



University
of Glasgow

Biodiversity Report

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This report has been compiled to ensure that the University of Glasgow complies with its legal obligations with regard to Biodiversity Reporting, as described in The Wildlife and Natural Environment (Scotland) Act (2011).

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1.0 Introduction

The University of Glasgow has inherited and developed a rich heritage of plant and animal life across its estate and is fully cognisant of its ongoing responsibility to protect and enhance this heritage. As such, The University is a signatory to both the Talloires Declaration, which carries a commitment to 'practice institutional ecology' (ULSF, 1990) and the COPERNICUS charter which requires 'a real commitment to the principle and practice of environmental protection and sustainable development within the academic milieu' (COPERNICUS, 1993). In keeping with these commitments, The University has also provided additional targeted central funds to support biodiversity-related research, as part of its 'Campus Vision' (University of Glasgow, 2010a).

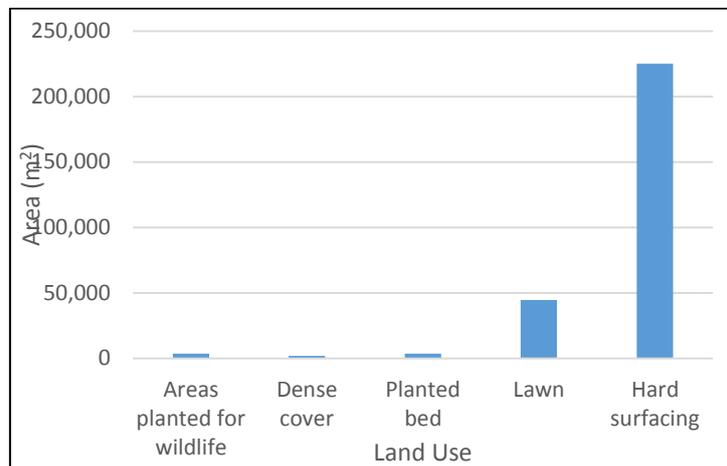
Currently, responsibility for encouraging environmentally sustainable behaviour on campus, including the promotion of biodiversity, falls under the remit of the Carbon Management Committee (CMC), which, in turn, reports to the University's Senior Management Committee. There is also a biodiversity working group at the University; this consists of interested members of staff and students, who currently provide support to the CMC on an *ad hoc* and informal basis. At the time of writing, there is a proposal in place to formalise the Biodiversity Working Group, and thus place a requirement on it to report regularly to the CMC. In addition, during term-time, The University employs a student promoter (a member of the Glasgow University Environmental Sustainability Team; GUEST) to carry out biodiversity work on a part-time basis.

2.0 Actions

- The University has had a Biodiversity Policy in place since 2006, and this has recently been redrafted to ensure that roles and responsibilities are more clearly defined (University of Glasgow, 2014a). The updated Biodiversity Policy also includes a number of Biodiversity SMART Targets (BSTs), and it is anticipated that progress towards achieving these BSTs will be monitored on an annual basis, through a student-led Biodiversity Audit.
- Since 2011, the GUEST organisation has worked to develop the Willowbank Community Garden. This council-owned space was previously an empty lot, close to the Gilmorehill Campus, and has been converted by students and engaged local residents into an organic garden. It has allowed those involved, not only to grow their own food, but also to improve the biodiversity of the area; a wildflower meadow has been established on the site to encourage visits by nectar-feeding insects and a 'bug hotel' has been created to provide a habitat for 'mini-beasts'.
- Beehives are currently kept at the University's Cochno Farm, Acre Rd and Garscube premises for research purposes. Given the decline of the UK honeybee population over the past few decades (Breeze et al, 2011), the GUEST Biodiversity Promoter has recently attended an introductory bee keeping course and plans to introduce more hives on the Gilmorehill campus.
- In 2012, a campus roof audit was carried out to determine the potential for green-roof habitat creation (GUEST, 2012). It was estimated that there is approximately 10,000 m² of flat and low-pitched roofing on the Gilmorehill campus that is free of ventilation piping and other plant installations. It should also be noted that green roofing is one of the few options which would provide biodiversity benefits on campus, without taking up additional space at ground level. Further investigation is now required by the Estates and Buildings Department, to determine which, if any, of these roof areas might be suitable for adaptation.

- In December 2013, a land use audit was carried out to determine the total areas of designated wildlife habitat, hedgerows, planted beds, lawn, hard surfacing and buildings on the Gilmorehill Campus (GUEST, 2013). The results (see Figure 1) demonstrated that less than 4% of the total area of Gilmorehill Campus is planted. The remaining land is comprised of buildings and hard surfacing (over 80%) and lawn (16%). It also was noted that connectivity between existing habitats on campus was limited and that very few freshwater habitats were available. Consultation will now be required with the Grounds Maintenance team, in order to discuss ways of improving habitat connectivity.

Figure 1. Land cover at the Gilmorehill campus (adapted from GUEST, 2013).



- The GUEST biodiversity promoter has plans to carry out a student biodiversity survey, which would enable participants to update an online species list with dates of recent sightings. Sightings would be verified by a qualified staff member. Such a list would provide useful baseline information about species present on the campus and would also generate a mailing list of people who may be interested in further, more in-depth surveys such as bat walks, invertebrate inventories, vegetation studies and small mammal trapping.

- Any audit/survey should seek to keep a record of, and carry out routine maintenance of all man-made nesting boxes/habitat boxes (e.g. bat and bird boxes).
- Other key areas for action have also been recently highlighted; these include enhancing the habitat value of lawn areas and the installation of swift and other nesting boxes (GUEST, 2013).
- It should also be highlighted that there are significant opportunities to further enhance biodiversity across the whole University estate and particularly at more rural locations such as the Rowardennan Field Station, Garscube Campus, Dumfries Crichton Campus and Cochno Farm. Furthermore, the estate has a number of natural assets which could be further exploited for greater biodiversity benefits, including the River Kelvin, Loch Lomond and ancient woodlands.

3.0 Mainstreaming

- The University has recently prepared the Gilmorehill Campus Development Framework (CDF), which provides an approved structure within which the evolution of the campus can be approached, subsequent to occupying the Western Infirmary site in 2015 (University of Glasgow, 2014b).
 - The CDF acknowledges that the majority of the Gilmorehill campus and the Western Infirmary site is already developed (buildings, roads or hard standing), which limits opportunities for encouraging biodiversity.
 - There is a clear message from the CDF that a focus in creating more green space on campus, to encourage biodiversity, is required in the future.
- All development brought forward by the University is required to comply with local and national statutory planning policies and guidelines. The Campus Development

Framework (University of Glasgow, 2014b) has been written to align with all relevant planning policies. Specific environmental policies relating to biodiversity are included in the Adopted Local Development Plan (Glasgow City Council, 2009) and the Glasgow Local Biodiversity Action Plan (Glasgow City Council, 2001).

- BREEAM is an environmental assessment method and rating system for buildings, which is intended to encourage sustainable building design. The methodology takes into account a broad range of measures from energy efficiency to ecological impacts. The University's Carbon and Energy Management Policy requires project sponsors to ensure that each new build meets the BREEAM 'Excellent' standard (University of Glasgow, 2010b). Thus, we have a mechanism in place to assess the effect of our new building projects on local biodiversity and can then take the appropriate steps to mitigate for any adverse impacts. Some examples of the studies undertaken during project development are:
 - Bat and nesting bird surveys have been carried out in advance of the demolition of various buildings on the Garscube campus (University of Glasgow, 2013).
 - A comprehensive ecological baseline survey was carried out for the Southern area of the Garscube campus, in relation to the proposed development of the Centre for Virology Research and the Garscube Learning and Social Space Building (University of Glasgow, 2012).
- The University also recognises the health benefits that can be had from access to bio-diverse landscapes. With this in mind, the University has recently re-landscaped the park area adjacent to the Reading Room, to make it more amenable as a meeting space for staff and students. In addition, it is currently in the process of applying for planning permission to install a therapeutic garden adjacent to the Student Disability Services building. The CDF also highlights the need to improve the connectivity between the Gilmorehill campus and the adjacent Kelvingrove Park, in this regard (University of Glasgow, 2014b).

- The University's Grounds Maintenance Team have implemented a number of routine practical management principles to ensure that biodiversity on campus is both protected and enhanced. These include:
 - Acting without causing harm.
 - Wildflower planting.
 - Timing operations to avoid disturbances.
 - Prioritising the planting of native species and removing invasive non-native species.
 - Using expertise to act on the results of surveys.
 - Use of alternatives to pesticides where possible; where not practicable, the use of herbicides/pesticides that are not harmful to wildlife.

4.0 Monitoring

- Currently, the only baseline monitoring carried out has been with regard to land use (GUEST, 2013). This study will be used as a starting point for developing targets for the inclusion of a larger area of habitat on campus.
- The redrafted biodiversity policy (University of Glasgow, 2014a) states that a full monitoring scheme (including the establishment of a baseline) should be implemented for all flora and fauna on campus. It is intended that such a monitoring scheme will be developed by GUEST in the academic year 2014/15. If such a monitoring scheme is to be a success, then a significant workforce will need to be mobilised, sustained and trained to ensure that biodiversity surveys are carried out according to standardised methods.
 - The expertise of ecological consultants may be sought to inform the development of the methodology.

5.0 Partnership Working and Biodiversity Communications

- Biodiversity Working Group Meetings include members of staff from the University's Zoology department, as well as office bearers from Glasgow Natural History Society, and Glasgow City Council's Biodiversity Officers.
- Training has included small mammal trapping (and release) led by Dr Vic Paterson of University of Glasgow, mist netting/ringing of birds led by Dr Stewart White of University of Glasgow, wildflower meadow planting from Jane Marriott (Estates and Buildings) and a guided tour of trees across the campus led by Bob Gray (Glasgow Tree Lovers' Society).
- In 2012/13, GUEST, with support from Estates & Buildings, ran a tree planting event on campus to coincide with National Tree Week, promoted by The Tree Council.

6.0 Biodiversity Highlights

- Biodiversity highlights for the academic year 2013/14 include the mist netting and ringing of birds at the University's Wildlife Garden; measurements were taken from Blue tits, Coal tits, Dunnocks and Europe's smallest bird, the Goldcrest. It is intended that this will be a continued activity, with the involvement of both GUEST and members of academic staff.
- GUEST has held events to:
 - Encourage participation in the public consultation for the redevelopment of the University's external spaces (linked to the acquisition of the Western

Infirmery), specifically encouraging people to include their views on green space and habitat creation in University's redevelopment questionnaire.

- Publicise the RSPB's waste electronic equipment recycling scheme to encourage participation and highlight the environmental impacts of waste, particularly on biodiversity.
- Last year, large flocks of migrant Waxwings gathered around Rowan trees on campus to feed on berries during the winter months, highlighting the fact that that our campus supports international as well as local wildlife.

7.0 References

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