

## Appendix 1 - Reporting Methodology

The tables below expose the data collection and calculation formulae for the College's GHG inventory:

### Scope 1: Direct Emissions

Inventory Item	Data Collection	Emissions Calculation Method
LPG	The College's LPG consumption is captured as the litres invoiced by suppliers.	Consumption (litres) x Emissions Factor
Burning Oil	The Estates Department records all kerosene input across the campus. Consumption for the year is represented by all recorded input into the boilers during the reporting period.	Consumption (litres) x Emissions Factor
Diesel (average biofuel blend)	All fuel purchasing activity is recorded by a Third Party, Allstar. Consumption of diesel is represented by all recorded litres purchased.	Consumption (litres) x Emissions Factor
Gas oil	All Gas Oil (Red Diesel) consumption is recorded within the Estates Dept and summed according to reporting year.	Consumption (litres) x Emissions Factor
Petrol (average biofuel blend)	All fuel purchasing activity is recorded by a Third Party, Allstar. Consumption of unleaded petrol is represented by all recorded litres purchased.	Consumption (litres) x Emissions Factor
Biomass (Wood chip)	All wood chip loaded into boilers is recorded with volume in cubic metres.	Cubic metres x (Conversion Factor (kg/m <sup>3</sup> )/1000) x Emissions Factor
Biomass (Wood Pellet)	Wood pellet usage is recorded via heat meter records from the plant rooms of all wood pellet boilers on site.	kWh x Emissions Factor

### Scope 2: Energy Indirect

Inventory Item	Data Collection	Emissions Calculation Method
Electricity generated	Electricity consumed is summed for all facilities owned and operated by the College, via invoiced consumption from electricity suppliers. Where the	Consumption (kWh) x Emissions Factor

# BCA Environmental Report 2019/20 - Appendices

	College purchases electricity which is consumed by third parties, this consumption is deducted and discounted from Scope 2 consumption.	
Renewable electricity purchased	All electricity purchased through the College's current contract with Orsted is summed as renewable electricity, for which a separate emissions factor is required.	Consumption (kWh) x Emissions Factor

## Scope 3: Other Indirect

Inventory Item	Data Collection	Emissions Calculation Method
LPG	LPG consumption for heating and hot water in spaces leased to third parties is summed according to invoice information for the reporting period.	Consumption (litres) x Emissions Factor
Burning Oil	Kerosene consumption for heating and hot water in spaces leased to third parties is summed according to invoice information for the reporting period.	Consumption (litres) x Emissions Factor
Biomass (Wood Chip)	Biomass consumption for heating and hot water in spaces leased to third parties is summed according to invoice information for the reporting period.	Consumption (tonnes) x Emissions Factor
T&D - UK Electricity	For all electricity purchased by BCA (excluding that which is purchased and resold to third parties in leasing arrangements), consumption is summed according to invoice data provided by electricity suppliers.	Purchased electricity (kWh) x Emissions Factor
Water Supply	Water consumption to BCA's site is summed according to data recorded by the Estates Dept from manual meter reading.	Consumption (litres) x Emissions Factor
Water Treatment	Water consumption to BCA's site is summed according to data recorded by the Estates Dept from manual meter reading. A deduction is then made based on an estimation of water that goes to troughs, soakaways, or otherwise does not return to the	(Consumption (litres) - non-outflow (5%)) x Emissions Factor

# BCA Environmental Report 2019/20 - Appendices

	sewage outflow of the site.	
Paper	Paper used throughout the College is recorded by reporting software on printers. This is summed as an approximate value in A4 sheets.	(Sheets x weight (5g)) x Emissions Factor
Municipal Waste	Waste is summed as a volume, in monthly data provided by the College's waste management partner. Volume is then converted to weight, using a DEFRA conversion factor of 0.27 tonnes per cubic metre.	Volume x DEFRA Volume-to-weight Conversion Factor x Emissions Factor
Organic: Food & Drink Waste	Food waste is summed as a volume, in monthly data provided by the College's waste management partner.	Volume x Emissions Factor

## Appendix 2 - Disclosures List

### Exclusions

The table below shows exclusions (and accompanying justification) from the College's GHG Inventory:

### Exclusions

Inventory Item	Reason for Exclusion
<b>Scope 3 - Construction Material Use</b> (incl. Aggregates, Average Construction, Asphalt, Bricks, Concrete, Insulation, Metals, Soils, Mineral Oil, Plasterboard, Tyres, Wood)	There is known usage of these materials. However, there is no current, nor historical data, from which to estimate construction material use. There are regular, small scale improvement projects to facilities and consequently there is a potentially significant volume of emissions left unquantified by virtue of the absence of these values.
<b>Scope 3 - Other Material Use</b> (incl. Books, Glass, Clothing, Food & Drink)	There is known usage of these materials. However, there is no current, nor historical data, from which to estimate these material consumption values. Further investigation is required to identify the significance of this absence of data.
<b>Scope 3 - Waste Disposal</b> (incl. Scrap Metal, WEEE, batteries,	These waste streams are currently collected from the business site, however volume is not currently centrally recorded.

# BCA Environmental Report 2019/20 - Appendices

---

Paper types)	
<b>Scope 3</b> - Business Travel - Land	The College currently uses third party coach services to facilitate student travel to and from campus, however there is no current data from which to estimate significantly accurate cumulative emissions from this activity.