

# SEPA'S ENVIRONMENTAL PERFORMANCE 2017 – 2018

## DETAILED DATA

| EMISSIONS OF CARBON DIOXIDE EQUIVALENT (KILOGRAMMES OF CO <sub>2</sub> e) BY SOURCE<br>2017-2018 COMPARED TO 2016-2017 |                                   |                                   |                 |                   |
|--|-----------------------------------|-----------------------------------|-----------------|-------------------|
| Source   | CO <sub>2</sub> e (kg)<br>2016-17 | CO <sub>2</sub> e (kg)<br>2017-18 | Unit<br>Change  | Percent<br>Change |
| <b>EMISSIONS FROM ENERGY USED IN BUILDINGS</b>   |                                   |                                   |                 |                   |
| Grid Electricity (generation)  | 1,237,991                         | 1,038,621                         | -199,370        | -16.1             |
| Grid Electricity (transmission & Distribution losses)  | 111,977                           | 97,109                            | -14,868         | -13.3             |
| Natural Gas  | 227,789                           | 181,526                           | -46,263         | -20.3             |
| Photo Voltaic Generation   | -13,891                           | -12,502                           | 1,388           | -10.0             |
| Biomass  | 973                               | 2,441                             | 1,468           | 150.9             |
| Kerosene - Burning oil   | 13,723                            | 14,432                            | 709             | 5.2               |
| <b>Total Emissions from buildings</b>  | <b>1,532,299</b>                  | <b>1,296,504</b>                  | <b>-235,795</b> | <b>-15.4</b>      |
| <b>EMISSIONS FROM TRANSPORT AND TRAVEL</b>   |                                   |                                   |                 |                   |
| Diesel (fleet vehicles)  | 181,798                           | 190,964                           | 9,167           | 5.0               |
| Petrol (fleet vehicles)  | 26,278                            | 23,209                            | -3,069          | -11.7             |
| Business car miles - diesel  | 261,562                           | 260,958                           | -604            | -0.2              |
| Business car miles - petrol  | 147,879                           | 145,058                           | -2,822          | -1.9              |
| Business car miles - Hybrid  | 1,185                             | 913                               | -272            | -23.0             |
| Business car miles - LPG   | 5,852                             | 4,230                             | -1,622          | -27.7             |
| Business car miles - EV  | 158                               | 389                               | 231             | 146.0             |
| Car H2   | 0                                 | 864                               | 864             | NA                |
| Rail (national rail)   | 97,311                            | 103,825                           | 6,514           | 6.7               |
| Ferry  | 1,300                             | 1,128                             | -173            | -13.3             |
| Domestic flights   | 24,384                            | 35,626                            | 11,242          | 46.1              |
| Short haul flights   | 20,188                            | 28,487                            | 8,299           | 41.1              |
| International Flight   | 0                                 | 36,735                            | 36,735          | NA                |
| Long haul flights  | 425                               | 23,886                            | 23,461          | 5517.6            |
| <b>Total Emissions from Transport and Travel</b>   | <b>768,320</b>                    | <b>856,272</b>                    | <b>87,952</b>   | <b>11.4</b>       |
| Diesel for the Sir John Murray survey vessel   | <b>120,239</b>                    | <b>86,097</b>                     | <b>-34,143</b>  | <b>-28.4</b>      |
| <b>SEPA'S TOTAL EMISSIONS</b>  | <b>2,420,858</b>                  | <b>2,238,872</b>                  | <b>-181,986</b> | <b>-7.5</b>       |
| Emissions per employee (tonnes)  | <b>2.06</b>                       | <b>1.88</b>                       | <b>-0.18</b>    | <b>-8.7</b>       |
| <b>NUMBER OF UNITS FOR EACH SOURCE OF OUR EMISSIONS IN 2017-2018 COMPARED TO THE PREVIOUS THREE YEARS</b>              |                                   |                                   |                 |                   |
| Source   | 2014-2015                         | 2015-2016                         | 2016-2017       | 2017-2018         |
| Electricity (kWh)  | 3,758,377                         | 3,320,122                         | 3,004,469       | 2,954,322         |
| Gas (kWh)  | 1,422,659                         | 1,234,965                         | 986,572         | 849,261           |
| Fuel Oil (litres)  | 5,523                             | 6,130                             | 5,419           | 5,699             |
| Biomass (tonnes)   | 17                                | 16                                | 10              | 41                |
| Fleet vehicles fuel (litres)   | 87,253                            | 83,960                            | 81,572          | 84,001            |
| Business car (miles)   | 1,577,341                         | 1,381,374                         | 1,390,813       | 1,409,847         |
| Rail (miles)   | 1,250,710                         | 1,261,204                         | 1,237,829       | 1,379,098         |
| Ferry (miles)  | 17,655                            | 11,832                            | 6,962           | 6,035             |
| Air domestic (miles)   | 75,555                            | 66,173                            | 54,372          | 82,773            |
| Air short haul (miles)   | 85,314                            | 118,068                           | 74,475          | 109,924           |
| Air long haul (miles)  | 0                                 | 51,333                            | 1,379           | 75,170            |
| Air international (miles)  | 0                                 | 0                                 | 0               | 126,628           |
| Sir John Murray fuel (litres)  | 44,800                            | 45,300                            | 46,040          | 33,112            |

| WASTE ARISING AND COMPOSITION 2017-2018  |            |
|--|------------|
| <b>Total waste arisings: 166.7 tonnes</b>  |            |
| <b>Tonnes of waste we recycled</b>   |            |
| Paper & Cardboard  | 65.5       |
| Mixed Recyclables  | 24.2       |
| Glass  | 4.12       |
| Cans   | 0.1        |
| Plastic  | 0.7        |
| WEEE <sup>1</sup>  | 0.001      |
| Food   | 13.7       |
| Mixed Metal  | 1.2        |
| Misc.  | 0.04       |
| Toner  | 0.084      |
| Other  | 0.3        |
| <b>Tonnes of waste we sent to MRF/EFW and that is recycled or energy recovered</b> |            |
| MRF/EFW <sup>2</sup>   | 38.58      |
| <b>Tonnes of waste we sent to landfill</b>   |            |
| Landfill   | 18.3       |
| <b>Total Recycled</b>  | <b>66%</b> |
| <b>Landfill Avoidance</b>  | <b>89%</b> |
| <sup>2</sup> WEEE = Waste Electronic and Electrical Equipment                      |            |
| <sup>1</sup> MRF/EFW = Materials Recycling Facility/Energy From Waste              |            |

| GREENHOUSE GAS EMISSIONS FROM SEPA'S WASTE 2017-2018  |   |  |
|---|---|--|
| Waste Stream  | GHG Net Impact (tonnes CO <sub>2</sub> e) from material & waste | GHG impact (tonnes CO <sub>2</sub> e) saved by recycling |
| General Waste <sup>1</sup>  | 267.9   | -16  |
| Paper & Cardboard   | 22.2  | -35.8  |
| Glass   | 1.4   | -2.2   |
| Cans  | 1.7   | -3.2   |
| Plastic   | 1.8   | -0.4   |
| WEEE <sup>2</sup>   | 0.002   | 0  |
| Food  | 50.5  | -0.96  |
| <b>Total</b>  | <b>345.5 tonnes</b>   | <b>-58.6 tonnes</b>                                      |
| <sup>1</sup> General waste is composed of landfill, MRF/EFW and Mixed recyclables   |   |  |
| <sup>2</sup> WEEE = Waste Electronic and Electrical Equipment   |   |  |
| The use of conversion factors supplied by Zero Waste Scotland allows us to quantify the environmental benefits from waste prevention, particularly recycling. These factors form the foundation of the Carbon Waste Metric and are based partly on a consumption approach to carbon accounting. They include the impact of producing materials, as well as the impact of disposing of them, creating a more complete picture of the impacts from waste. |   |  |