

## **Fortem Sustainability KPI Reporting Document**

### Introduction

This document explains the definitions, scopes, methodologies, and assumptions Fortem uses to calculate and report sustainability performance, as published in Fortem’s Annual Report and Accounts.

Relevant Policies:

- Sustainability strategy - <https://www.fortem.co.uk/approach/sustainability/>
- Carbon Reduction Plan - [https://www.fortem.co.uk/\\_downloads/carbon-reduction-plan/](https://www.fortem.co.uk/_downloads/carbon-reduction-plan/)

*This list is not exhaustive*

### Internal review process and sign off

- Data is collected at the lowest reporting level
- Data is input to standard systems for review, including evidence documents
- Internal review is completed by central functions
- Data submitted for external assurance, annually

### Detailed KPI Methodology

<b>Operational Carbon Emissions</b>	
KPI owner	National Sustainability Manager
Performance measure	Total absolute carbon emissions (measured in tonnes of carbon dioxide equivalent) generated during the reporting period
KPI Unit	Tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e)
Scope	<p>This KPI refers to all scope 1 and 2 emissions and selected scope 3 emissions. Scope 3 emissions where Fortem has the greatest level of control, and which can be confidently reported, are included in Fortem’s operational carbon emissions.</p> <p>Fortem’s operational carbon emissions: Fortem uses the operational control approach and opts to include anything that Fortem directly pays for under scope 1 &amp; 2 emissions and select scope 3 emissions (on account of these being the emissions that Fortem can influence and control). Scope 2 emissions from electricity are calculated using the market-based approach to account for renewable electricity procurement.</p> <p>Fortem’s operational emissions</p> <p>Direct</p> <ul style="list-style-type: none"> <li>- Scope 1 <ul style="list-style-type: none"> <li>- Fuel use: mains gas, diesel, LPG, hydrogenated vegetable oil (HVO)</li> <li>- Transport: business and commute travel from company vehicles</li> </ul> </li> </ul> <p>Indirect</p> <ul style="list-style-type: none"> <li>- Scope 2: <ul style="list-style-type: none"> <li>- Purchased electricity (market-based)</li> </ul> </li> <li>- Scope 3 <ul style="list-style-type: none"> <li>- Category 6: Business travel</li> <li>- Category 7: Employee commuting</li> </ul> </li> </ul>

	<p>Fortem’s operational emissions (Government's Streamlined Energy and Carbon Reporting [SECR] compliance)<sup>1</sup>:</p> <p>For compliance with SECR, Fortem captures additional operational emissions, including the energy that is consumed but not directly paid for i.e. electricity provided by a client on construction sites or as part of an office lease. In this instance, scope 2 emissions from electricity are calculated using the location-based method.</p>
<p>Methodology</p>	<p>Fortem’s carbon emissions are calculated in accordance with international standards (Greenhouse Gas Protocol and ISO14064) and categorised as scope 1, 2 and 3 as described in the WBCSD/WRI Greenhouse Gas Protocol Reporting standard<sup>2</sup>.</p> <p>Data is collected from the following sources:</p> <ul style="list-style-type: none"> <li>• Billing from suppliers (e.g. electricity companies, fuel suppliers, and fuel cards) captured in a financial reporting system using information from paid invoices.</li> <li>• Employee travel returns (as part of business and commute travel expense claims)</li> <li>• Site level data entered in SmartWaste<sup>3</sup>, a construction specific sustainability data capture software (e.g. client electricity consumption, waste, and water).</li> </ul> <p><b>Scope 1</b></p> <p>Site and office mains gas Gas consumption, from offices and sites, is recorded using information from invoices. Consumption is converted from kWh to CO<sub>2</sub>e using the relevant Defra conversion factor. Where Fortem is recharged for gas consumption, in a shared office space i.e. with a client or supply chain partner or on a temporary site, gas consumption is calculated from billing information, where available.</p> <p>Fuel use (diesel, petrol, HVO and LPG) Quantity of purchased fuel is entered in SmartWaste and cross-checked with delivery and invoice records from fuel suppliers. Quantities are converted to CO<sub>2</sub>e using the relevant Defra conversion factor.</p> <p>Travel from company vehicles (business and commute miles) Travel from company vehicles includes two data sources:</p> <ul style="list-style-type: none"> <li>• Fuel card reports provide data on quantity of fuel purchased and fuel type. This is then converted to CO<sub>2</sub>e using the relevant Defra conversion factors, depending on fuel type.</li> <li>• Where the quantity of fuel is not stated for a transaction, an average (£/litres) value is used to estimate the quantity</li> <li>• Distance travelled in company vehicles is recorded using mileage capture and audit software. Distance travelled is multiplied by the published</li> </ul>

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HM Government, 2019. Environmental reporting guidelines: including streamlined energy and carbon reporting guidance. <https://assets.publishing.service.gov.uk/media/67161e8696def6d27a4c9ab3/environmental-reporting-guidance-secr-march-2019.pdf>

<sup>2</sup> Corporate Standard | GHG Protocol. <https://ghgprotocol.org/corporate-standard>.

<sup>3</sup> <https://www.smartwaste.co.uk>

	<p>carbon emissions for the individual vehicle. Individual vehicle details are provided directly to the mileage capture software via Clear Vehicle Data (CVD)<sup>4</sup>.</p> <p><b>Scope 2</b> Emissions from purchased electricity – market based</p> <ul style="list-style-type: none"> <li>• Electricity consumption from sites and offices is recorded using information from paid invoices</li> <li>• Where Fortem is recharged for gas consumption, in a shared office space i.e. with a client or supply chain partner or on a temporary site, electricity consumption is calculated from billing information, where available.</li> <li>• Electricity used to charge leased operational fleet vehicles is recorded using EV charging card transaction reports</li> <li>• Where the quantity of electricity is not stated for a charge session, an average (£/kWh) value is used to estimate the quantity</li> <li>• Electricity supplies are classified as renewable and therefore zero CO<sub>2</sub>e, where: <ul style="list-style-type: none"> <li>○ They are procured through Fortem’s energy broker, appointed to provide only 100% renewable electricity backed by REGO certificates (Renewable Energy Guarantees of Origin) on Fortem’s behalf or,</li> <li>○ They are provided by companies that are known to provide only 100% natural renewable electricity or,</li> <li>○ Evidence of the electricity supply being from a renewable source has been obtained</li> </ul> </li> <li>• Details of the public charge point operators used to charge our operational fleet vehicles are available in the EV charge card transaction report. If a charge point operator states they use 100% renewable electricity on their website, zero CO<sub>2</sub>e is reported. If no claim is found, an assumption is made that the operator does not use a renewable supply of electricity. Where home charge points are used, the assumption is made that the electricity supply is non-renewable.</li> <li>• All other supplies are assumed to be non-renewable</li> <li>• Non-renewable electricity consumption is converted to CO<sub>2</sub>e using the Association of Issuing Bodies (AIB) residual mix conversion factor<sup>5</sup> for the UK.</li> </ul> <p>Emissions from purchased electricity – location based</p> <ul style="list-style-type: none"> <li>• Electricity consumption from sites and offices, is recorded using information from paid invoices.</li> <li>• Electricity used to charge leased operational fleet vehicles is recorded using EV charging card transaction reports</li> <li>• Where the quantity of electricity is not stated for a charge session, an average (£/kWh) value is used to estimate the quantity</li> <li>• Electricity consumption (kWh) is converted to CO<sub>2</sub>e using the UK national grid average conversion factor<sup>6</sup> published by Defra. This data is provided in</li> </ul>
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<sup>4</sup> <https://clearvehicledata.com/>

<sup>5</sup> <https://www.aib-net.org/facts/european-residual-mix>

<sup>6</sup> <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023>

	<p>accordance with best practice and for compliance with SECR Regulations but is not included in Fortem’s operational emissions.</p> <p>Emissions from electricity consumed to charge electric vehicles (EV) and plug-in hybrid electric vehicles (PHEV) (Company cars)</p> <ul style="list-style-type: none"> <li>Distance travelled in company car vehicles and the type of each vehicle is recorded using transport data capture and audit software. The total distance travelled in fully electric or plug-in hybrid vehicles is converted to electricity (kWh) by multiplying by the relevant Defra conversion factor. Electricity consumption is converted to CO<sub>2</sub>e using the Association of Issuing Bodies (AIB) residual mix conversion factor for the UK and UK national grid average conversion factor published by Defra for market-based and location-based reporting, respectively.</li> </ul> <p>Client procured electricity – location based</p> <ul style="list-style-type: none"> <li>Electricity consumption at sites or offices that Fortem does not directly pay for is recorded from meter readings and entered in SmartWaste. This data is provided in accordance with best practice and for compliance with SECR Regulations but is not included in Fortem’s operational emissions. Consumption is converted from kWh to CO<sub>2</sub>e using the UK electricity national grid average conversion factor published by Defra.</li> </ul> <p><b>Scope 3</b></p> <p>Travel from grey fleet (business and commute)</p> <ul style="list-style-type: none"> <li>Distance travelled in grey fleet vehicles, on business and commute purposes, is recorded using mileage capture and audit software. Distance travelled is then multiplied by the published carbon emissions for the individual vehicle. Individual vehicle details are provided directly to the mileage capture software via a CVD.</li> </ul> <p>Emissions from electricity consumed to charge EV and PHEV (Grey fleet)</p> <p>Distance travelled and the type of each vehicle is recorded using transport data capture and audit software. The total distance travelled in fully electric or plug-in hybrid vehicles is converted to electricity (kWh) by multiplying by the relevant Defra conversion factor. Electricity consumption is converted to CO<sub>2</sub>e using the Association of Issuing Bodies (AIB) residual mix conversion factor for the UK and UK national grid average conversion factor published by Defra for market-based and location-based reporting, respectively.</p> <p>Train travel</p> <ul style="list-style-type: none"> <li>Train travel is recorded through the business expenses system. Origin and destination stations are used to calculate distance travelled in one journey (based on track distance). If a return journey has been specified, this distance is multiplied by two. For season tickets the system uses a series of assumptions based to calculate total distance<sup>7</sup>. Distance travelled is converted to CO<sub>2</sub>e using the relevant Defra conversion factor.</li> <li>Train travel reported on the expense date and as a result, any expenses logged after the cut-off date are added to the following year. Any expenses</li> </ul>
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<sup>7</sup> For tickets over 5 days in duration, working days have been calculated by removing weekends, annual leave, bank holidays, average sick days and, where applicable, non-travel days

	<p>that are incorrectly logged under train travel (such as parking at the train station) are excluded.</p> <p>Emissions from purchased goods and services:</p> <ul style="list-style-type: none"> <li>• Emissions from purchased goods and services are calculated using a spend based method using the UK Government Defra factors for UK emissions intensity by SIC code. The latest published intensity factor published is for 2022, therefore this is used. Invoices are categorised by industry according to descriptions entered by the finance department at the time of logging the invoices.</li> <li>• Information on purchased goods and services for the year is taken from our financial system (F&amp;O). The total CO<sub>2</sub>e emissions amount is based on paid invoices only.</li> </ul> <p>Emissions from waste</p> <ul style="list-style-type: none"> <li>• Relevant Defra conversion factors are used for each waste stream to convert from tonnes of waste to CO<sub>2</sub>e</li> <li>• Emissions from wastewater are not currently reported on</li> </ul> <p>Transmission and Distribution (T&amp;D) losses</p> <ul style="list-style-type: none"> <li>• CO<sub>2</sub>e from T&amp;D losses for site and office electricity are calculated by multiplying kWh of electricity consumed by the relevant Defra conversion factor. For electric vehicles, distance travelled by EVs and plug-in hybrids are multiplied by the respective Defra conversion factors for T&amp;D losses from electric vehicles.</li> </ul> <p>Well to Tank Emissions (WTT)</p> <ul style="list-style-type: none"> <li>• WTT emissions have been calculated for electricity generation and T&amp;D losses, fuels, bioenergy, and travel by vehicle to account for the extraction, processing, production, and distribution of fuels. Raw data (kWh, litres, kg, miles) is multiplied by the relevant Defra conversion factors.</li> </ul> <p><b>Out of Scope Emissions</b></p> <ul style="list-style-type: none"> <li>• Biogenic HVO emissions <ul style="list-style-type: none"> <li>○ Where HVO fuel is used, 'out of scope' emissions are calculated to account for the direct CO<sub>2</sub>e released during combustion. The emissions are labelled 'outside of scopes' because the fuel source absorbs an equivalent amount of CO<sub>2</sub> during the growth phase as the amount of CO<sub>2</sub>e released through combustion. This is calculated by multiplying the quantity of HVO by the relevant Defra conversion factor.</li> </ul> </li> <li>• Forecourt fuels containing biofuel <ul style="list-style-type: none"> <li>○ Where forecourt petrol and diesel have been purchased, out of scope emissions are calculated to account for the direct CO<sub>2</sub>e released during combustion. This is calculated by multiplying total quantity by the relevant Defra conversion factor.</li> </ul> </li> </ul>
Assumptions	Operational carbon emissions include business travel from company vehicles, grey fleet, and trains, as well as employee commuting by car and train. Other

	modes of business travel are excluded from the footprint but account for less than 1% of the footprint <sup>8</sup> .
<b>Percentage of renewable electricity from sites and offices</b>	
KPI owner	National Sustainability Manager
Performance measure	<p>Amount of renewable electricity consumed as a percentage of Fortem's total electricity consumed during the reporting period. This includes electricity used in offices, on site and to charge operational fleet vehicles.</p> <p>Electricity sources are classified as renewable where they have been procured through Fortem's energy broker, Planet First (who are appointed to provide only 100% renewable electricity on Fortem's behalf), or where the supply is provided by a certified supplier of 100% renewable energy. Fortem's broker only procure supplies that are backed by REGO certificates (Renewable Energy Guarantees of Origin).</p>
KPI Unit	Percentage
Scope	This KPI covers all electricity purchased directly by Fortem, paid for within the reporting period.
Methodology	<p>Electricity consumption from sites and offices is captured in a financial reporting system using information from paid invoices. The invoices are generated by the respective energy companies and provide the amount of energy consumed, the site name, the supplier, and the date of payment.</p> <p>The total kWh purchased from renewable supplies is then calculated as a percentage of the total kWh of electricity purchased.</p>
Assumptions	No relevant assumptions are made

<b>Percentage of company fleet and grey fleet vehicles that are electric</b>	
KPI owner	National Sustainability Manager
Performance measure	Percentage of vehicles in Fortem's fleet which are fully electrically powered. Fortem's fleet includes company-owned vehicles and grey fleet vehicles.
KPI Unit	Percentage
Scope	All company cars and grey fleet used for business travel and commuting for Fortem. Only vehicles powered solely by electricity are included, hybrid and plug in hybrid vehicles are not included.
Methodology	The vehicle details of all company cars and grey fleet cars owned by Fortem employees are recorded using mileage capture software. A report can be generated at any specified point in the year detailing the vehicles that are currently in use by Fortem employees. This report is used to calculate the

<sup>8</sup> Other modes of business travel include travel by plane, taxi, bus, ferry, tram and tube. Where exact mileage information is not available, miles have been estimated for a number of journeys for each transport type and using analysis of miles per £1 for these trips, mileage assumptions have been applied to each journey type.

	number of vehicles that are fully electric as a percentage of the total number of vehicles currently in Fortem's fleet at year end. Individual vehicle details are provided directly to the mileage capture software via CVD.
Assumptions	No relevant assumptions are made

<b>Percentage of operational fleet vehicles that are electric</b>	
KPI owner	National Sustainability Manager
Performance measure	Percentage of vehicles in Fortem's operational fleet which are fully electric.
KPI Unit	Percentage
Scope	All operational fleet vehicles leased by Fortem. Fortem's operational fleet includes vehicles leased for the purpose of delivering contracted services. Only vehicles powered solely by electricity are included, hybrid and plug in hybrid vehicles are not included.
Methodology	The vehicle details of all leased vehicles are provided in monthly reports from vehicle providers. A report is generated detailing the vehicles that are currently on hire by Fortem. This report is used to calculate the number of vehicles that are fully electric as a percentage of the total number of vehicles currently in Fortem's fleet at year end.
Assumptions	No relevant assumptions are made

<b>Total construction and demolition waste generated</b>	
KPI owner	National Sustainability Manager
Performance measure	Total amount of construction and demolition waste generated within the reporting period. <ul style="list-style-type: none"> <li>Construction waste is any waste generated by Fortem that is not defined as demolition waste or excavation waste.</li> <li>Demolition waste is unwanted material arising from the demolition or strip out of an existing structure, this includes soft-strip.</li> </ul>
KPI Unit	Tonnes
Scope	This KPI relates to all construction and demolition waste generated from Fortem contracts within the reporting period. This does not include excavation and unavoidable waste: <ul style="list-style-type: none"> <li>Excavation waste is unwanted material resulting from excavation activities such as a reduced level dig and site preparation and levelling, and the excavation of foundations, basements, tunnels, and service trenches, typically consisting of soil and stones.</li> <li>Unavoidable waste materials include street cleaning residue, septic tank sludge and any hazardous waste produced during operations – where</li> </ul>

	there is no alternative treatment process apart from disposal. A list of unavoidable waste materials is included in appendix A.
Methodology	<p>SmartWaste is used to record waste movements. This captures information such as the movement date, project phase (i.e. construction, demolition, excavation), waste transfer note reference number and total amount of waste materials.</p> <p>For mixed waste movements, the waste materials, and the approximate percentage that each material makes up is entered, where possible. For segregated waste, the waste material is entered.</p> <p>Total construction and demolition waste is calculated from the total amount of all waste materials entered with unavoidable waste materials, removed.</p>
Assumptions	No relevant assumptions are made

<b>Percentage of construction and demolition waste diverted from landfill</b>	
KPI owner	National Sustainability Manager
Performance measure	<p>Total construction and demolition waste that has been diverted from landfill as a percentage of total combined construction and demolition waste that has been generated during the reporting period.</p> <ul style="list-style-type: none"> <li>• Construction waste is any waste generated by Fortem that is not defined as demolition waste or excavation waste.</li> <li>• Demolition waste is unwanted material arising from the demolition or strip out of an existing structure, this includes soft-strip.</li> </ul> <p>Waste is considered diverted from landfill if it is not subject to landfill tax.</p>
KPI Unit	Percentage
Scope	<p>This KPI refers to all construction and demolition waste generated from Fortem contracts within the reporting period, excluding excavation and unavoidable waste:</p> <ul style="list-style-type: none"> <li>• Excavation waste is unwanted material resulting from excavation activities such as a reduced level dig and site preparation and levelling, and the excavation of foundations, basements, tunnels, and service trenches, typically consisting of soil and stones.</li> <li>• Unavoidable waste streams include street cleaning residue, septic tank sludge and any hazardous waste produced during operations – where there is no alternative treatment process apart from disposal. A list of unavoidable waste materials is included in appendix A.</li> </ul>
Methodology	In SmartWaste, diversion from landfill rates are recorded for each waste destination. Where possible, rates are applied to specific material types; otherwise, an overall rate for the destination is used.

	When waste movement information is entered and a destination selected, the system then automatically calculates the percentage of that waste movement that was diverted from landfill.						
Assumptions	<p>Evidence of diversion rates is provided depending on the destination of the waste. Where no evidence is available, worst case scenario default diversion rates are used instead and are automatically applied in SmartWaste. Default rates are taken from ENCORD Construction Waste Measurement Protocol Appendix 3<sup>9</sup>:</p> <table border="1" data-bbox="528 591 1315 878"> <thead> <tr> <th data-bbox="528 591 1174 636">Destination</th> <th data-bbox="1174 591 1315 636">Diversion rate</th> </tr> </thead> <tbody> <tr> <td data-bbox="528 636 1174 757">           Mixed waste sent off site for recycling or energy recovery            Waste deposited in mixed containers on site and sent to a dedicated Recycling Centre, Materials Recovery Facility or Waste Transfer Station for recycling, or incineration at an energy recovery facility.         </td> <td data-bbox="1174 636 1315 757">50%</td> </tr> <tr> <td data-bbox="528 757 1174 878">           Segregated waste sent off site for recycling or energy recovery            Wastes that are placed into segregated containers on site and sent to a dedicated Recycling Centre, Materials Recovery Facility or Waste Transfer Station for recycling, or incineration at an energy recovery facility<sup>10</sup>.         </td> <td data-bbox="1174 757 1315 878">80%</td> </tr> </tbody> </table>	Destination	Diversion rate	Mixed waste sent off site for recycling or energy recovery Waste deposited in mixed containers on site and sent to a dedicated Recycling Centre, Materials Recovery Facility or Waste Transfer Station for recycling, or incineration at an energy recovery facility.	50%	Segregated waste sent off site for recycling or energy recovery Wastes that are placed into segregated containers on site and sent to a dedicated Recycling Centre, Materials Recovery Facility or Waste Transfer Station for recycling, or incineration at an energy recovery facility <sup>10</sup> .	80%
Destination	Diversion rate						
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Segregated waste sent off site for recycling or energy recovery Wastes that are placed into segregated containers on site and sent to a dedicated Recycling Centre, Materials Recovery Facility or Waste Transfer Station for recycling, or incineration at an energy recovery facility <sup>10</sup> .	80%						

Appendices

**Appendix A - Unavoidable Waste Types**

<b>Waste Type</b>
Hazardous waste*
Street-cleaning residues (20 03 03)
Septic tank sludge (20 03 04)

<sup>9</sup> Law, Charlie. ENCORD CO2e and Waste Measurement Protocols. p. Page 23-Appendix 3.