



## Summary Carbon Footprint Report: 2012-2013

10 June 2014



### Introduction

This is a summary of GCU's 2012-2013 emissions report, which was published in June 2014. The full report is available from the sustainability pages on GCU's website<sup>1</sup>.

GCU published its first carbon footprint in 2010 as a part of a Carbon Management Plan (CMP), which was produced in partnership with the Carbon Trust. The CMP identified a number of interventions that would deliver a 20% reduction in carbon emissions against a baseline set to the 2008-2009 academic year by the end of the 2013-2014 academic year.

The CMP was part of GCU's wider efforts to reduce environmental impacts associated with its operations and align itself with Scottish Government carbon reduction targets.

Whilst updates on the implementation of GCU's CMP were produced, changes to GCU's operations; improvements in its ability to collect environmental data; updated emission factors; and changes in carbon reporting methodologies warrant a fresh, wholesale review and update of GCU's carbon footprint.

Updating GCU's carbon footprint will also facilitate GCU's annual reporting of emissions to the Scottish Funding Council, update its Carbon Management Plan and develop further action plans to reduce environmental impact associated with various aspects of its operations.

### Carbon Reporting – Outline Approach

GCU used the DEFRA's 2013 emission factors and the latest reporting standards to update its carbon footprint. The carbon footprint's boundary was set around those activities which GCU has 'operational control' and emissions sources attributed to one of the following categories:

- **Scope 1:** Emissions associated with activities owned or controlled by an organisation that release emissions straight into the atmosphere (e.g. fuel combustion). Scope 1 emissions are classified as direct emissions.
- **Scope 2:** Emissions attributed to the use of purchase of purchased electricity, heat, steam and cooling. These indirect emissions arise as a consequence of an organisation's activities but occur at sources that are not owned or controlled by organisation. Scope 2 emissions are classified as indirect and are the electricity, heat, steam and cooling generators' Scope 1 emissions.
- **Scope 3:** Other emissions that are a consequence of an organisation's actions, but occur at sources not owned or controlled by the organisation and which are not classed as scope 2 emissions. Scope 3 emissions are indirect emissions.

The standards provide guidance on what emissions' reporting is mandatory and which are voluntary: scopes 1 and 2 are mandatory and scope 3 voluntary. To help report emissions in a systematic manner, scope 3 emissions are further divided into 15 categories. Following this approach will

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<sup>1</sup> <http://www.gcu.ac.uk/sustainability/ourcommitments/carbonfootprint/>

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enable GCU to move towards full carbon accounting and develop a better understanding of the environmental impacts associated with its operations.

GCU has full operational control over buildings in its estate and partial operational control over buildings it rents from third parties: as a result, emissions from some buildings were excluded from GCU's emission inventory. Table 1 Emissions sources in GCU's emission inventory for 2012-2013 carbon footprint (✓ = included; × =not included. The rationale for the inclusion or not of particular emissions from each site in each scope is provided in the full report). summarises the boundary for GCU's emissions inventory for the updated carbon footprint.

Site	Scope 1	Scope 2	Scope 3
City Campus	✓	✓	✓
GCU London	×	×	✓
Buchanan House	×	×	✓
Caledonian Court	✓	✓	✓

**Table 1 Emissions sources in GCU's emission inventory for 2012-2013 carbon footprint (✓ = included; × =not included. The rationale for the inclusion or not of particular emissions from each site in each scope is provided in the full report).**

This approach was used to compile GCU's emissions inventory and calculate emissions for 2008-2009, 2012-2013 and make a projection for 2013-2014. As a result, a broader range of activities and emission sources were included in the carbon footprint for 2012-13 than were used for 2008-2009 or are reported to the Scottish Funding Council.

### Our Carbon Footprint

GCU's reported emissions for 2012-2013 are detailed below and are followed by an analysis of changes from the baseline of 2008-2009 and a projection of emissions for 2013-2014.

GCU's total reported emissions for 2012-2013 were 25,803 tonnes CO<sub>2</sub>e, which can be broken down as: 2,735 tonnes CO<sub>2</sub>e in scope 1; 5,087 tonnes CO<sub>2</sub>e in scope 2 and 17,981 tonnes CO<sub>2</sub>e in scope 3 (all reported emissions). Student commuting, international student travel and electricity and gas purchased from the National Grid representing the largest sources of emissions (Figure 1).

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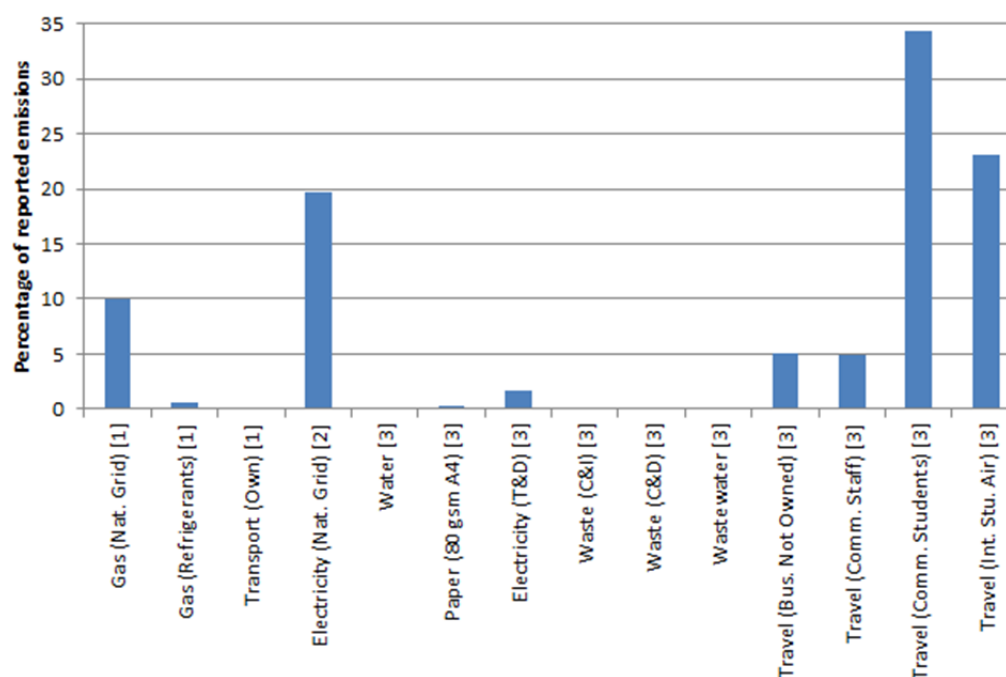


Figure 1 Distribution of GCU's total reported emissions (25,778 tonnes CO<sub>2</sub>e) for 2012-13. The number in square brackets indicates the emission scope.

The broader range of emissions reported for 2012-2012 may suggest an increase in emissions, it actually reflects an improvement in GCU's understanding of the environmental impacts associated with its operations and enables a transition towards full carbon reporting using current reporting standards and practices.

The position relative to the baseline year, using comparable data, is provided in Table 2, which also includes a projection of emissions for the target year of 2013-2014.

Emission Source	Scope	2008-09	2012-13	2013-14
Gas - Nat. Grid (Tonnes CO <sub>2</sub> e)	1	2,674	2,572	2910
Gas – Refrigerants (Tonnes CO <sub>2</sub> e)	1	152	152	152
Transport – Own (Tonnes CO <sub>2</sub> e)	1	12	11	11
Electricity – Nat. Grid (Tonnes CO <sub>2</sub> e)	2	6,828	5,087	3,495
Electricity - Trans. & Dist. Losses (Tonnes CO <sub>2</sub> e)	3	541	435	301
General Waste & Recycling (Tonnes CO <sub>2</sub> e)	3	107	41	20

Totals & Reduction from Baseline		2008-09	2012-13	2013-14
Scope 1,2 & 3 – Total (Tonnes CO <sub>2</sub> e)	1,2+3	10,315	8,298	6,876
Scope 1,2 & 3 – Reduction from baseline (%)	1,2+3		20%	33%

Table 2 Actual and estimated carbon emissions for 2008-2009, 2012-2013 and projections for 2013-2014 (where comparable datasets were available).

Table 2 indicates that GCU will achieve and surpass the 2013-2014 target ahead of schedule, with 20% reduction in 2012-2013 (8,298 tonnes CO<sub>2</sub>e, vs. 10,315 tonnes CO<sub>2</sub>e in 2008-2009) and a projected reduction of 33% for 2013-2014 (to 6,876 tonnes CO<sub>2</sub>e). These reductions are illustrated in Figure 2.

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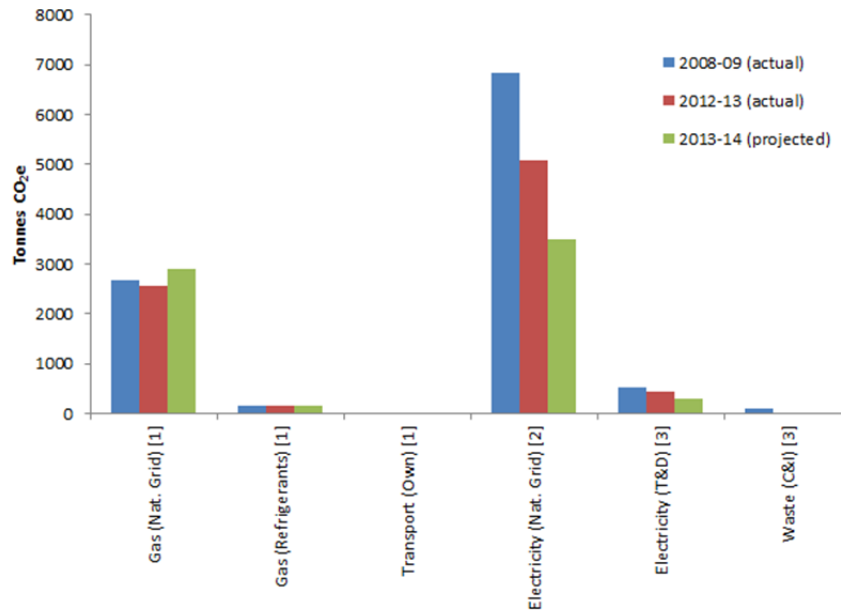


Figure 2 Emissions projections for 2013-2014 using the categories used in the GCU's first carbon footprint.

The reductions are primarily attributed to less electricity being purchased from the National Grid, reflecting the successful implementation of GCU's CMP and anticipated performance for the new Energy Centre. However, improvements arising from changes in the way GCU manages its waste are also acknowledged.

### Next Steps

Since GCU first reported its carbon emissions in 2010, much progress has been made understanding how different aspects of GCU's operations contribute greenhouse emissions, both directly and indirectly, and what opportunities exist for mitigating them.

This understanding has resulted in a concerted effort to implement GCU's CMP and the EcoCampus Environmental Management System. Combined these have resulted in a 20% reduction in GCU's emissions, which coupled with the completion of a number of developments anticipated for 2013-2014, indicate that GCU is well positioned to meet its 20% target for 2014 and likely to surpass it.

However, whilst this will be a notable achievement, GCU's wider sustainability aspirations and commitment to supporting the Scottish and UK Governments carbon reduction targets, it is imperative that momentum is sustained. Within this context, this new emissions report provides a springboard to:

- Identifying additional scope 1 and 2 carbon reduction opportunities and incorporate them into a revised CMP.
- Identifying opportunities and appropriate initiatives for reducing scope 3 emission, e.g. by focusing on more sustainable travel (business and commuting).
- Working with suppliers to further develop GCU's understanding of its indirect emissions (scope 3) and broaden the range of categories in its emissions inventory.
- Use the data from this report to develop a broader environmental report celebrating GCU's environmental achievements.

## **Summary Carbon Footprint Report**

Combined, the output from the above activities will help GCU sustain the momentum necessary to drive further improvements in its environmental performance over the short to medium-term (e.g. next five to ten years).



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Brighter futures begin with GCU



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