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Recommended Reporting: Reporting on Wider Influence

RECOMMENDED – WIDER INFLUENCE
OTHER NOTABLE REPORTABLE ACTIVITY

PART 1: PROFILE OF REPORTING BODY

1(a) Name of reporting body
University of Glasgow

1(b) Type of body
Educational Institutions

1(c) Highest number of full-time equivalent staff in the body during the report year 5587

1(d) Metrics used by the body									
Specify the metrics that the body uses to assess its performance in relation to climate change and sustainability.									
Metric	Unit	Value	Comments						
Floor area	m2		We compare our carbon efficiency, to that of other Russell Group comparators by dividing the carbon emissions relating to our gas and electricity consumption by Gross Internal Area (GIA) in m2.						

1(e) Overall budget of the body

Specify approximate £/annum for the report year.

Budget

Budget Comments

The income listed above is the consolidated income for the University and all of its subsidiaries.

In addition to the numbers of staff listed above we also have 24,617 FTE students.

1(f) Report year	
Specify the report year.	
Report Year	Report Year Comments
Academic	

1(g) ContextProvide a summary of the body's nature and functions that are relevant to climate change reporting.

The University of Glasgow has a well developed system for determining and reporting our organisational carbon emissions. Our Gilmorehill campus falls under the auspices of the EU ETS, while the remainder of our organisation falls under the auspices of the CRC Energy Efficiency Scheme. We use TEAM Sigma energy management software to collate information for both of these data returns. In addition, we report various other sources of carbon emissions (water, waste, transport [business travel and staff/student commuting]) to HESA on an annual basis.

PART 2: GOVERNANCE, MANAGEMENT AND STRATEGY

2(a) How is climate change governed in the body?

Provide a summary of the roles performed by the body's governance bodies and members in relation to climate change. If any of the body's activities in relation to climate change sit outside its own governance arrangements (in relation to, for example, land use, adaptation, transport, business travel, waste, information and communication technology, procurement or behaviour change), identify these activities and the governance arrangements.

UofG has recently developed a new sustainability strategy and action plan, that was approved by University Court in summer 2016.

The University will adopt a 'whole-of-institution' approach to sustainability management. The remit of the previously exisiting Carbon Management Committee (CMC) has been expanded, and its membership reconsidered, to allow a broader focus on the all of the aspects that contribute towards a holistic approach to sustainability (people, market place, community & environment).

We now have in place both a Sustainability Governance Board and a Sustainability Delivery Board.

The Sustainability Governance Board has the following remit:

- To raise awareness of the University's Sustainability Strategy within the University community
- To engage students and staff in helping to define and deliver the Sustainability Action Plan
- To receive quarterly reports from the Sustainability Delivery Board on implementation of the Action Plan
- To advise the Sustainability Delivery Board on actions to improve performance
- To review the Sustainability Strategy every three years (next review due in May 2019)
- To report, through Estates Committee, to Court

and the following membership:

- University Sustainability Champion (convener)
- Sustainability Champions from:
- College of Arts
- College of MVLS
- College of Science & Engineering
- College of Social Sciences
- University Services

and:

- SRC President
- Communications & Public Affairs representative
- Sustainable Environment Officer
- Chair of the Sustainability Delivery Board

2(b) How is climate change action managed and embedded by the body?

Provide a summary of how decision-making in relation to climate change action by the body is managed and how responsibility is allocated to the body's senior staff, departmental heads etc. If any such decision-making sits outside the body's own governance arrangements (in relation to, for example, land use, adaptation, transport, business travel, waste, information and communication technology, procurement or behaviour change), identify how this is managed and how responsibility is allocated outside the body (JPEG, PNG, PDF, DOC)

The Sustainability Delivery Board has the following remit:

- To coordinate delivery of the Sustainability Strategy Action Plan
- Put in place robust reporting systems so that progress may be monitored
- Secure the cooperation of relevant staff experts in addressing actions and targets
- Report quarterly to the Sustainability Governance Board on implementation of the Action Plan
- Advise the Governance Board on measures to increase student and staff engagement with the Sustainability Strategy

and the following membership:

- Secretary of Court (convener)
- Delivery Champions for:
- Sustainable Procurement
- Sustainable Food
- Carbon efficiency of the estate
- Efficient utilisation of space
- Water efficiency
- Sustainable Construction
- Waste reduction, re-use and recycling
- Biodiversity
- Sustainable Transport

and:

- SRC Environmental Officer
- Sustainable Environment Officer
- Communications & Public Affairs representative
- Convener of GUEST (Glasgow University Environmental Sustainability Team)

Provide a brief summary of objectives if they exist.									
Objective	Doc Name	Doc Link							
SUSTAINABLE SPACES We want to do justice to the beauty, legacy and utility of our surrounding areas. We will: • Respect and reflect the heritage, environment and communities around us. • Hold ourselves to rigorous standards of environmentally friendly and socially responsible construction. • Operate in a sustainable and environmentally and socially responsible manner.	Inspiring People; Changing the World. University Strategy 2015 - 2020.	http://www.gla.ac.uk/media/media_410447_en.ldf							
In addition we aspire to having an organisational carbon footprint of 39kT by 2020 (Note: This target was set at a time when the scope of our footprint did not include Scope 3 emissions from staff/student commuting and business travel).									

2(d) Does the body have a climate change plan or strategy?

If yes, provide the name of any such document and details of where a copy of the document may be obtained or accessed.

The University's Carbon Management Plan (CMP) was produced in 2009, to cover the 5 year period from 2009-2014.

http://www.gla.ac.uk/media/media_192265_en.pdf

The CMP is now in need of revision. The University is currently in the process of planning the redevelopment of the recently acquired Western Infirmary (WI) Site. A revised capital plan for the WI development will go to University Court at the end of this year. Once we have a better understanding of the development plans (including demolitions and disposals elsewhere on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above.

Provide the name of any such do	cument and the timeframe covered.				
Topic area	Name of document	Link	Time period covered	Comments	
Adaptation	A formal climate change adaptation plan has yet to be developed.	n/a	n/a	Please see Section 4 for further details.	
Business travel	Strategic Transport and Travel Plan	http://www.gla.ac.uk/media/media_462432_en.pdf	2016—2025		
Staff Travel	Strategic Transport and Travel Plan	http://www.gla.ac.uk/media/media_462432_en.pdf	2016—2025		
Energy efficiency	Carbon Management Plan	http://www.gla.ac.uk/media/medi a_192265_en.pdf	2009-2014	As explained above, our CMP is in need of revision. Once we have a better understanding of the development plans for the Western Infirmary Site (including demolitions and disposals elsewhere on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above. Energy efficiency, including BMS upgrading, use of SMART technology and improved space utilization will all have a contribution to play.	
Fleet transport	Strategic Transport and Travel Plan	http://www.gla.ac.uk/media/media_462432_en.pdf	2016—2025		
Information and communication technology	IT Services; Strategic Plan to 2016/17	http://www.gla.ac.uk/media/medi a_259493_en.pdf	2012-2017	The current strategic plan for IT services highlights the aspiration for a single, efficient data centre for the University, that could help deliver a significant reduction in carbon emissions.	

2(e) Does the body have any pla	ns or strategies covering the following	areas that include climate chang	je?	
Provide the name of any such docu	ument and the timeframe covered.			
Topic area	Name of document	Link	Time period covered	Comments
Renewable energy	Carbon Management Plan	http://www.gla.ac.uk/media/medi a_192265_en.pdf	2009-2014	As explained above, our CMP is in need of revision. Once we have a better understanding of the development plans for the Western Infirmary Site (including demolitions and disposals elsewhere on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above. Provision of low carbon heat and electricity to our estate will have a contribution to make.
Sustainable/renewable heat	Carbon Management Plan	http://www.gla.ac.uk/media/medi a_192265_en.pdf	2009-2014	As explained above, our CMP is in need of revision. Once we have a better understanding of the development plans for the Western Infirmary Site (including demolitions and disposals elsewhere on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above. Provision of low carbon heat and electricity to our estate will have a contribution to make.
Waste management	Waste minimization and recycling policy	http://www.gla.ac.uk/media/medi a_142657_en.pdf	Not stated in policy	The current waste minimization and recycling policy is limited. Our new Sustainability Action Plan contains a commitment to produce a revised waste management policy and action plan for the University.
Water and sewerage	Carbon Management Plan	http://www.gla.ac.uk/media/medi a_192265_en.pdf	2009-2014	As explained above, our CMP is in need of revision. Once we have a better understanding of the development plans for the Western Infirmary Site (including demolitions and disposals elsewhere on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above. Improvements to the water efficiency of our estate will have a contribution to make.
Land Use	We do not currently have a land use strategy in place.	n/a	n/a	Our new Sustainability Action Plan contains a commitment to produce a biodiversity strategy and action plan for the University.
Other (state topic area covered in comments)	n/a	n/a	n/a	n/a

2(f) What are the body's top 5 priorities for climate change governance, management and strategy for the year ahead?

rovide a brief summary of the body's areas and activities of focus for the year ahead.

1 - An institution-wide environmental communications strategy will be developed and delivered; the content of our sustainability webpages will be reviewed, updated and moved to a central, corporate location on the University's website; cross-service links (e.g. to Estates & Buildings, Procurement, Hospitality Services, SEPS) will be highlighted appropriately.

2 - The University will seek to maintain its recently awarded 'gold star status' under the Chartered Institute of Procurement and Supply (CIPS) sustainable procurement review. We will continue to increase the proportion of our contractors and suppliers that have undergone assessment via the CIPS Sustainability Index (CSI).

3 - The existing Carbon Management Plan will be reviewed and updated, to take into consideration the organisations planned expansion onto the Western Infirmary Site.

4 - Feasibility studies for the provision of low carbon energy to the planned Western Infirmary development will be carried out.

5 - A review of the existing water mains infrastructure on the Gilmorehill and Garscube campuses, including determination of leakage rate, will be carried out in order to identify areas for investment/improvement.

2(g) Has the body used the Climate Change Assessment Tool(a) or equivalent tool to self-assess its capability / performance?

If yes, please provide details of the key findings and resultant action taken.

In previous years we have used the RES tool for determining our carbon footprint; this year we have not done so. We already use the TEAM Sigma energy management software for recording electricity, gas and water consumption across our estate; these figures, along with data relating to fugitive emissions, waste and travel/transport have been entered into Section 3 below, in order to calculate our total carbon footprint for the academic year 2015/16.

2(h) Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to governance, management and strategy.

The Glasgow University Environmental Sustainability Team (GUEST) is a student-led university body that provides project-based work placement opportunities to students in areas such as energy conservation, recycling, biodiversity, sustainable food, sustainable travel, waste management, communications and student engagement. These projects not only play a vital role in the ongoing promotion of sustainability on campus, but also provide an opportunity for students to develop both professionally and personally, while contributing to the everyday functioning of the University.

Approximately 10 paid placements are available each year; students work for 12 hours per week over a period of 20 weeks. In addition GUEST also offers the opportunity for interns to work on its projects on a voluntary basis, with interns progressing to salaried positions in subsequent years. In this way, a certain amount of project continuity can also be provided from year to year.

PART 3: EMISSIONS, TARGETS AND PROJECTS

3a Emissions from start of the year which the body uses as a baseline (for its carbon footprint) to the end of the report year

Complete the following table using the greenhouse gas emissions total for the body calculated on the same basis as for its annual carbon footprint /management reporting or, where applicable, its sustainability reporting. Include greenhouse gas emissions from the body's estate and operations (a) (measured and reported in accordance with Scopes 1 & 2 and, to the extent applicable, selected Scope 3 of the Greenhouse Gas Protocol (b)). If data is not available for any year from the start of the year which is used as a baseline to the end of the report year, provide an explanation in the comments column.

(a) No information is required on the effect of the body on emissions which are not from its estate and operations.

Reference Year	Year	Scope1	Scope2	Scope3	Total	Units	Comments
Baseline carbon footprint	2014/15	15737	32343	15537	63617	tCO2e	
Year 1 carbon footprint	2015/16	18534	26799	24257	69590	tCO2e	With respect to the previous year, Scope 1 emissions have increased as a result of the installation of a gas-fired CHP engine. Scope 2 emissions have decreased, in part, because we are now generating some of our own electricity via CHP and in part because of the decarbonisation of the national grid. Scope 3 emissions have increased, based on data from an updated staff/student travel survey and due to an enhanced ability to collect data relating to business travel.

3b Breakdown of emission sources

Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3 (a) above. Use the 'Comments' column to explain what is included within each category of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the total emissions for that category of emission source in the 'Emissions' column.

otal		Comments – reason for difference between Q3a & 3b.	Emission source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
	69590.9		Average Car - Unknown Fuel	Scope 3	36842250	km	0.18695	kg CO2e/km		includes car hire data where data available, grey fleet and commuting (SC and car share)
			Bus (local bus, not London)	Scope 3	18200262	passenger km	0.11986	kg CO2e/passe nger km		commuting and business travel (Tay House to Main Campus)
			Diesel (average biofuel blend)	Scope 1	39151	litres	2.6116251 9961375	kg CO2e/litre	102.2	fleet vehicles
		Domestic flight (average passenger)	Scope 3	2002742	passenger km	0.27867	kg CO2e/passe nger km		Business travel - travel agent and from expenses. Includes economy passenge due to lack of conversion factor	
		Gas Oil	Scope 1	20485	litres	2.9657177 7479733	kg CO2e/litre	60.8	fleet vehicles - agricultural vehicles	

3b Breakdown of emission sources
Complete the following table with the breakdown of
emission sources from the body's most recent
carbon footprint (greenhouse gas inventory); this
should correspond to the last entry in the table in 3
(a) above. Use the 'Comments' column to explain
what is included within each category of emission
source entered in the first column. If, for any such
category of emission source, it is not possible to
provide a simple emission factor(a) leave the field
for the emission factor blank and provide the total
emissions for that category of emission source in
the 'Emissions' column.

					11. 14		11. 14		
otal	Comments – reason for difference between Q3a & 3b.	Emission source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
69590.	9	Light rail and tram	Scope 3	2385902	passenger km	0.05363	kg CO2e/passe nger km	128.0	commuting (subway)
		Long-haul flights (Business class)	Scope 3	4947886	passenger km	0.42565	kg CO2e/passe nger km	2106.1	Business travel - travel agent
		Long-haul flights (Economy Class)	Scope 3	23776998	passenger km	0.14678	kg CO2e/passe nger km	3490.0	Business travel - travel agent
		Long-haul flights (First class)	Scope 3	94783	passenger km	0.58711	kg CO2e/passe nger km	55.6	Business travel - travel agent
		Long-haul flights (Premium economy class)	Scope 3	1040107	passenger km	0.23484	kg CO2e/passe nger km	244.3	Business travel - travel agent
		Long-haul flights (average passenger)	Scope 3	10063083	passenger km	0.19162	kg CO2e/passe nger km	1928.3	Business travel - from expenses
		Motorbike - Average	Scope 3	321799	km	0.11978	kg CO2e/km	38.5	commuting
		Petrol (average biofuel blend)	Scope 1	7648	litres	2.1969738 7704532	kg CO2e/litre	16.8	fleet vehicles
		Rail (International rail)	Scope 3	60101	passenger km	0.01214	kg CO2e/passe nger km	0.7	Business travel - travel agent and expenses
		Rail (National rail)	Scope 3	46271752	passenger km	0.04885	kg CO2e/passe nger km	2260.4	Business travel - travel agent and expenses, includes commuting data
		Short-haul flights (Business class)	Scope 3	65922	passenger km	0.24761	kg CO2e/passe nger km	16.3	Business travel - travel agent. Includes first class travel due to lack of conversion factor

3b Breakdown of emission sources
Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3 (a) above. Use the 'Comments' column to explain what is included within each category of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the total emissions for that category of emission source in the 'Emissions' column.

otal	Comments – reason for difference between Q3a & 3b.	Emission source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
6959		Short-haul flights (Economy class)	Scope 3	2066672	passenger km	0.16508	kg CO2e/passe nger km	341.2	Business travel - travel agent
		Taxi (regular)	Scope 3	245251	passenger km		kg CO2e/passe nger km	39.9	commuting
		Van - Class III (1.74 to 3.5 tonnes) Diesel	Scope 1	187994	miles	0.4579112 44931818	kg CO2e/mile	86.1	fleet vehicles - GUSA and SRC
		Other	Scope 3	8016	passenger km	0.40241	kg CO2e/passe nger km	3.2	Long haul flights domestic (Business class) - travel agent
		Other	Scope 3	153878	passenger km		kg CO2e/passe nger km	21.4	Long haul flights domestic (Economy class) - travel agent
		Other	Scope 3	1606	passenger km	0.55506	kg CO2e/passe nger km	0.9	Long haul flights domestic (First clastravel agent
		Refuse Municipal to Landfill	Scope 3	2751	tonnes	421	kg CO2e/tonne	1158.2	Non-residential general waste
		Mixed recycling	Scope 3	507	tonnes	21	kg CO2e/tonne	10.6	Non-residential mixed recycling
		Organic Garden Waste Composting	Scope 3	1820	tonnes		kg CO2e/tonne	10.9	Large animal manure and bedding from Veterinary Hospital - this is sent for composting.
		R410A	Scope 1	112	kg	2088	kg CO2e/kg	233.9	
		HFC-134a	Scope 1	6	kg	1430	kg CO2e/kg	8.6	

3b Breakdown of emission sources Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3 (a) above. Use the 'Comments' column to explain what is included within each category of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the total emissions for that category of emission source in the 'Emissions' column.

al	Comments – reason for difference between Q3a &	Emission source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
	3b.								
69590	0.9	R407C	Scope 1	66	kg	1774	kg CO2e/kg	117.1	
		Other	Scope 1	4	kg	2265	kg CO2e/kg	9.1	Fugitive emissions - R438a
		Other	Scope 1	19	kg	3922	kg CO2e/kg	74.5	Fugitive emissions - R404a
		Biomass (Wood Pellets)	Scope 1	78	tonnes	55.53148	kg CO2e/tonne	4.3	Biomass Boiler - Stoker Building
		Natural Gas	Scope 1	5735277	kWh	0.1839968 18181275	kg CO2e/kWh	1055.3	Residential Gas Consumption
		Grid Electricity (generation)	Scope 2	1262274	kWh	0.41205	kg CO2e/kWh	520.1	Residential Electricity Consumption
		Grid Electricity (transmission & distribution losses)	Scope 3	1262274	kWh	0.03727	kg CO2e/kWh	47.0	Residential Electricity Consumption
		Water - Supply	Scope 3	3677	m3	0.344	kg CO2e/m3	1.3	Residential Water Consumption
		Water - Treatment	Scope 3	3493	m3	0.708	kg CO2e/m3	2.5	Residential Water Treatment
		Natural Gas	Scope 1	62410737	kWh	0.1839968 18181275	kg CO2e/kWh	11483.4	Non Residential Gas Consumption
		Natural Gas	Scope 1	22164868	kWh	0.1839968 18181275	kg CO2e/kWh	4078.3	CHP Gas Consumption

Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3 (a) above. Use the 'Comments' column to explain what is included within each category of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the total emissions for that category of emission source in the 'Emissions' column.

Total	Comments – reason for difference between Q3a & 3b.	Emission source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
69590.9	00.9	Grid Electricity (generation)	Scope 2	63777054	kWh	0.41205	kg CO2e/kWh	26279.3	Non Residential Electricity Consumption
		Grid Electricity (transmission & amp; distribution losses)	Scope 3	63777054	kWh	0.03727	kg CO2e/kWh	2377.0	Non Residential Electricity Consumption
		Water - Supply	Scope 3	340292	m3	0.344	kg CO2e/m3	117.1	Non Residential Water Consumption Note: same figure as last years submission has been used as estimate; new water supplier and issues with meter transfer and billing mean accurate figure is not available.
		Water - Treatment	Scope 3	323277	m3	0.708	kg CO2e/m3	228.9	Non Residential Water Treatment Note: same figure as last years submission has been used as estimate; new water supplier and issues with meter transfer and billing mean accurate figure is not available.
		Gas Oil	Scope 1	87000	litres	2.9657177 7479733	kg CO2e/litre	258.0	Non Residential Gas Oil Consumption
		Gas Oil	Scope 1	318992	litres	2.9657177 7479733	kg CO2e/litre	946.0	Consumption from temporary boilers used during CHP/district heating project
		WEEE (Mixed) Recycling	Scope 3	72	tonnes	21	kg CO2e/tonne	1.5	

3c Generation, consumption and export of renewable energy										
Provide a summary of the body's annual renewable generation (if any), and whether it is used or exported by the body.										
	ectricity	Renewable He	eat							
Technology	Total consumed by the organisation (kWh)	Total exported (kWh)	Total consumed by the organisation (kWh)	Total exported (kWh)	Comments					
Solar PV	18232	0			Solar panels on Stoker Building					
Solar PV	2461	0			Solar panels on GLASS Building					
Biomass	184000	0			Biomass boiler in Stoker Building					
Other										

3d Targets

List all of the body's targets of relevance to its climate change duties. Where applicable, overall carbon targets and any separate land use, energy efficiency, waste, water, information and communication technology, transport, travel and heat targets should be included.

Name of Target	Type of Target	Target	Units	Boundary/scope of Target	Progress against target	Year used as baseline	Units of baseline	Target completion year	Comments
Carbon Reduction Target	absolute	39000	Other (specify in comments)	Other (please specify in comments)		2015/16	Other (specify in comments)		We aim to reduce our carbon footprint to 39000 ton CO2e by 2020. The target was set at a time when the scope of our footprint did not include Scope 3 emissions from staff/student commuting and business travel.

e Estimated total annual carbon savings from all projects implemented by the body in the eport year			
otal	Emissions Source	Total estimated annual carbon savings (tCO2e)	Comments
1868	Electricity	78	New plant growth rooms in Botany Building
	Natural gas	1790	New gas-fired CHP-led district heating system installed in April 16. Estimated to give 5000 ton CO2e savings per year, but only running for 4 months of this reporting year. Carbon savings from gas-fired CHP will reduce in the future, as the electricity grid de-carbonizes. Figure also includes a roof insulation project and a fumehood project.
	Other heating fuels		n/a
	Waste		n/a
	Water and sewerage		n/a
	Business Travel		n/a
	Fleet transport		n/a
	Other (specify in comments)		n/a

3f Detail the top 10 car											
Provide details of the 10 Project name	Funding source	First full year of CO2e savings	Are these savings	Capital cost (£)	Operational cost	Project lifetime		Estimated carbon savings per year (tCO2e/annum)	Estimated costs savings (£/annum)	Behaviour Change	Comments
CHP project		2017	Estimated			15	Natural Gas	5000			Annual carbon savings in the future will depend on the rate of grid de-carbonisation.
GUU roof insulation	Salix	2015	Estimated	12000		50	Natural Gas	29	7088		
Kelvinhall Fume Hoods	Salix	2016	Estimated	49777	,	25	Natural Gas	46	8657		
Plant Growth Cabinets - Bower Building	Salix	2016	Estimated	71800		50	Grid Electricity	78	20327		

3g Estimated decrease or increase in the body's emissions attributed to factors (not reported elsewhere in this form) in the report year							
If the emissions increased or decreased due to any such factor in the report year, provide an estimate of the amount and direction.							
Total	Emissions so	ource	Total estimated annual emissions (tCO2e)	Increase or decrease in emissions	Comments		
10362	Estate change	s	2362	Increase	Increase in total GI year to 395890 m2 carbon efficiency for CO2 per m2 GIA. Trise in carbon emis 2000 ton	this year. His or our estate is Thus, we may	torical s ~120 kg expect a
	Service provis	ion			n/a		
	Staff numbers				n/a		
	Other (specify comments)	in	8000	Increase	Scope 3 emissions commute and busin ton versus last yea improved ability to data.	ness travel are r. This reflect	e up ~8000 s an
	Other (specify comments)	in			n/a		

3h Anticipated annual carbon savings from all projects implemented by the body in the year ahead			
Total	Source	Saving	Comments
8	5 Electricity	85	Lighting projects (Garscube Street Lighting Botany Growth Rooms, McMillan Reading Room, Lilybank Gardens)
	Natural gas		n/a
	Other heating fuels		n/a
	Waste		n/a
	Water and sewerage		n/a
	Business Travel		n/a
	Fleet transport		n/a
	Other (specify in comments)		n/a

3i Estimated decrease or increase in the body's emissions attributed to factors (not reported elsewhere in this form) in the year ahead				
If the emissions are likely to increase or decrease due to any such factor in the year ahead, provide an estimate of the amount and direction.				
Total	Emissions source	Total estimated annual emissions (tCO2e)	Increase or decrease in emissions	Comments
	Estate changes			As explained above in part 2d, the University is currently in the process of planning the redevelopment of the recently acquired Western Infirmary (WI) Site. A revised capital plan for the WI development will go to University Court at the end of this year. Once we have a better understanding of the development plans (including demolitions and disposals else where on the estate), we can start to project what the future carbon emissions for the organisation will look like, and then develop a carbon management plan that will help us work towards the 2020 target stated above.
	Service provision			
	Staff numbers			At the time of writing, it is difficult to accurately determine the effect of the proposed WI development on staff/student numbers, however these are likely to increase in the future.
	Other (specify in comments)			

3j Total carbon reduction project savings since the start of the year which the body uses as a baseline for its carbon footprint

If the body has data available, estimate the total emissions savings made from projects since the start of that year ("the baseline year").

Total Comments

2432 Based on 564 ton of savings reported last year and 1868 ton of savings reported this year

PART 4: ADAPTATION

4(a) Has the body assessed current and future climate-related risks?

If yes, provide a reference or link to any such risk assessment(s).

The University has not yet assessed current and future climate-related risks.

The University of Glasgow has however recently developed a new Sustainability Strategy and Action Plan, which was approved by University Court at the end of June '16. One of the areas highlighted for further work, was the development of a Climate Change Adaptation Plan for the organisation.

It is clear that an inward looking approach, with something like Climate Change Adaptation is only going to be of limited use, when you begin to consider the various interdependencies that very large organisations such as ourselves rely on, in order to function effectively (e.g. utilities, public transport etc).

We are therefore keen to build alliances with other organisations across the region, in order that wide scale resilience may be effectively developed.

Thus we have already met with colleagues from Glasgow City Council to discuss the formation of an Adaptation Task Force, that would guide the work of focus groups, with the objective of developing a Climate Change Adaptation Framework for the City of Glasgow. Furthermore, we have also met with Climate Ready Clyde to discuss the development of a partnership approach to Climate Change Adaptation in the wider Clyde area.

In addition we have applied to participate in the Climate Ready Clyde Accelerator Programme, which we hope will provide us with another forum in which to develop valuable contacts with other organisations across the region, and an opportunity to tap into already existing expertise.

We would hope to work in tandem with other organisations to develop an understanding of the significant climate events that have affected the city over these past several years. With this resource in place, we would then be in a position to approach other business units within the University, to try and identify the impact that changing climate is already having on our organisation. With this understanding, we would then be in a position to begin to assess future climate-related risks for the University.

4(b) What arrangements does the body have in place to manage climate-related risks?

Provide details of any climate change adaptation strategies, action plans and risk management procedures, and any climate change adaptation policies which apply across the body.

While we do not have a Climate Change Adaptation strategy in place, our proposed redevelopment of the former Western Infirmary site does take into consideration adaptation requirements.

One of the key principles highlighted in the Gilmorehill campus redevelopment framework (http://www.gla.ac.uk/media/media_343419_en.pdf) is to create a campus that is demonstrably sustainable. With regard to Climate Change Adaptation, it it proposed that any future development:

'considers the impact on and resilience of the building stock to the predicted changes in climate. This will include: flexibility and adaptability for long term changes in use; ability to mitigate increased risk of overheating to occupants and increased demand for cooling; potential threats to infrastructure due to flooding with implementation of SUDS on the campus'

Furthermore, the Masterplan and associated Sustainability Statement for the Gilmorehill campus redevelopment also places a strong emphasis on Climate Change Adaptation and Resilience.

The drainage scheme proposed for the masterplan has been designed to incorporate an increase in peak flow rates due to climate change in line with best practice. A variety of Sustainable Urban Drainage Systems (SuDS) are proposed to mitigate flooding, attenuate surface water and to assist with natural filtration. These include tree pits with small cellular storage; permeable paving; a filter blanket; a swale or filter trench; and a SuDS basin. Moreover, the surface water strategy for the masterplan has been designed to include as many green features providing attenuation and treatment as practicable. Where possible, it is intended that all surface water will be treated at source to the necessary standards, and then attenuated to greenfield runoff rates for the 1:30 year event before discharge. It is hoped that surface water will be taken out of the combined sewer and discharged to the River Kelvin, thus reducing reliance upon the conventional combined sewer system. SuDS are not only proposed for the WI site, but potential also exists to incorporate SuDS and store surface water within the existing areas and buildings of the campus to the north of University Avenue. For external areas within each building plot, SuDS features could be created, such as rain gardens, planted channels or another bio-retention solution. This encourages developers to create an open, green environment. Alternatively, if the external space is paved, permeable paving could be utilised, which may be able to provide a link from downpipe planters to underground storage systems.

(c) What action has the body taken to adapt to climate change?

Include details of work to increase awareness of the need to adapt to climate change and build the capacity of staff and stakeholders to assess risk and implement action.

In order to start building capacity, the University's Energy & Climate Change Manager and Sustainability Officer both attended Climate Change Adaptation training, provided by Adaptation Scotland, in April 2016. The event was valuable in increasing background knowledge, with regard to adaptation. The training facilitator was able to put us in contact with staff carrying out similar work at Glasgow City Council and was also able to highlight academic staff within the University who have expertise in this particular area.

It should also be noted that the University is now hosting the new National Centre for Resilience (NCR) on its Dumfries campus which will be Scotland's first resilience 'centre of excellence' focusing on natural hazards and how Scotland can become more resilient towards them. It will help improve our understanding of the impact of natural hazards, such as extreme weather events on communities, and provide support to them including practical tools kits, learning and exercise opportunities. The centre will be a national resource helping with, anticipating, and reducing problems from developing in the first place and, where they do emerge, enabling individuals and communities to recover quickly.

4(a) where applicable, what progress has the body made
in delivering the policies and proposals referenced N1, N2
N3, B1, B2, B3, S1, S2 and S3 in the Scottish Climate
Change Adaptation Programme(a) ("the Programme")?

If the body is listed in the Programme as a body responsible for the delivery of one or more policies and proposals under the objectives N1, N2, N3, B1,B2, B3, S1, S2 and S3, provide details of the progress made by the body in delivering each policy or proposal in the report year. If it is not responsible for delivering any policy or proposal under a particular objective enter "N/A" in the 'Delivery progress made' column for that objective.

(a) This refers to the programme for adaptation to climate change laid before the Scottish Parliament under section 53(2) of the Climate Change (Scotland) Act 2009 (asp 12) which currently has effect. The most recent one is entitled "Climate Ready Scotland: Scottish Climate Change Adaptation Programme" dated May 2014.

Objective	Objective reference	Theme	Policy / Proposal reference	Delivery progress made	Comments
Understand the effects of climate change and their impacts on the natural environment.	N1	Natural Environment	N1-2	The University is now hosting the new National Centre for Resilience (NCR) on its Dumfries campus. This will be Scotland's first resilience 'centre of excellence' focusing on natural hazards and how Scotland can become more resilient towards them. It will help improve our understanding of the impact of natural hazards, such as extreme weather events on communities, and provide support to them including practical tools kits, learning and exercise opportunities. The centre will be a national resource helping with, anticipating, and reducing problems from developing in the first place and, where they do emerge, enabling individuals and communities to recover quickly.	

4(d) Where applicable, v in delivering the policies N3, B1, B2, B3, S1, S2 at Change Adaptation Prog	s and propo nd S3 in the	sals referenced N1, N2, Scottish Climate			
If the body is listed in the Prodelivery of one or more policing N1, N2, N3, B1,B2, B3, S1, Sprogress made by the body the report year. If it is not resproposal under a particular oprogress made' column for the	cies and propo S2 and S3, proin delivering e sponsible for combjective enter	sals under the objectives ovide details of the ach policy or proposal in delivering any policy or			
(a) This refers to the program before the Scottish Parliame Change (Scotland) Act 2009 most recent one is entitled "Change Adaptation Program	ent under secti (asp 12) whic Climate Ready	on 53(2) of the Climate ch currently has effect. The y Scotland: Scottish Climate			
Objective	Objective reference	Theme	Policy / Proposal reference	Delivery progress made	Comments
Support a healthy and diverse natural environment with capacity to adapt.	N2	Natural Environment		n/a to University of Glasgow	
Sustain and enhance the benefits, goods and services that the natural environment provides.	N3	Natural Environment		n/a to University of Glasgow	
Understand the effects of climate change and their impacts on buildings and infrastructure networks.	B1	Buildings and infrastructure networks		n/a to University of Glasgow	
Provide the knowledge, skills and tools to manage climate change impacts on buildings and infrastructure.	B2	Buildings and infrastructure networks		n/a to University of Glasgow	
Increase the resilience of buildings and infrastructure networks to sustain and enhance the benefits and services provided.		Buildings and infrastructure networks		n/a to University of Glasgow	

4(d) Where applicable, win delivering the policies N3, B1, B2, B3, S1, S2 ar Change Adaptation Prog	s and propo nd S3 in the	sals referenced N1, N2, Scottish Climate			
If the body is listed in the Prodelivery of one or more polici N1, N2, N3, B1,B2, B3, S1, S progress made by the body i the report year. If it is not res proposal under a particular o progress made' column for the	ies and propo S2 and S3, pro n delivering e sponsible for d objective enter	sals under the objectives ovide details of the ach policy or proposal in delivering any policy or			
(a) This refers to the program before the Scottish Parliame Change (Scotland) Act 2009 most recent one is entitled "C Change Adaptation Program	nt under secti (asp 12) whic Climate Ready	on 53(2) of the Climate ch currently has effect. The y Scotland: Scottish Climate			
Objective	Objective reference	Theme	Policy / Proposal reference	Delivery progress made	Comments
Understand the effects of climate change and their impacts on people, homes and communities.	S1	Society		n/a to University of Glasgow	
Increase the awareness of the impacts of climate change to enable people to adapt to future extreme weather events.	S2	Society		n/a to University of Glasgow	While not listed as a body responsible for the delivery of this objective, it is worth highlighting that the University is now hosting the new National Centre for Resilience (NCR) on its Dumfries campus. This will be Scotland's first resilience 'centre of excellence' focusing on natural hazards and how Scotland can become more resilient towards them. It will help improve our understanding of the impact of natural hazards, such as extreme weather events on communities, and provide support to them including practical tools kits, learning and exercise opportunities. The centre will be a national resource helping with, anticipating, and reducing problems from developing in the first place and, where they do emerge, enabling individuals and communities to recover quickly.
Support our health services and emergency responders to enable them to respond effectively to the increased pressures associated with a changing climate.	S3	Society		n/a to University of Glasgow	

4(e) What arrangements does the body have in place to review current and future climate risks?

Provide details of arrangements to review current and future climate risks, for example, what timescales are in place to review the climate change risk assessments referred to in Question 4(a) and adaptation strategies, action plans, procedures and policies in Question 4(b).
As explained in part 4a, we are currently at the stage of identifying what our current climate risks are, and assessing what our future risks are likely to be.
We would hope to work in tandem with other organisations in the region (East Dunbartonshire Council, Glasgow City Council, Inverclyde Council, NHS Lanarkshire, Scottish National Heritage, Strathclyde Partnership for Transport, University of Strathclyde, West Dunbartonshire Council) to develop an understanding of the significant climate events the have affected the city over these past several years. With this resource in place, we would then be in a position to approach other business units within the University, to try and identify the impact that changing climate is already having on our organisation. With this information, we would then be in a position to begin to assess future climate-related risk for the University.
4(f) What arrangements does the body have in place to monitor and evaluate the impact of the adaptation actions? Please provide details of monitoring and evaluation criteria and adaptation indicators used to assess the effectiveness of actions detailed under Question 4(c) and Question 4(d).
We currently have no formal arrangements in place to monitor and evaluate the impact of adaptation actions.

4(g) What are the body's top 5 priorities for the year ahead in relation to climate change adaptation?
Provide a summary of the areas and activities of focus for the year ahead.
Over the course of the coming year it is our aim to:
1- work in tandem with other organisations in the region to develop an understanding of the significant climate events that have affected the city over these past several years. 2- define the economic impact that adverse weather events are already having on our organisation 3- better understand our inter-dependencies with regard to other organisations within the region, and how these may be affected by future changes in climate. 4- consult more widely across the University, as to what future climate risks we might face, and how to best mitigate for them. 5- ensure that the redevelopment of the Gilmorehill campus progresses with resilience to future climate impacts 'built in'.
4(h) Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to adaptation.

PART 5: PROCUREMENT

5(a) How have procurement policies contributed to compliance with climate change duties?

Provide information relating to how the procurement policies of the body have contributed to its compliance with climate changes duties.

The University of Glasgow Procurement Policy clearly describes the role of procurement as follows:

"We will procure all goods and services with high ethical standard and focused on social, economic and environmental considerations by applying principles of sustainable procurement" The policy is also publicly communicated through the University's Procurement Website.

This demonstrates acting sustainably in alignment to the Public Bodies Climate Change Duties guidance document. Sustainability is one of the six core values that are fully embedded in all aspects of our service. These are Compliance to Regulation, Sustainable Procurement, Effectiveness & Efficiency, Risk Management, Performance, and Brand Professionalism.

All tendering activity carried out by the University includes sustainability questions as part of assessment criteria. This covers areas of Sustainability Code of Conduct, community benefits, supported business; workforce matters, working with SMEs and driving compliance to the Modern Slavery Act and environmental considerations as appropriate to the buying need.

The Procurement Policy also includes guidance on each stage of the procurement journey. This includes assessment of environmental sustainability and social factors including community benefits requirements at start of procurement process for data gathering, tender strategy and also in further stages such as tender criteria and ongoing supplier relationship management.

The University has updated its Procurement policy in line with the Procurement Reform Act. Aspects such as impact of contract to local community, environment, promoting use of SMEs and supported businesses are considered before conducting a regulated procurement. The University publishes its Policy on disposal of assets including Electronic, IT and Electrical Equipment on its website and this policy is included in tender documentation.

5(b) How has procurement activity contributed to compliance with climate change duties?

Provide information relating to how procurement activity by the body has contributed to its compliance with climate changes duties.

Procurement Policy and Procurement Strategy includes value for money at the heart of all procurement activity conducted by the University and whole life costing methodology is adopted in all tenders. This is in compliance to Public Bodies Climate Change Duties guidance as per Climate Change (Scotland) Act 2009

The University's Sustainability Strategy is supported by the Sustainability Governance Committee and executed through Sustainability Delivery Boards which includes Sustainability Action Plan. As a member of this Board, Procurement is focussed on ensuring that our key supply chain partners are delivering value in the areas of community benefits, supported business; workforce matters, working with SMEs and driving compliance to the Modern Slavery Act. The Procurement Strategy is committed to delivering our Sustainable Procurement Objectives. The University has achieved the Chartered Institute of Procurement and Supply (CIPS) Sustainable Procurement Review GOLD award which is designed in alignment to the Scottish Government's Flexible Framework and is an external assessment process.

The University has set a robust "sustainability test" for its supply chain. The University of Glasgow has adopted a Supply Chain Code of Conduct document in alignment with the sustainable procurement programme led by Advanced Procurement for Universities and Colleges (APUC). The code of conduct is included in tendering activity and as compliance criteria for suppliers. Supplier's performance against the environmental, social, ethical and economic criteria is assessed through the Chartered Institute of Procurement and Supply (CIPS) Sustainability Index (CSI). The Index allows suppliers to obtain a rating of their performance CIPS Sustainability Index (CIPS-SI) in the areas of Economic, Social and Environmental sustainability.

The University has adopted use of Marrakech approach for categorisation of goods, services and works to identify sustainability risks within its supply chain. DEFRA tools are applied to further analyse the sustainability risks, and high risk suppliers are also measured and monitored through CIPS CSI as described above. Examples of high risk areas identified are Construction, Utilities, IT, Travel, Food, Waste Management

The University's target for FY16-17 is 50 suppliers, identified as high sustainability risk, to be CSI rated. The University currently has:

18 Suppliers with published CSI rating

6 in process of assessment

31 registered to start assessment

Further suppliers are being identified continually through the categorisation process.

The CIPS CSI assessment includes detailed environmental questions (examples list below) and clearly identifies improvement actions where a low score is achieved.

• Has your organisation been successfully prosecuted for a breach of any environmental Laws

• Has your organisations operations ever been served with any enforcement notices by the UK

Environment Agency or Environmental Protection Agency or Natural resources Agency in respect of your non-compliance of Environmental Law?

• Does your organisation embed sustainability principles such as eco design, life cycle thinking, into its product / service development process

• Does your organisation measure and report its greenhouse gas emissions? If yes give your latest measurements/reports

• Does your organisation set improvement targets to reduce your businesses greenhouse gas emissions under Scopes 1, 2 and 3? if Yes give details including time periods

• In respect of your organisations overall energy usage do you measure and report by energy source (ie. gas, electricity, oil, other) set targets for year on year reduction

• Do you make direct efforts to include/increase the use of renewables/ waste heat /

• energy from waste/cogeneration as alternative sources of energy within your organisation

• Does your organisation have a written Waste Management policy which quantifies and

monitors your organisation's direct waste production and effective disposal including the promotion of reduction, reuse and recycling where possible

• Does your organisation measure ,report and set targets to systematically reduce or eliminate air, water and land pollution in your operations

• Does your organisation set annual targets to reduce its overall water usage?

• Does your organisation have a process in place to engage with / encourage your suppliers to reduce their environmental impact in the following areas: a) Carbon /energy reduction b)

Waste and water management c) Sustainable sourcing

• Does your organisation have a process in place to reduce the level of packaging in

products you produce and the environmental impact created by the packaging, handling and transportation of your sourced materials

5(c) Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to procurement.

In addition to the above, the University's Supplier Relationship Management programme used as a contract management mechanism includes sustainability as one of the key performance indicators of realised benefits of the contract.

Procurement Office team members have attended various sustainability training sessions, most recently this has included the Scottish Govt Reform Act training and APUC Reform Act training. Sustainability objectives are also embedded as an internal performance measure and also form part of Procurement Category Managers individual objectives in the Annual Performance and Development Review (P&DR).

Food - The University's Hospitality Team works with its food suppliers to maximise the proportion of their produce sourced sustainably. For instance KPIs have been implemented with key suppliers to measure the proportion of produce locally sourced. For instance Butcher meat is 100% Scottish produce, Poultry 100% UK and Bakery 100% UK.

Travel - Procurement office engage in quarterly performance reviews with its two nominated travel providers. Sustainability is part of the KPIs of these contracts and the travel providers report on sustainability items such as carbon usage and offset.

PART 6: VALIDATION AND DECLARATION

6(a) Internal validation process

Briefly describe the body's internal validation process, if any, of the data or information contained within this report.

We are currently reviewing our internal validation processes for Scope 3 sources of emissions.

6(b) Peer validation process

Briefly describe the body's peer validation process, if any, of the data or information contained within this report.

There is currently no peer validation process in place.

6(c) External validation process

Briefly describe the body's external validation process, if any, of the data or information contained within this report.

The University participates in both the EU ETS and the CRC Energy Efficiency Scheme. Thus the recording of both electricity and gas consumption across our estate is regularly audited/validated externally. In the case of the EU-ETS, auditing is carried out by Lloyd's Register.

6(d) No validation process

If any information provided in this report has not been validated, identify the information in question and explain why it has not been validated.

n/a

6e - Declaration

I confirm that the information in this report is accurate and provides a fair representation of the body's performance in relation to climate change.

, ,	3	
Name	Role in the body	Date
Stewart Miller	Sustainability Officer	2016-11-30

RECOMMENDED - WIDER INFLUENCE

Q1 Historic Emissions (Local Authorities only)

Please indicate emission amounts and unit of measurement (e.g. tCO2e) and years. Please provide information on the following components using data from the links provided below. Please use (1) as the default unless targets and actions relate to (2).

(1) UK local and regional CO2 emissions: **subset dataset** (emissions within the scope of influence of local authorities):

(2) UK local and regional CO2 emissions: **full dataset**:

Select the default target dataset

Table 1a														
Source	Dataset	Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Units	Comments
	DECC Sectors													
	Other Sectors													

•	Table 1b														
,	Source	Dataset	Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Units	Comments
		DECC Sectors													
		Other Sectors													

Table 1c														
Source	Dataset	Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Units	Comments
Other	DECC Sectors													
	Other Sectors													

	2a – Targets										
Please det	Please detail your wider influence targets										
RPP Sector	Action Type	Description	Type of Target (units)	Baseline value	Start year		End	Saving in latest year measured	Year	Comments	

Q2b) Does the Organisation have an overall mission statement, strategies, plans or policies outlining ambition to influence emissions beyond your corporate boundaries? If so, please detail this in the box below.

Q3) Policio	Q3) Policies and Actions to Reduce Emissions																
RPP Sector	Action Type	Description	imple - mentation	that the policy / action will be fully	CO2 saving once fully imple - mented	measured			Metric / indicators for monitoring progress		policy design	details of this behaviour change	Investment	year)	Primary Funding Source for Implementation of Policy / Action	Accountable body	Comments

Please provide any detail on data sources or limitations relating to the information provided in Table 3										

Q4) Partnership Working, Communication and Capacity Building. Please detail your Climate Change Partnership, Communication or Capacity Building Initiatives below.										
Key Action Title	Action Type	Organisation's project role	Lead Organisation (if not reporting organisation)	Private Partners	Public Partners	3rd Sector Partners	Outputs	Value to Organisation	Total Investment into Partnership	Comments

OTHER NOTABLE REPORTABLE ACTIVITY

Q5) Please detail key actions relating to Food and Drink, Biodiversity, Water, Procurement and Resource Use in the table below.												
Key Action Title	Key Action Description	Organisation's Project Role	Impacts	Comments								
O6) Places use the toy! h	6) Please use the text box below to detail further climate change related activity that is not noted elsewhere within this reporting template											
Qo) Please use the text i	box below to detail further climate change related ac	ctivity that is not noted eisewhere within this report	ting template									