

## 2023 environmental data – methodologies and supplementary data

### Greenhouse Gas (GHG)

Our Scope 1 and 2 GHG emissions are calculated with reference to the GHG Protocol Corporate Standard (2015 revision). We report in tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) and include all gases in the GHG Protocol. We do not include any purchased offsets in our GHG inventory.

We take an operational control approach to defining our GHG and energy organisational boundary. This approach is consistent with our financial statements. This means our equity ownerships are excluded from our combined Scope 1 and 2 footprint but are included in Scope 3 Category 15 (Investments). Data from new facilities are included from the date we take control and the facility becomes operational.

*Scope 1:* Our Scope 1 GHG emissions include emissions from combustion of fuels for energy, heat and vehicles, process emissions from our chemical manufacturing, refrigerants and land use change at our mines. Fuels and refrigerants use consumption invoices from suppliers wherever possible, and estimates from the local teams if invoices are not available in a timely manner for reporting deadlines. We use DEFRA emission factors for Scope 1 fuels globally, and these factors include the Global Warming Potential (GWP) of CH<sub>4</sub> and N<sub>2</sub>O. The GWP used for HFCs is specific to the actual HFC consumed.

*Biomass:* CO<sub>2</sub> from biomass is reported outside of the Scopes. CH<sub>4</sub> and N<sub>2</sub>O emissions from biomass are included in our Scope 1. We assume diesel fuels contain biomass, and use the appropriate DEFRA factors to remove this CO<sub>2</sub> from our Scope 1 and include it in the biomass reporting number.

*Scope 2:* Our Scope 2 emissions include all emissions caused by creating the electricity and steam, using invoices issued by our suppliers. We use IEA emissions factors for location-based Scope 2 emissions, except in the UK where we use DEFRA factors. Scope 2 (market-based) emissions include power purchases associated with a Renewable Energy Certificate (REC) or Guarantee of Origin (GO). We use residual mix factors from the Association of Issuing Bodies (AIB) for European sites without an REC or GO, and use location-based factors for remaining sites market-based emissions.

*Intensity:* We measure gross global scope 1 and 2 emissions in tonnes of CO<sub>2</sub>e per tonne of production output as this is a common intensity metric for our industry sector, and per million US dollars of revenue.

*Scope 3:* For details about our Scope 3 calculation methodology, see the separate document on our website.

*Climate risk assessment:* To assess climate-related financial risks associated with carbon pricing and energy pricing, Elementis uses the Network for Greening the Financial System (NGFS) climate scenario database. Long term carbon and energy price assumptions that we use are averages of the following NGFS model datasets: GCAM 6.0 NGFS, MESSAGEix-GLOBIOM 1.1-M-R12 and REMIND-MAGPIE 3.2-4.6 for Current Policies, Delayed Transition and Net Zero 2050 scenarios. For energy cost trends, we combine NGFS data with an assumed 1.5% per annum growth in our energy demand. For carbon costs, we combine NGFS data with our combined Scope 1 & 2 CO<sub>2</sub>e emissions, either increasing at 1.5% per annum (i.e. a scenario where we do not decarbonise further) and contrast with a scenario where our combined Scope 1 & 2 CO<sub>2</sub>e emissions reduce in line with the IPCC 1.5C Net Zero pathway.

## Water

Water withdrawal data uses invoices from our water suppliers, or our own meter readings where we abstract water directly from the environment. Where invoices are not available, for example at some of our offices, estimates from the local teams are used.

## Waste

Waste data uses invoices from our waste handling suppliers. Where invoices are not available, estimates from the local teams are used.

## Approach to estimation

Where estimation is necessary and invoices exist from a prior data period, this prior period is used to estimate the KPI, adjusting for major changes in the site situation (e.g. a change in office headcount). Where there is no specific consumption data from a prior period (for example, waste from some of our offices), the local team make a calculation based on known facts such as headcount and local waste treatment statistics.

## Approach to restatements

On occasion, data from a previously reported period needs to be corrected, for example due to the availability of updated data or methodological improvements. Where this occurs, we will restate prior year data if the impact is greater than 5% of the previously reported total, and optionally at lower impact levels if it helps within a specific context.

## Supplementary environmental data 2023<sup>1)</sup>

### Scope 1 constituent gases

	CO <sub>2</sub> e	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFC	PFC	SF <sub>6</sub>	NF <sub>3</sub>
Direct GHG emissions (t CO <sub>2</sub> e)	39,217	38,956	157	51	54	0	0	0
Direct emissions (tonnes of gas)		38,956	6	0.2	0.02	0	0	0

### Greenhouse gas (Scope 1 and Scope 2) by region

Tonnes CO <sub>2</sub> e	Global	UK	Europe	Asia	Americas
Scope 1	39,217	5,350	6,906	5,164	21,798
Scope 2 market-based	23,380	973	1,813	12,202	8,390
Scope 2 location-based	44,608	1,532	18,783	12,202	12,090

### Energy from fuel type by region

kWh	Global	UK	Europe	Asia	Americas
Natural Gas	180,972,606	29,152,594	13,503,760	24,999,587	113,316,665
Diesel	6,187,387		1,062,542	1,901,927	3,222,918
Petrol	845,352		264,892	219,458	361,002
LPG	19,607,124		19,213,516		393,608
Propane	490,392	78,350	43,650		368,392
Biomass	10,781,162			10,781,162	

### Purchased energy by region

kWh	Global	UK	Europe	Asia	Americas
<b>Total purchased energy</b>	197,086,154	7,400,651	134,801,939	18,500,160	36,383,405
<b>Total steam</b>	9,930,052		3,194,774		6,735,278
<b>Total electricity</b>	187,156,102	7,400,651	131,607,165	18,500,160	29,648,127
- from renewables	45,951,732	4,734,955	31,195,286		10,021,491
- from nuclear	98,590,186		98,590,186		

### Water withdrawals by region

m <sup>3</sup>	Global	UK	Europe	Asia	Americas
<b>Total water withdrawal</b>	1,310,825	252,777	342,518	199,041	516,490
<b>Water withdrawal by source:</b>					
- Ground	248,877	159,156			89,721
- Surface	185,539		82,008		
- Third Party	876,410	93,621	260,509	199,041	426,769

### Waste sent for third party treatment by region

Tonnes	Global	UK	Europe	Asia	Americas
<b>Hazardous waste landfilled</b>	138		1	137	1
<b>Hazardous waste incinerated</b>	1,126	169	8	869	79
<b>Hazardous waste recycled/reused</b>	12		4		8
<b>Total hazardous waste</b>	1,276	169	13	1,006	88
<b>Non-hazardous waste landfilled</b>	7,664	3,769		32	3,863
<b>Non-hazardous waste incinerated</b>	185		173	12	
<b>Non-hazardous waste recycled/reused</b>	6,420		465	5,769	186
<b>Total non-hazardous waste</b>	14,269	3,770	638	5,813	4,049
<b>Total waste</b>	15,545	3,939	651	6,819	4,137

<sup>1)</sup> While Global data has been verified to a reasonable level by a third party (TÜV SÜD – see their verification statement on our website), totals for individual regions have not expressly been verified by them.