Greenhouse Gas Protocol (Dual Reporting) Report for The University of Edinburgh

Assessment Period: August 2020 - July 2021

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Assessment Details

Consolidation Approach

Operational control

Organisational Boundaries

Operations of The University of Edinburgh

Included

- The University of Edinburgh
- Academic estate
- Accommodation

Operational Boundary

- Air travel
- Bicycle
- Bus and coach
- Cars
- Composted waste
- Electricity
- Ferry
- Fuel oil
- Hazardous waste
- Hotel night stays
- Incinerated waste
- Landfilled waste
- Motorcycle
- Natural gas
- On foot
- Other fuel(s)
- Other fuels, UK (gross CV)
- Rail
- Rail (train, tram, light rail, underground)
- Recycled plastic
- Recycled waste
- Refrigerant gas loss and other fugitive emissions
- Residential waste mass anaerobic digestion (ERWMADI)
- Residential waste mass used to create energy (ERWMENE)
- Taxi
- Water supply
- Water treatment

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Introduction

A greenhouse gas (GHG) emissions assessment quantifies the total greenhouse gases produced directly and indirectly from a business or organisation's activities. Also known as a carbon footprint, it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

A GHG assessment quantifies all seven Kyoto greenhouse gases where applicable and is measured in units of carbon dioxide equivalence, or CO_2e[1]. The seven Kyoto gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF_3), sulphur hexafluoride (SF_6) and perfluorocarbons (PFCs). The global warming potential (GWP) of each gas is illustrated in the Table 1.

Table 1. GWP of Kyoto Gases (IPCC 2007)

Greenhouse Gas	GWP
Carbon dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous oxide (N_2O)	298
Hydrofluorocarbons (HFCs)	124 - 14,800
Perfluorocarbons (PFCs)	7,390 - 12,200
Nitrogen trifluoride (NF_3)	17,200
Sulphur hexafluoride (SF_6)	22,800

This assessment has been carried out in accordance with the World Business Council for Sustainable Development and World Resources Institute's (WBCSD/WRI) Greenhouse Gas Protocol; a Corporate Accounting and Reporting Standard, including the GHG Protocol Scope 2 Guidance. This protocol is considered current best practice for corporate or organisational greenhouse gas emissions reporting. GHG emissions have been reported by the three WBCSD/WRI Scopes.

Scope 1 includes direct GHG emissions from sources that are owned or controlled by the company such as natural gas combustion and company owned vehicles.

Scope 2 accounts for GHG emissions from the generation of purchased electricity, heat and steam generated off-site. As the subject of this assessment operates in markets which offer contractual instruments with product or supplier-specific data, scope 2 emissions are reported using both the location-based method and the market-based method. The location-based method applies average emission factors that correspond to the grid where consumption occurs, whereas the market-based method applies emission factors that correspond to energy purchased (or not purchased) through contractual instruments. Contractual instruments include energy attribute certificates, direct energy contracts, and supplier specific emission rates. The subject of this assessment has ensured that any contractual instruments used in the market-based method have met the Scope 2 Quality Criteria, as defined in the Guidance. Where contractual instruments do not meet the Quality Criteria, or where contractual instruments were not purchased, market-based scope 2 emissions have been calculated using residual mix emission factors. Where residual mix emission factors are not available, market-based scope 2 emissions have been calculated using default location grid-average emission factors, per the Protocol hierarchy. This may result in double counting between electricity consumers, as an adjusted emission factor taking into account voluntary purchases of electricity with specific attributes was not available.

Scope 3 includes all other indirect emissions such as waste disposal, business travel and staff commuting. Reporting of these activities is optional under the WBCSD/WRI GHG Protocol, but as they can contribute a significant portion of overall emissions Ecometrica recommends they are reported where applicable.

A GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated. GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or CSR reporting. Ecometrica GHG assessments are designed to be transparent, consistent and repeatable over time.

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[1] Carbon dioxide equivalent or CO_2e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact.

Data Quality and Availability

In order to provide the most accurate estimate of an organisation's GHG emissions, primary (actual) data should be used where it is available, up to date and geographically relevant. Secondary data in the form of estimates, extrapolations and industry averages may be used when primary data is not available. Table 2 details the quality of data submitted for this assessment with the key assumptions used stated below.

Data Quality Overview

Location-based

Accuracy Overview	tCO_2e/year	%
Actual	65,706	94.9
Estimated	3,514	5.08
Total	69,220	100

Market-based

Accuracy Overview	tCO_2e/year	%
Actual	74,737	95.5
Estimated	3,514	4.49
Total	78,251	100

Table 2. Data Quality and Availability

Source of emissions	Data quality
Premises	
Electricity	Actual
Fuel oil	Actual
Natural gas	Actual
Other fuel(s)	N/A
Other fuels, UK (gross CV)	Actual
Refrigerant gas loss and other fugitive emissions	Actual
Water supply	Actual
Water treatment	Actual
Company owned vehicles	
Other fuel(s)	Actual
Business Travel	
Air travel	Actual
Bus and coach	Actual
Cars	Actual
Ferry	Actual

Hotel night stays	Actual
Rail (train, tram, light rail, underground)	Actual
Taxi	Actual
Staff Commuting	
Bicycle	Estimated
Bus and coach	Estimated
Cars	Estimated
Estimated emissions	N/A
Motorcycle	Estimated
On foot	Estimated
Rail	Estimated
Taxi	Estimated
Student Commuting	
Bicycle	Estimated
Bus and coach	Estimated
Cars	Estimated
Estimated emissions	N/A
Motorcycle	Estimated
On foot	Estimated
Rail	Estimated
Taxi	Estimated
Contractor Vehicles	
Other fuel(s)	Actual
Waste	
Composted waste	Mixed
Hazardous waste	Mixed
Incinerated waste	Actual
Landfilled waste	Estimated
Recycled glass	N/A
Recycled metal	N/A
Recycled paper & board	N/A
Recycled plastic	Actual
Recycled waste	Mixed
Residential waste mass anaerobic digestion (ERWMADI)	Estimated
Residential waste mass used to create energy (ERWMENE)	Estimated

Assessment Summary for The University of Edinburgh

Gross Overall Emissions (location-based): 69,220 tCO_2e

Gross Overall Emissions (market-based): 78,251 tCO_2e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO_2e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
11,212 Full Time Equivalent Employees	6.17 tCO_2e per Full Time Equivalent Employee (Location-Based)
45,615 Number of students	1.52 tCO_2e per Student (Location-Based)
1,187,000 Thousand GBP Revenue (£)	0.0583 tCO_2e per Thousand GBP Revenue (£) (Location-Based)
970,000 Floor area (square metres)	0.0714 tCO_2e per square metre (Location-Based)
11,212 Full Time Equivalent Employees	6.98 tCO_2e per Full Time Equivalent Employee (Market-Based)
45,615 Number of students	1.72 tCO_2e per Student (Market-Based)
1,187,000 Thousand GBP Revenue (£)	0.0659 tCO_2e per Thousand GBP Revenue (£) (Market-Based)
970,000 Floor area (square metres)	0.0807 tCO_2e per square metre (Market-Based)

Summary by Activity (Location-Based, tCO_2e)

By Activity	tCO_2e/year	%
Premises	64,563	93.3
Staff Commuting	2,110	3.05
Student Commuting	1,296	1.87
Business Travel	830	1.2
Company owned vehicles	252	0.363
Waste	131	0.19
Contractor Vehicles	38.6	0.0558
Total 69,220	100	

Summary by Activity (Market-Based, tCO_2e)

By Activity	tCO_2e/year	%
Premises	73,594	94
Staff Commuting	2,110	2.7
Student Commuting	1,296	1.66
Business Travel	830	1.06
Company owned vehicles	252	0.321
Waste	131	0.168
Contractor Vehicles	38.6	0.0493
Total	78,251	100

Summary by WBCSD/WRI Scope (Location-Based, tCO_2e)

By Activity	tCO_2e/year	%
Scope 1	44,552	64.4
Scope 2	18,496	26.7
Scope 3	6,172	8.92
Total	69,220	100

Summary by WBCSD/WRI Scope (Market-Based, tCO_2e)

By Activity	tCO_2e/year	%
Scope 1	44,552	56.9
Scope 2	27,527	35.2
Scope 3	6,172	7.89
Total	78,251	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO_2e/year (Location-Based)	tGHG/year (Market-Based)	tCO_2e/year (Market-Based)
CO_2	1	64,420	64,420	73,639	73,639
CH_4	25	5.42	135	2.63	65.8
N_2O	298	0.55	164	0.149	44.5
Biogenic CO_2	0	8.34	0	8.34	0
HFC-134a	1430	0.551	788	0.551	788
HFC-407c	1773.85	0.0064	11.4	0.0064	11.4
HFC-410a	2087.5	0.0163	34	0.0163	34
CO_2e	1	3,668	3,668	3,668	3,668

Total	69,220	78,251

Summary of Scope 2 Market-Based Method for The University of Edinburgh

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy

Scope 2 Market-Based Emissions

Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO_2e	%
Client-supplied market-based instrument	0	0	0	0
Residual mix factors	87,110	100	27,527	100
Default location-based factors	0	0	0	0
Total	87,110	100	27,527	100

Detailed Results

Detailed Summary by WBCSD/WRI Scope

Location-Based methodology

Source of Emissions	tCO_2/yr	tCH_4/yr	tN_2O/yr	Total Emissions (tCO_2e/yr)	%
Scope 1 Total	**43,629**	**2.38**	**0.0984**	**44,552**	**64.4%**
Company owned vehicles Total	248	0.00558	0.011	252	0.363%
Other fuel(s)	248	0.00558	0.011	252	0.363%
Premises Total	43,381	2.37	0.0873	44,300	64%
Fuel oil	205	0.00845	0.00797	207	0.3%
Natural gas	43,162	2.36	0.0793	43,245	62.5%
Other fuels, UK (gross CV)	14.1	4.39e-4	2.95e-5	14.1	0.0204%
Refrigerant gas loss and other fugitive emissions	0	0	0	834	1.2%
Scope 2 Total	**18,307**	**2.79**	**0.4**	**18,496**	**26.7%**
Premises Total	18,307	2.79	0.4	18,496	26.7%
Electricity	18,307	2.79	0.4	18,496	26.7%
Scope 3 Total	**2,483**	**0.257**	**0.051**	**6,172**	**8.92%**
Business Travel Total	825	0.0114	0.0145	830	1.2%
Air travel	613	0.00203	0.0103	617	0.891%
Bus and coach	26.4	1.55e-4	9.06e-4	26.7	0.0386%
Cars	100	0.004	0.00217	101	0.146%
Ferry	1.48	1.78e-5	6.77e-5	1.5	0.00217%
Ferry: Ferry, average passenger, upstream emissions	0	0	0	0.318	4.59e-4%
Hotel night stays	58.4	0.00395	2.98e-4	58.6	0.0847%
Rail (train, tram, light rail, underground)	15	0.0012	4.59e-4	15.2	0.0219%
Taxi	10	8.05e-6	3.06e-4	10.1	0.0146%
Contractor Vehicles Total	38.1	0.00157	0.00148	38.6	0.0558%
Other fuel(s)	38.1	0.00157	0.00148	38.6	0.0558%
Premises Total	1,620	0.244	0.0351	1,767	2.55%
Electricity: Electricity - transmission & distribution losses (MCR)	1,620	0.244	0.0351	1,637	2.36%
Water supply	0	0	0	51.7	0.0748%
Water treatment	0	0	0	78.3	0.113%
Staff Commuting Total	0	0	0	2,110	3.05%
Bicycle	0	0	0	0	0%
Bus and coach	0	0	0	490	0.708%
Cars	0	0	0	1,315	1.9%
Motorcycle	0	0	0	21	0.0303%
On foot	0	0	0	0	0%

Rail	0	0	0	276	0.399%
Taxi	0	0	0	8	0.0116%
Student Commuting Total	0	0	0	1,296	1.87%
Bicycle	0	0	0	0	0%
Bus and coach	0	0	0	577	0.834%
Cars	0	0	0	382	0.552%
Motorcycle	0	0	0	12	0.0173%
On foot	0	0	0	0	0%
Rail	0	0	0	296	0.428%
Taxi	0	0	0	29	0.0419%
Waste Total	0	0	0	131	0.19%
Composted waste	0	0	0	7.56	0.0109%
Hazardous waste	0	0	0	4.76	0.00688%
Incinerated waste	0	0	0	10.5	0.0152%
Landfilled waste	0	0	0	49	0.0708%
Recycled plastic	0	0	0	0.052	7.51e-5%
Recycled waste	0	0	0	25.3	0.0366%
Residential waste mass anaerobic digestion (ERWMADI)	0	0	0	0.6	8.66e-4%
Residential waste mass used to create energy (ERWMENE)	0	0	0	33.4	0.0482%
Total	**64,420**	**5.42**	**0.55**	**69,220**	**100%**

Market-Based methodology

Source of Emissions	tCO_2/yr	tCH_4/yr	tN_2O/yr	Total Emissions (tCO_2e/yr)	%
Scope 1 Total	**43,629**	**2.38**	**0.0984**	**44,552**	**56.9%**
Company owned vehicles Total	248	0.00558	0.011	252	0.321%
Other fuel(s)	248	0.00558	0.011	252	0.321%
Premises Total	43,381	2.37	0.0873	44,300	56.6%
Fuel oil	205	0.00845	0.00797	207	0.265%
Natural gas	43,162	2.36	0.0793	43,245	55.3%
Other fuels, UK (gross CV)	14.1	4.39e-4	2.95e-5	14.1	0.0181%
Refrigerant gas loss and other fugitive emissions	0	0	0	834	1.07%
Scope 2 Total	**27,527**	**0**	**0**	**27,527**	**35.2%**
Premises Total	27,527	0	0	27,527	35.2%
Electricity	27,527	0	0	27,527	35.2%
Scope 3 Total	**2,483**	**0.257**	**0.051**	**6,172**	**7.89%**
Business Travel Total	825	0.0114	0.0145	830	1.06%
Air travel	613	0.00203	0.0103	617	0.788%
Bus and coach	26.4	1.55e-4	9.06e-4	26.7	0.0341%

Cars	100	0.004	0.00217	101	0.129%
Ferry	1.48	1.78e-5	6.77e-5	1.5	0.00192%
Ferry: Ferry, average passenger, upstream emissions	0	0	0	0.318	4.06e-4%
Hotel night stays	58.4	0.00395	2.98e-4	58.6	0.0749%
Rail (train, tram, light rail, underground)	15	0.0012	4.59e-4	15.2	0.0194%
Taxi	10	8.05e-6	3.06e-4	10.1	0.0129%
Contractor Vehicles Total	38.1	0.00157	0.00148	38.6	0.0493%
Other fuel(s)	38.1	0.00157	0.00148	38.6	0.0493%
Premises Total	1,620	0.244	0.0351	1,767	2.26%
Electricity: Electricity - transmission & distribution losses (MCR)	1,620	0.244	0.0351	1,637	2.09%
Water supply	0	0	0	51.7	0.0661%
Water treatment	0	0	0	78.3	0.1%
Staff Commuting Total	0	0	0	2,110	2.7%
Bicycle	0	0	0	0	0%
Bus and coach	0	0	0	490	0.626%
Cars	0	0	0	1,315	1.68%
Motorcycle	0	0	0	21	0.0268%
On foot	0	0	0	0	0%
Rail	0	0	0	276	0.353%
Taxi	0	0	0	8	0.0102%
Student Commuting Total	0	0	0	1,296	1.66%
Bicycle	0	0	0	0	0%
Bus and coach	0	0	0	577	0.737%
Cars	0	0	0	382	0.488%
Motorcycle	0	0	0	12	0.0153%
On foot	0	0	0	0	0%
Rail	0	0	0	296	0.378%
Taxi	0	0	0	29	0.0371%
Waste Total	0	0	0	131	0.168%
Composted waste	0	0	0	7.56	0.00966%
Hazardous waste	0	0	0	4.76	0.00609%
Incinerated waste	0	0	0	10.5	0.0134%
Landfilled waste	0	0	0	49	0.0627%
Recycled plastic	0	0	0	0.052	6.64e-5%
Recycled waste	0	0	0	25.3	0.0324%
Residential waste mass anaerobic digestion (ERWMADI)	0	0	0	0.6	7.66e-4%
Residential waste mass used to create energy (ERWMENE)	0	0	0	33.4	0.0426%
Total	**73,639**	**2.63**	**0.149**	**78,251**	**100%**

Summary by Company Unit

Location-Based methodology

Assessment	August 2019 - July 2020		August 2020 - July 2021	
Company Unit	**Total Emissions (tCO_2e)**	**Emissions per FTE (tCO_2e/FTE)**	**Total Emissions (tCO_2e)**	**Emissions per FTE (tCO_2e/FTE)**
The University of Edinburgh	83,371	7.28	69,220	6.17
Academic estate	66,862	-	58,535	-
Accommodation	7,054	-	7,279	-

Market-Based methodology

Assessment	August 2019 - July 2020		August 2020 - July 2021	
Company Unit	**Total Emissions (tCO_2e)**	**Emissions per FTE (tCO_2e/FTE)**	**Total Emissions (tCO_2e)**	**Emissions per FTE (tCO_2e/FTE)**
The University of Edinburgh	63,627	5.56	78,251	6.98
Academic estate	49,245	-	66,541	-
Accommodation	4,927	-	8,304	-

Annual Activity Data

Source of Emissions	Value	Unit
Business Travel		
Air travel		
Long-haul, average class (RFI 1.9)	1,198,164	pass.km
Long-haul, economy (RFI 1.9)	1,695,194	pass.km
Long-haul, premium economy (RFI 1.9)	6,842	pass.km
Medium-haul, average class (RFI 1.9)	323,594	pass.km
Medium-haul, business (RFI 1.9)	7,049	pass.km
Medium-haul, economy (RFI 1.9)	287,016	pass.km
Short-haul (RFI 1.9)	155,771	pass.km
Bus and coach		
Average bus	216,274	pass.km
Coach	171,527	pass.km
Cars		
Average car (unknown fuel)	588,019	km
Ferry		
Average ferry passenger	13,304	pass.km
Hotel night stays		
Hotel night stays	2,411	night
Rail (train, tram, light rail, underground)		
Intercity/National train	427,176	pass.km
Taxi		
Average taxi	48,470	km
Company owned vehicles		
Other fuel(s)		
Diesel, retail station biofuel blend	55,181	l
Gas Oil	39,159	l
Petrol	2,079	l
Contractor Vehicles		
Other fuel(s)		
Gas Oil	13,991	l
Premises		
Electricity		
Electricity consumption	87,110,099	kWh
Fuel oil		
Gas Oil	75,207	l
Natural gas		
Natural gas (average UK network) (gross)	236,091,325	kWh
Other fuels, UK (gross CV)		
LPG (gross CV)	9,071	l

Refrigerant gas loss and other fugitive emissions			
	HFC-134a emissions	551	kg
	R407c emissions	6.4	kg
	R410a emissions	16.3	kg
Water supply			
	Water supply	347,297	m3
Water treatment			
	Water treatment	287,892	m3
Staff Commuting			
Bicycle			
	Bicycle	1,155,786	km
Bus and coach			
	Total CO2e emissions	490	tonne
Cars			
	Total CO2e emissions	1,315	tonne
Motorcycle			
	Total CO2e emissions	21	tonne
On foot			
	On foot	572,375	km
Rail			
	Total CO2e emissions	276	tonne
Taxi			
	Total CO2e emissions	8	tonne
Student Commuting			
Bicycle			
	Bicycle	833,661	km
Bus and coach			
	Total CO2e emissions	577	tonne
Cars			
	Total CO2e emissions	382	tonne
Motorcycle			
	Total CO2e emissions	12	tonne
On foot			
	On foot	1,578,765	km
Rail			
	Total CO2e emissions	296	tonne
Taxi			
	Total CO2e emissions	29	tonne
Waste			
Composted waste			
	Composted waste, food and drink waste	352	tonne
	Composted waste, garden waste	492	tonne

Hazardous waste		
Combusted waste, energy recovery, mixed commercial and industrial	224	tonne
Incinerated waste		
Combusted waste, energy recovery, mixed commercial and industrial	493	tonne
Landfilled waste		
Mixed commercial and industrial waste, landfilled	105	tonne
Recycled plastic		
Closed loop recycling - average plastics	2.44	tonne
Recycled waste		
Closed loop recycling - books	1.41	tonne
Closed loop recycling - glass	25.8	tonne
Closed loop recycling - mixed commercial and industrial waste	1,063	tonne
Closed loop recycling - mixed paper & board	24.8	tonne
Closed loop recycling - wood	18.3	tonne
Open loop recycling - WEEE - mixed	50.9	tonne
Open loop recycling - WEEE - small	0.74	tonne
Open loop recycling - average construction material	75.6	tonne
Open loop recycling - average plastics	0.72	tonne
Residential waste mass anaerobic digestion (ERWMADI)		
Municipal waste, average, anaerobic digestion	67	tonne
Residential waste mass used to create energy (ERWMENE)		
Combusted waste, energy recovery, municipal waste, average	1,567	tonne

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Assessment Summary for Academic estate

Gross Overall Emissions (location-based): 58,535 tCO_2e

Gross Overall Emissions (market-based): 66,541 tCO_2e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO_2e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
765,000 Floor area (square metres)	0.0765 tCO_2e per square metre (Location-Based)
765,000 Floor area (square metres)	0.087 tCO_2e per square metre (Market-Based)

Summary by Activity (Location-Based, tCO_2e)

By Activity	tCO_2e/year	%
Premises	57,396	98.1
Business Travel	830	1.42
Company owned vehicles	243	0.416
Contractor Vehicles	38.6	0.0659
Waste	27.4	0.0468
Total 58,535	100	

Summary by Activity (Market-Based, tCO_2e)

By Activity	tCO_2e/year	%
Premises	65,402	98.3
Business Travel	830	1.25
Company owned vehicles	243	0.366
Contractor Vehicles	38.6	0.058
Waste	27.4	0.0412
Total 66,541	100	

Summary by WBCSD/WRI Scope (Location-Based, tCO_2e)

By Activity	tCO_2e/year	%
Scope 1	39,667	67.8
Scope 2	16,397	28
Scope 3	2,471	4.22
Total	58,535	100

Summary by WBCSD/WRI Scope (Market-Based, tCO_2e)

By Activity	tCO_2e/year	%
Scope 1	39,667	59.6
Scope 2	24,403	36.7
Scope 3	2,471	3.71
Total	66,541	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO_2e/year (Location-Based)	tGHG/year (Market-Based)	tCO_2e/year (Market-Based)
CO_2	1	57,283	57,283	65,456	65,456
CH_4	25	4.81	120	2.34	58.5
N_2O	298	0.491	146	0.136	40.6
Biogenic CO_2	0	7.86	0	7.86	0
HFC-134a	1430	0.551	788	0.551	788
HFC-407c	1773.85	0.0064	11.4	0.0064	11.4
HFC-410a	2087.5	0.0163	34	0.0163	34
CO_2e	1	152	152	152	152
Total			58,535	66,541	

Summary of Scope 2 Market-Based Method for Academic estate

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy

Scope 2 Market-Based Emissions

Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO_2e	%
Client-supplied market-based instrument	0	0	0	0
Residual mix factors	77,223	100	24,403	100
Default location-based factors	0	0	0	0
Total	77,223	100	24,403	100

Assessment Summary for Accommodation

Gross Overall Emissions (location-based): 7,279 tCO_2e

Gross Overall Emissions (market-based): 8,304 tCO_2e

Summary by Activity (Location-Based, tCO_2e)

By Activity		tCO_2e/year	%
Premises		7,167	98.5
Waste		104	1.43
Company owned vehicles		8.03	0.11
Total	7,279	100	

Summary by Activity (Market-Based, tCO_2e)

By Activity		tCO_2e/year	%
Premises		8,192	98.7
Waste		104	1.25
Company owned vehicles		8.03	0.0967
Total	8,304	100	

Summary by WBCSD/WRI Scope (Location-Based, tCO_2e)

By Activity		tCO_2e/year	%
Scope 1		4,885	67.1
Scope 2		2,099	28.8
Scope 3		295	4.06
Total	7,279	100	

Summary by WBCSD/WRI Scope (Market-Based, tCO_2e)

By Activity	tCO_2e/year	%
Scope 1	4,885	58.8
Scope 2	3,124	37.6
Scope 3	295	3.56
Total	8,304	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO_2e/year (Location-Based)	tGHG/year (Market-Based)	tCO_2e/year (Market-Based)
CO_2	1	7,137	7,137	8,183	8,183
CH_4	25	0.61	15.3	0.294	7.35
N_2O	298	0.0588	17.5	0.0133	3.97
Biogenic CO_2	0	0.483	0	0.483	0
CO_2e	1	109	109	109	109
Total			7,279		8,304

Summary of Scope 2 Market-Based Method for Accommodation

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy

Scope 2 Market-Based Emissions

Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO_2e	%
Client-supplied market-based instrument	0	0	0	0
Residual mix factors	9,887	100	3,124	100
Default location-based factors	0	0	0	0
Total	9,887	100	3,124	100