbon dioxide equivalent, this figure includes GHGs in addition to carbon dioxide.

(5) Scope 1 figures include emissions from fuel used on premises, transport emissions from owned or controlled vehicles, losses of refrigerant, and process and fugitive emission.

(6) Scope 2 figures include emissions from electricity and heat purchased by the Group's businesses. Scope 2 emissions, and total GHG emissions, are calculated using the location-based method.

(7) Electricity transmission and distribution losses.

(8) Emissions from fuel-related well-to-tank.

(9) Including rail, vehicle and air travel information, collected from 100% (by revenue) of the Group in 2022. For 2021, this category included only business travel from 63% (by revenue) of the Group.

Energy efficiency

Our businesses seek to reduce energy usage and GHG emissions within their operations through more efficient use of electricity, fuel and heat by increasing the proportion of renewable energy where commercially viable, and by implementing other climate-positive actions such as sustainable transport initiatives. During 2022, the Group more than doubled its investment in energy efficiency programmes, having as a whole invested £20,117,803 (2021: £9,864,423) in the following initiatives:

Type of energy efficiency programmes	2022	2021
	(Global) £	(Global) £
LED lighting retrofits	3,257,209	1,936,419
More efficient air conditioning and heating systems	1,630,895	917,525
Renewable energy installations	1,034,338	53,388
Insulation improvements	1,399,677	953,738
Energy efficient equipment	12,795,684	6,003,353
Total	20,117,803	9,864,423

The table below shows a breakdown of the Group's GHG emissions by type and by where those emissions were incurred. Our Scope 1 and Scope 2 emissions for 2022 encompass methane (CH₄) and nitrous oxide (N₂O). The vast majority of our emissions are from carbon dioxide (CO₂), which is common among most industrial businesses. There have been reductions in most Scope 1 GHG emission types between 2021 and 2022 across the Group, however there has been a steep increase in recorded R134a emissions which is due to advances in data collection since 2021. Scope 2 emissions have increased in line with the general increase in year-on-year energy usage and the increase in the emission factors for many countries.

Melrose Group GHG emissions by type (CO₂e) for the period 1 January 2022 – 31 December 2022 (tonnes CO₂e⁽¹⁰⁾ unless stated)

	2022			2021 ⁽¹¹⁾			Change in Total (2022/21)
	UK	Global (excl. UK)	Total	UK	Global (excl. UK)	Total	
Scope 1⁽¹²⁾							
CO ₂	7,700	147,934	155,634	9,375	159,958	169,333	-8%
CH ₄	11	195	206	13	211	224	-8%
N ₂ O	5	143	148	6	150	156	-5%
R134a ⁽¹³⁾	0	3,384	3,384	0	157	157	–
Total Scope 1 CO₂e	7,716	151,656	159,372	9,394	160,476	169,870	-6%
Scope 2⁽¹⁴⁾							
CO ₂	11,800	601,676	613,476	15,156	588,418	603,574	2%
CH ₄	49	414	463	58	296	354	31%
N ₂ O	85	1,638	1,723	99	1,668	1,767	-2%
Total Scope 2 CO₂e	11,934	603,728	615,662	15,313	590,382	605,695	2%

(10) CO₂e – carbon dioxide equivalent, this figure includes GHGs in addition to carbon dioxide.

(11) 2021 data has been restated.

(12) Scope 1 figures include emissions from fuel used on premises, transport emissions from owned or controlled vehicles, losses of refrigerant, and process and fugitive emission.

(13) Increase in R134a emissions year-on-year data is due to improved monitoring processes allowing to collect emissions data more accurately.

(14) Scope 2 figures include emissions from electricity and heat purchased by the Group's businesses. Scope 2 emissions, and total GHG emissions, are calculated using the location-based method.

The table below shows the energy consumption by type for the Group, broken down by UK and overseas consumption, in accordance with the requirements of the SECR regulations. Please see page 24 for more information.

Melrose Group energy consumption by type for the period 1 January 2022 – 31 December 2022 ("MWh" unless stated)

Energy type	2022			2021 ⁽¹⁵⁾			Change in Total (2022/21)
	UK	Global (excl. UK)	Total	UK	Global (excl. UK)	Total	
Natural gas	41,897	724,786	766,683	50,903	787,327	838,230	-9%
LPG	62	36,192	36,254	76	37,805	37,881	-4%
Gas oil	0	4,939	4,939	0	4,894	4,894	1%
Fuel oil	0	6,344	6,344	0	12,697	12,697	-50%
Diesel	191	12,553	12,744	202	12,166	12,368	3%
Petrol (gasoline) ⁽¹⁶⁾	38	3,847	3,885	28	1,594	1,622	–
Steam	0	7,032	7,032	0	17,157	17,157	-59%
Propane ⁽¹⁶⁾	0	6,240	6,240	0	0	0	–
Total non-renewable fuels consumption	42,188	801,933	844,121	51,209	873,640	924,849	-9%
Total renewable electricity consumption ⁽¹⁷⁾	3	2,335	2,338	327	25,743	26,070	–
Total non-renewable electricity consumption	61,711	1,719,092	1,780,803	72,118	1,762,731	1,834,849	-3%
Total electricity consumption	61,714	1,721,427	1,783,141	72,445	1,788,474	1,860,919	-4%
Total operational energy consumption	103,902	2,523,360	2,627,262	123,654	2,662,114	2,785,768	-6%
Company's chosen intensity measurement:							
MWh per £1,000 turnover ⁽¹⁸⁾	0.014	0.335	0.349	0.018	0.387	0.405	-14%

(15) 2021 data has been restated.

(16) Increase in petrol (gasoline) and propane year-on-year data is due to improved monitoring processes allowing to collect non-renewable energy consumption data more accurately.

(17) Decrease in renewable electricity consumption year-on-year data is due to improved monitoring processes allowing to collect renewable electricity consumption data more accurately.

(18) The turnover figure used to calculate the intensity ratio does not include any share of revenues from entities in which the Group holds an interest of 50% or less. For 2022, the turnover figure includes continuing businesses only.