

# A Proposed Environmental Sustainability Vision, Policy and Strategy

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## **1. Introduction**

- 1.1. In January 2013, the Environmental Strategy Committee agreed that a full review of the University's Environmental Policy should be undertaken to help ensure its continued relevance and to enhance the University's reputation in sustainability policy and practice. The University Council endorsed this process in April 2013. The Environmental Policy Review Committee was established to direct this review with the intention of bringing forward a proposed new Environmental Sustainability Policy and Strategy to be considered for adoption.
- 1.2. This report begins with background information on the Environmental Policy Review Committee and the review process. It then proposes an Environmental Sustainability Policy to match the status and standing of the University of Cambridge. Following the proposed policy, it outlines a possible roadmap for implementation and proposed arrangements for governance and management. This is then followed by an outline of key matters arising from the consultation, a proposed detailed strategy for 2015-2020 and a list of recommendations. Some recommendations can be implemented almost immediately; others require significant institutional and cultural change and are longer term. Some recommendations are as much about consciousness raising and encouraging behaviour change as they are about saving energy, money, carbon or biodiversity. If the Council approves the overall Environmental Sustainability Vision, Policy and Strategy and governance arrangements, it will be for the newly-formed Environmental Sustainability Strategy Committee to further consider appropriate implementation mechanisms and develop operational plans to achieve the aspirations set out in the policy and strategy. These plans would be subject to the usual scrutiny through General Board, Council and the Planning Round.

## **2. Environmental Policy Review Committee**

- 2.1. The membership of the Review Committee is as follows:

- Professor Jeremy Sanders (Chair) - Pro-Vice-Chancellor for Institutional Affairs and Chair of the Environmental Strategy Committee
- Professor Andrew Balmford – Department of Zoology
- Joanna Chamberlain – Head of Environment and Energy, Estate Management
- Polly Courtice – Director, Cambridge Institute for Sustainability Leadership
- Professor Peter Guthrie - Department of Engineering and member of the Environmental Strategy Committee
- Eleanor Hobson – Ethical Affairs Co-Chair, CUSU
- Sue Mehrer – Deputy Librarian, Cambridge University Library
- Professor Koen Steemers – Department of Architecture and member of the Environmental Strategy Committee
- Kerry Sykes – Deputy Director of Finance Division and member of the Environmental Strategy Committee
- Roger Taylor – Head of Estate Strategy and member of the Environmental Strategy Committee
- Dr Ann Thompson – Department of Land Economy and member of the Environment and Energy Coordinator Network
- James White – Ethical Affairs Co-Chair, CUSU
- A representative from Energise Cambridge (Chris Powers followed by Tom Cole).

- 2.2. The terms of reference are to consider:

- the objectives, targets, key performance indicators and aspirations to be included in the new policy and supporting strategy

- appropriate governance and oversight arrangements for implementing the new policy, and to make recommendations to the Council
  - whether supporting policies and plans, for example the Travel Plan, Procurement Policy and Carbon Management Plan, require review and if additional supporting policies are required.
- 2.3. The Review Committee met nine times between November 2013 and October 2014. Background information and minutes of the Review Committee meetings are available online at [www.environment.admin.cam.ac.uk](http://www.environment.admin.cam.ac.uk). The outcomes of consultation and this subsequent report have been considered via circulation.

### **3. Consultation process**

- 3.1. As part of the review process the Review Committee sought the views of the University Community during Lent Term 2014. During this period the committee:
- heard verbal evidence from 18 individuals, including three external to the University, who are listed in appendix A
  - received written evidence from a department and a group as listed in Appendix B
  - received 526 responses to an online questionnaire.
- 3.2. A consultative report<sup>1</sup> for consideration by the University community was published in Michaelmas Term 2014. The report contained a proposed Environmental Sustainability Vision, Policy and Strategy and made 21 recommendations. The Chair of the Environmental Policy Review Committee and/or the Head of Environment and Energy attended meetings of the following University committees and groups to present and discuss the proposals.

Energy and Carbon Reduction Project Board	13 November 2014
Environmental Strategy Committee	13 November 2014 and 2 March 2015
Departmental Secretaries in the School of the Physical Sciences	19 November 2014
Council of the School of Physical Sciences	20 November 2014
Council of the School of Biological Sciences	24 November 2014
Planning and Resources Committee	26 November 2014 and 21 January 2015
Council of the School of Technology	30 January 2015
Council of the School of Humanities and Social Sciences	30 January 2015
Meeting of the UAS Directors	2 February 2015
Council of the School of Clinical Medicine	3 February 2015
Estates Strategy Committee	19 February 2014

- 3.1. Fourteen written responses were received to the consultation, seven from individuals and the remainder for a mix of schools, institutions and groups as listed in Appendix C. The consultation demonstrated broad support for the proposed Vision, Policy and Strategy. The majority of comments related to the operational proposals and therefore, no substantial changes have been made to the proposed Vision, Policy and Strategy that is presented to Council in this paper. However, there has been a change in the reporting structure of the proposed Environmental

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<sup>1</sup> Consultation on a proposed Environmental Sustainability Vision, Policy and Strategy, available at [www.environment.admin.cam.ac.uk/files/environmental\\_policy\\_review\\_consultation\\_report.fin\\_.pdf](http://www.environment.admin.cam.ac.uk/files/environmental_policy_review_consultation_report.fin_.pdf).

Sustainability Strategy Committee to include the General Board for matters relating to academic activity. This is covered further in section 6.6.

- 3.2. While four written responses commented that the policy should cover ethical investment, it remains the case that this is outside of the remit of the Review Committee and so no changes have been made to the policy in this regard.

#### **4. An Environmental Sustainability Policy to match the Status and Standing of Cambridge**

- 4.1. The University of Cambridge is a world-class university with an international reputation for research and teaching, attracting the finest minds from around the world. Much of that research contributes significantly to the environmental sustainability challenges faced by society. However, the University's existing Environmental Policy<sup>2</sup> dates from 2008, it has no teeth, is largely ignored and its level of ambition does not align with the University's aspirations.
- 4.2. The proposed vision is that **the University of Cambridge is committed to making a positive impact through outstanding environmental sustainability performance**. This is a level of ambition that presents a huge challenge that will take time and resources to fulfil. It will mean that some activities will be significantly altered, many behaviours changed, and projects redefined. Whilst there are risks and initial additional costs involved, there will be long-term benefits and the reputational risk of poor performance will be averted. The simplicity of the proposed policy and strategy provides clarity for university members, visibility for society and inspiration for funders. The proposed policy and strategy resonates with Cambridge's multi-century scale of vision and provides a focus for action and decision making. Our performance needs to be benchmarked against peer institutions nationally and internationally.

**Recommendation 1:** The University adopts the proposed vision that it is committed to making a positive impact through outstanding environmental sustainability performance.

- 4.3. The proposed policy framework, set out in figure 1, shows how the proposed environmental sustainability vision aligns with the University mission and one of its core values. It contains four underpinning principles and three priority areas and conveys the University's key environmental sustainability impacts and the supporting approaches available to manage these impacts.

**Recommendation 2:** The University adopts the proposed policy framework contained in figure 1.

#### **5. Roadmap for implementation**

- 5.1. An ambitious Environmental Sustainability Policy will take time to implement. Figure 2 contains a possible outline roadmap for implementation, highlighting key strategic activities relating to strategy and governance, implementation and management, and monitoring and reporting.

**Recommendation 3:** The University adopts the proposed roadmap set out in figure 2.

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<sup>2</sup> Available at [www.environment.admin.cam.ac.uk/files/environmental-policy.pdf](http://www.environment.admin.cam.ac.uk/files/environmental-policy.pdf).

Figure 1: A policy framework for our approach

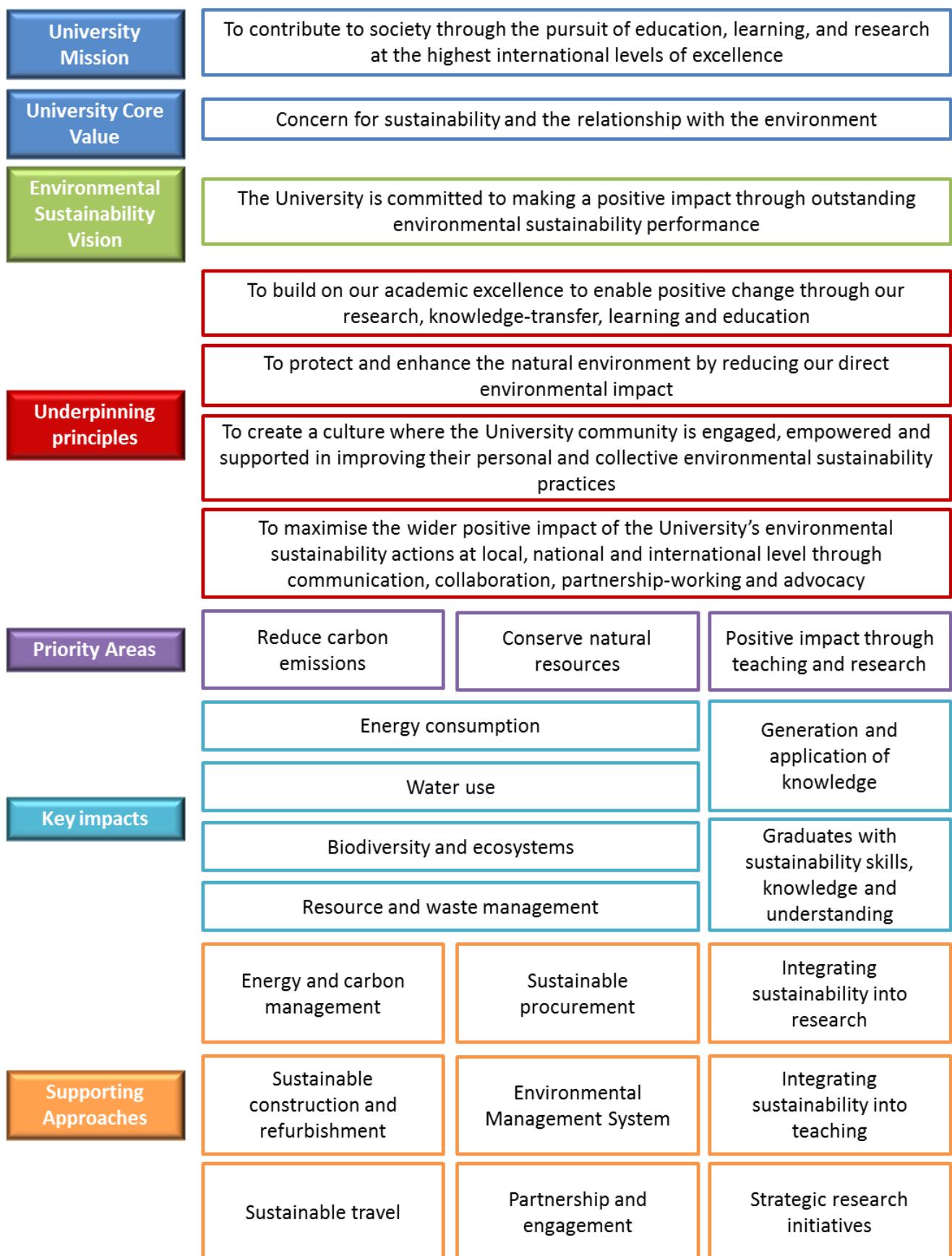


Figure 2: Outline roadmap for implementation

	“Early days” Pre-2014	“Structuring” 2014-2016	“Embedding” 2016-2020	“Leading” 2021 onwards
<b>Strategy and Governance</b>	<p>Existing Environmental Policy adopted in 2008</p> <p>Review of Environmental Policy instigated in 2013</p>	<p>Environmental Sustainability Policy and Strategy adopted</p> <p>New Environmental Sustainability Strategy Committee (ESSC) - 2015</p>	<p>2020 – review of Environmental Sustainability Policy and Strategy</p> <p>Consideration of what would be required to achieve long-term ambitions such as carbon neutrality</p>	
<b>Implementation and Management</b>	<p>Separate Environmental Office and Energy Team within EM</p> <p>Environment and Energy Section created within EM in 2013</p> <p>Energy and Carbon Reduction Project (ECRP) launched in 2010</p> <p>Carbon Management Plan (CMP) 2010 - 2020</p> <p>Strategic Research Initiatives established on Conservation, Energy and Global Food Security</p> <p>Energy@Cambridge established</p> <p>Travel Plan adopted in 2011</p>	<p>Review of CMP in 2015/16 including energy reduction measures</p> <p>New approach to sustainable construction adopted in 2015</p> <p>Adoption of a Sustainable Procurement Policy in 2015/16</p> <p>Development of a Sustainable Food Policy</p> <p>Review of Travel Plan in 2015/16</p>	<p>Environmental Sustainability embedded into University planning (e.g. Planning Round, Risk Register)</p> <p>Institutions prepare Environmental Sustainability Plans in 2016/17, to be reviewed by the ESSC</p>	
<b>Monitoring and reporting</b>	<p>Annual reporting to HESA’s Estate Management Record</p> <p>ECRP Annual Report since 2011</p>	<p>Publication of Annual Environmental Sustainability Report from 2015</p> <p>KPIs for Environmental Sustainability identified, agreed and regularly reported against</p> <p>Consider participation in external benchmarking initiatives</p>	<p>Environmental metrics (non-financial indicators) included in the University’s annual report</p> <p>Annual reports from institutions to the ESSC on progress against their Environmental Management Plans</p>	

## **6. Governance and management arrangements**

- 6.1. There are three bodies that currently relate to the implementation of the existing Environmental Policy. These are the:
  - Environmental Strategy Committee (ESC)
  - Energy and Carbon Reduction Project (ECRP) Board
  - Living Lab Advisory Group (LLAG).
- 6.2. The terms of reference for the ESC state that “the Environmental Strategy Committee provides oversight of the work of the Environmental Officer in order that he/she can most effectively advise on measures to deliver continuous improvement in conservation of natural resources and prevention of environmental pollution by the University.” In practice, the Committee now provides oversight for the implementation of the existing Environmental Policy and the work of the Environment and Energy Section. The Committee meets three times a year and is chaired by the Pro-VC for Institutional Affairs. It reports to the Planning and Resources Committee (PRC) and the Estates Strategy Committee. Until Michaelmas Term 2014 it reported to PRC and the Buildings Committee.
- 6.3. The Energy and Carbon Reduction Project oversees the implementation of the Energy and Carbon Reduction Project. It makes decisions relating to the use of the ECRP budget of £2M per annum. The Committee meets four times a year, is chaired by the Pro-VC for Institutional Affairs and reports to the Environmental Strategy Committee.
- 6.4. The Living Lab Advisory Group provides oversight to the Santander funded Living Laboratory for Sustainability project and makes funding decisions for projects requesting over £1,000 of funding from the Living Lab. The Group meets 4 times per year, is chaired by Prof Peter Guthrie, a member of the ESC, and reports to the Environmental Strategy Committee.

### Environmental Sustainability Strategy Committee

- 6.5. The current governance and management arrangements for the existing Environmental Strategy Committee do not provide sufficient levers to achieve the level of ambition proposed in the new Environmental Sustainability Policy. In addition, the frequency of meetings of the ECRP Project Board is not conducive to efficient implementation of energy reduction projects due to the length of the approval process. There is substantial overlap of membership amongst the three groups and attendance at meetings (particularly the ESC and LLAG) is often low. For example, attendance from senior academic and academic-related members (excluding the Chair) at the ESC meetings in May 2014, January 2014 and October 2013 was 0%, 100% and 67% respectively. Two out of four of the past LLAG meetings have had to be cancelled due to a high number of apologies. The existing arrangements also lead to duplication of reporting. Therefore, it is proposed to create one new committee, an Environmental Sustainability Strategy Committee, which will take on all the functions of the three existing committees/groups and have a higher level of standing. The proposals for the new committee are set out in the following paragraphs.

### Organisation

- 6.6. The proposed organisational arrangements are as follows:

- The Committee is chaired by the Pro-Vice-Chancellor with responsibility for Environmental Sustainability matters.

- The Committee is a joint committee of the Council and General Board with indirect reporting lines to Planning and Resources Committee and the Estates Strategy Committee.
- The Secretary of the Committee is the Director of Estate Strategy and the Assistant Secretary is the Head of Environment and Energy.
- The Committee meets at least six times per year.

### Membership

6.7. It is proposed that a newly-formed ESSC consists of the following members:

- Pro-Vice-Chancellor with responsibility for Environmental Sustainability matters (Chair)
- Three members nominated by the University Council, of whom one shall be a member of the Council
- Three members appointed by the General Board, of whom two shall be Heads of School
- Two student members appointed by the Committee, one on the nomination of the CUSU Executive and one on the nomination of the Graduate Union Executive Committee
- The Chair of the Bursar's Environment and Planning Sub-Committee or his or her deputy appointed from amongst the Bursars serving on the Sub-Committee
- Two further members co-opted by the Committee for their expertise.

### Officers in attendance

- Director of Estate Strategy
- Director of Finance
- Director of Information Services
- Head of Environment and Energy

### Terms of reference

6.8. The proposed terms of reference are to:

- provide strategic oversight of the University's commitment to environmental sustainability embodied in its Environmental Sustainability Policy and Strategy
- recommend for approval strategies, policies, procedures, guidance notes and action plans in connection with environmental sustainability
- make recommendations to the Planning and Resources Committee in relation to resource requirements for the implementation of the policy
- monitor progress against the implementation of policy and produce an annual environmental sustainability report that will be made publicly available
- take forward strategic decisions relating to agreed policies within the area of environmental sustainability

- require that Schools/Institutions produce and implement environmental sustainability management plans that identify actions to improve performance and allocate appropriate resources
- review and comment on these plans, with authority to refer a matter to the appropriate School/Institution with a recommendation for action
- oversee the delivery of supporting policies and plans including, but not limited to, the Carbon Management Plan, Travel Plan and Sustainable Procurement Policy
- direct the implementation of the Energy and Carbon Reduction Project and authorise the use of ECRP funding
- act as ambassadors for Environmental Sustainability matters at the University.

### Management

6.9. The day-to-day implementation of the proposed policy and strategy will be undertaken by the Environment and Energy Section, created in 2013 and led by the Head of Environment and Energy. This section is located within Estate Management, which is appropriate even though their remit goes beyond estates matters.

**Recommendation 4:** An Environmental Sustainability Strategy Committee is established from 1 October 2015 to deliver the proposed policy and strategy.

## 7. Matters arising from the consultation

### Reducing the energy consumption of existing buildings

- 7.1. Energy consumption in buildings accounts for around 30% of the University's overall carbon footprint and costs approximately £16M per annum. Approximately 80% of the total consumption is electricity, reflecting the energy-intensive nature of much of the University's research.
- 7.2. The operational costs associated with energy and water use are invisible to institutions and individuals. While the Electricity Incentivisation Scheme is intended to provide a financial incentive for institutions to reduce their electricity use, it is only partially effective and does not reflect the full costs of utilities. This applies to all costs relating to space use and as long as there is lack of clarity and accountability at institutional level over actual costs, financial savings will not provide sufficient local impetus to change institutional behaviour.

**Recommendation 5:** True costs of building construction and operations should ultimately be visible and accountable at an institutional level.

- 7.3. Several institutional representatives emphasised the challenges of implementing energy efficiency projects within their institution because it is often not a core part of anyone's job, staff are already very busy and they do not necessarily possess appropriate technical knowledge, even though there is funding and support for identifying and implementing energy efficiency projects available to institutions through the Energy and Carbon Reduction Project (ECRP). It is evident that where institutions do engage and resources are allocated, significant reductions in energy consumption and carbon emissions are achievable. For example, carbon emission in the ECRP pilots Engineering, Chemistry and the Gurdon Institute have decreased by 12%, 11%, and 27% respectively over the past two years. Witnesses highlighted that maintaining two separate workforces – institutional and central Maintenance staff – does not result in consistency of an approach as they may not necessarily communicate or coordinate their actions.

**Recommendation 6:** There should be better integration of building and equipment maintenance between institutions and Estate Management.

7.4. The energy-intensive nature of much of the research is due to both research equipment and to the necessary mechanical and electrical (M&E) systems to support research activity. The energy efficiency of M&E systems is being addressed through ECRP and maintenance activity but there is currently no mechanism to ensure that energy efficient equipment is purchased and there is no incentive for academic staff to buy energy efficient equipment through grant-funded processes. This links to discussions around sustainable procurement: the Committee believes that it is necessary to ensure that purchasers are encouraged, or even required, to purchase energy efficient models, where available, recognising that there are likely to be savings over the lifetime of equipment. The options for achieving this include a policy whereby only certain models of equipment can be purchased where energy efficiency ratings already exist (e.g. fridges and freezers) and the creation of a fund that could provide additional 'top-up' funding to cover any additional capital costs of the more efficient model.

**Recommendation 7:** The University should implement a mechanism to ensure that the life-time running costs of equipment are taken into account in all purchasing decisions.

7.5. It is clear from the consultation that relevant and timely data is important to support institutions to manage their energy consumption. Some work is underway within the Environment and Energy Section to provide better quality data to institutional representatives that can help inform energy efficiency initiatives, but this is far from comprehensive.

**Recommendation 8:** Specifying effective and fine-grained monitoring should become an essential component of all building, maintenance and refurbishment projects, and that relevant information is regularly communicated to institutions to assist in managing their energy consumption.

### Carbon neutrality

7.6. There was a strong call from respondents to the consultation and members of the Review Committee that the University should have a level of ambition around being carbon neutral by 2050; some argued that it should be earlier. There are multiple understandings of the term carbon neutral and in this case, we are aspiring to be carbon neutral in energy terms (a net zero carbon footprint) by reducing our consumption as far as possible, using renewable and low carbon fuels and finally offsetting the remaining through sequestration (e.g. tree planting on site) or the purchase of carbon credits.

7.7. The intention is to explore further what would be required to achieve this long-term aspiration, but in the meantime the University should investigate opportunities for generating low-carbon energy at building-level, site-level and offsite. The benefits of this will include long-term financial savings, help meet planning requirements and help improve energy security by reducing reliance on the National Grid.

**Recommendation 9:** As part of the review of the Carbon Management Plan, the Environment and Energy Section should explore further what would be required to achieve carbon neutrality.

### Sustainable construction and refurbishment

7.8. The continuing expansion of the University's estate makes achieving our carbon reduction and other targets even more challenging. Achieving them will not only require us to be more efficient in our use of utilities and other resources, but also to ensure that environmental sustainability is central to the design of all new buildings and major refurbishments. A review of the University's existing approach to sustainable construction and refurbishment is underway. This aims to develop a new optimised approach that takes account of the various

challenges and opportunities created by its mix of new build, refurbishment, and fit out activities, links into our ongoing masterplanning activities, and helps ensure that the University produces high quality and sustainable buildings. A long-term ambition is to be able to assess our buildings for embodied carbon, in addition to measurement of operational carbon emissions.

- 7.9. The committee heard that the process of setting budgets for capital projects does not normally allow for full consideration of whole life-costing of energy efficiency measures as the budgets are often set before the design process begins. It is essential that the University has a mechanism whereby cost-effective energy efficiency and other environmental measures can be supported and not excluded due to limitations in the project budget.

**Recommendation 10:** Implementation of a mechanism that enables cost-effective energy efficiency and other environmental measures to be funded by an alternative means if there is not sufficient funding available in the capital project budget.

- 7.10. There is a need to optimise space utilisation through better accountability and an increase in the provision and use of shared facilities: the University's space utilisation rate is low compared to sector averages, at 21% in 2012/13 (HESA's Estate Management Record). Creating additional space increases the University's carbon footprint and utilities bill. The current and forthcoming masterplanning work for key sites provides a crucial opportunity to achieve this.

**Recommendation 11:** Enforcing the effective use of shared facilities, and more rigorous examination and justification of space demands, should be key features of all future major capital projects.

## Travel

- 7.11. A number of travel-related matters were raised covering how staff travel to work (commuting), travel at work (i.e. between sites) and travel for work (business travel). The University's current Travel Plan focuses only on travel to work but there is a need for a comprehensive Travel Plan that encompasses both a high level strategy and specific tactical matters.

**Recommendation 12:** The University Travel Plan should be reviewed urgently with the objective of producing a comprehensive plan covering travel to, at and for work.

- 7.12. There was strong support for increasing the accessibility and affordability of sustainable transport options, both for commuting and travelling between University sites. One example is the evident need for improvements to the Uni4 bus service, as there are current problems relating to frequency, reliability and the route (which does not take in the railway station or other key University sites); the latter issue is becoming more pressing as more of the workforce is transferred from City centre sites to West and North West Cambridge. Improved options for travelling to work and at work would reduce the need for staff to take a car to work because they need to use it during the working day.

**Recommendation 13:** The Uni4 service should be reviewed with the objective of identifying public transport options for staff and students to travel to work and between sites including the NWCD, West Cambridge, city centre sites, the railway station and the biomedical campus.

- 7.13. Another matter for consideration is the management of University car parks. Almost all other UK higher education institutions charge for car parking on their sites, this income often being ring-fenced to fund alternative travel measures such as discounts on public transport, a subsidised bus service and cycle parking; parking charges are often salary-related. Parking in Cambridge is severely limited and it is unclear whether institutions always follow the agreed criteria for allocating car park permits. The University bears heavy operational

and opportunity costs associated with the provision of free car parking and this is a benefit that is not equally available to all staff; for example, some receive free car parking while others have to pay to use the Park and Ride. The introduction of car park charging would be contentious and would need to be accompanied by improved options and support for alternative modes of travel but congestion in the city and planning requirements for future developments mean that there is a need to reduce single-occupancy car journeys.

**Recommendation 14:** The proposed Environmental Sustainability Strategy Committee should review how the University's car parks are managed and as part of this consider whether and how car park charging should be introduced.

7.14. Many staff cannot afford to live in Cambridge. They are not able to walk or cycle to work, and many do not have access to convenient public transport, so travel to work by car is often seen as essential. The University has recognised the need for more affordable housing for staff and this will, in part, be provided by the North-West Cambridge Development, the plans for which include sustainability and provision of sustainable transport infrastructure. However, NWCD and similar projects will only make a relatively small contribution to the transport problem.

7.15. The carbon footprint associated with business travel, particularly flying which accounts for 6% of the University's overall carbon footprint, was raised on a number of occasions. While it is accepted that international travel is an essential part of the University's academic activity, there are likely to be opportunities to reduce the need to travel through improved video-conferencing facilities which could be used on occasions when face-to-face contact is not necessary, such as regular meetings with international collaborators. A reduction in the need to travel would bring wider benefits such as time savings and reduced travel costs. It was also suggested that the process for academic promotions might be reviewed to reduce the perceived importance of international travel in the University's promotions process. This would also support the University's equality and diversity agenda as certain groups may be less able to travel.

**Recommendation 15:** The need to travel nationally or internationally should be reduced through investment that increases the accessibility and availability of options such as video-conferencing.

### Sustainable procurement

7.16. Sustainable procurement supports many of the ambitions of the proposed policy and strategy. The committee heard how this will be particularly challenging as many individuals currently do not use central procurement contracts, believing that it is easier, cheaper and quicker to do it themselves. An aspiration in the proposed policy and strategy is that the central procurement frameworks are more attractive financially, more environmentally friendly and faster than other routes, so that more individuals and institutions switch to using them. Further consideration is needed on how to achieve this in practice. This may include a need for additional staff resource to work with institutional purchasers on sustainable procurement, which could have the added benefit of encouraging more institutions to use central procurement frameworks.

**Recommendation 16:** A Sustainable Procurement Policy covering all aspects of sustainability (environmental, social and economic) should be developed and adopted.

### Biodiversity and Ecosystems

7.17. It was suggested that the University should be doing much more to reduce its negative, and increase its positive, impacts on biodiversity and conservation. It is proposed to create an Ecological Advisory Panel to review and advise on current and planned work on the all

University's estate that has the potential to have harmful impacts on designated sites or species of conservation concern, to undertake a baseline assessment of existing biodiversity and ecosystems and to recommend opportunities for improving biodiversity. This Advisory Panel could report to either, or both, the Estate Strategy Committee and the proposed Environmental Sustainability Strategy Committee.

- 7.18. Tree planting on the estate can help increase biodiversity, improve the public realm and contribute to carbon neutrality through offsetting.

**Recommendation 17:** An Ecological Advisory Panel should be established with representation from key partners in the Cambridge Conservation Forum.

**Recommendation 18:** Opportunities for tree-planting on University land should be identified and maximised.

### Sustainable Food

- 7.19. Sustainable food is an important topic as, not only are there ethical considerations, it also affects the University's overall carbon footprint, waste volumes and indirect biodiversity and water impacts. It is proposed that a Sustainable Food Policy is developed to cover matters such as local sourcing, low-carbon foods, Marine Stewardship Council standards, Fairtrade and animal welfare standards. The volumes of food purchased by the University are low compared to the Colleges and so this is a key area where the University should look to learn from and work collaboratively with the Colleges.

**Recommendation 19:** A Sustainable Food Policy should be developed and adopted.

### Ethical Investment

- 7.20. Fifteen respondents to the online questionnaire stated that ethical investment should be included in the Environmental Sustainability Policy with written comments such as "I am very concerned that the University has no binding Sustainable and Responsible Investment policy, and worry about the way that my fees and the university's endowment are impacting our world." This topic also featured in the Students' Vision (a written response) and the verbal evidence heard from Jessica Walsh of Energise Cambridge.
- 7.21. The issue of ethical investment is outside of the remit of the Environmental Policy Review Committee and is a matter for the Finance Committee. The University has a Statement of Investment Responsibility (<http://www.admin.cam.ac.uk/reporter/2012-13/weekly/6299/section1.shtml#heading2-4>) and a policy not to disclose its investment holdings.

### Behavioural change

- 7.22. It is clear that behavioural and cultural change at the level of individual staff and students is crucial to reducing the University's environmental impact. This relates to a variety of areas, including energy savings actions such as switching off lights and equipment when they are not needed, procurement decisions, choices around mode of travel and disposing of waste in the correct way. A number of central initiatives, such as Green Impact, the Environment and Energy Coordinator Network, Switch Off Week and Student Switch Off, are designed to encourage staff and student to adopt environmentally positive behaviours. However, there are other areas that present opportunities but which are harder to influence centrally such as staff and student inductions within institutions and colleges.
- 7.23. While there is some evidence about how feedback and social reinforcement can help to change behaviour, fundamentally we do not know enough about effective ways to try to

change environmentally relevant behaviours and it is apparent to the committee that this area provides an important strategic research opportunity.

**Recommendation 20:** Institutions should consider whether environmental behavioural change is a strategic research opportunity that they wish to exploit.

#### Environmental Sustainability Plans for Institutions

7.24. As part of the Planning Round, institutions are asked to provide information on significant initiatives that they have conducted or plan to undertake to manage their carbon emissions and reduce their environmental impacts, and to identify planned future activity that is likely to have a positive or negative impact on their carbon emissions and indicate what the implications may be. The Planning Round is primarily financial and resource driven and there is no quality assessment of institutions' plans to reduce energy and carbon emission. Environmental sustainability plans tailored to institutions would raise the level of activity at institutional level and help address the lack of connection between behaviour and accountability for costs. The Environment and Energy Section would assist institutions in the development of these plans.

**Recommendation 21:** The terms of reference for the proposed Environmental Sustainability Strategy Committee should include the ability to require institutions to produce and implement environmental sustainability management plans and to submit these plans to the committee for review and comment.

## **8. Proposed Environmental Sustainability Strategy**

8.1. In order to deliver the policy aspirations outlined above, the University will need to implement the multi-step Environmental Sustainability Strategy contained in pages 15 - 21. This contains detail of the proposed aims, targets, key performance indicators and implementation mechanisms relating the key impacts and supporting approaches. The Environmental Sustainability Strategy will, in part, be implemented through several supporting policies and plans.

## **Strategy 2015-2020**

### **Introduction**

The University is committed to making a positive impact through outstanding environmental sustainability performance.

The University's Environmental Sustainability Policy and Strategy articulate how we will support this mission by building on our academic excellence in environmental sustainability and reducing our environmental sustainability impacts. The policy outlines our overarching principles, the framework for our approach and long-term ambitions in our key areas. Detailed objectives, targets and implementation mechanisms are contained within our accompanying strategy.

The scope of our policy and strategy is the operational aspects of the University of Cambridge. It does not directly apply to the 31 Cambridge Colleges, which are independent institutions with their own property and income, many of which have their own environmental policies and initiatives. However, in implementing this policy the University seeks to work collaboratively with Colleges to achieve its aims.

### **Energy and carbon management**

#### Overarching aim

To reduce scope 1, 2 and 3 carbon emissions while supporting the University's plans for growth in research activity and staff and students numbers.

#### Target

- To reduce carbon emissions from energy use by 34% by 2020 against a 2005 baseline.
- We aspire to a long-term ambition to be carbon neutral from energy use by 2050.

#### Key performance indicators

- Carbon emissions from energy use (tonnes)
- Carbon emissions from water use (tonnes)
- Carbon emissions from energy use per staff and student (tonnes/FTE)
- Carbon emissions from water use per staff and student (tonnes/FTE)
- Carbon emissions from energy use per total income (tonnes/£)
- Carbon emissions from water use per total income (tonnes/£)
- Percentage of energy generated from onsite renewable or low carbon sources (%)

#### Key implementation mechanisms

- Review of the Carbon Management Plan in 2015 to include the development of a roadmap to carbon reductions and appropriate targets and key performance indicators across all carbon emission scopes.
- Implement energy efficiency and carbon reduction projects within existing buildings through the Energy and Carbon Reduction Project that has an annual budget of £2M.
- Use the Electricity Incentivisation Scheme to provide a financial incentive for institutions to reduce their electricity use.
- Investigate opportunities for strategic estate-wide renewable energy at the University of Cambridge with the aim of increasing the volume of energy generated from onsite renewable or low carbon sources.
- Work with academics with the aim of using their expertise to help solve problems and implement effective solutions.
- Measure the University's scope 3 carbon footprint and develop appropriate metrics to monitor these emissions.

- Monitor and analyse energy and carbon data and provide relevant information to institutions.

#### Supporting policies and plans

- Carbon Management Plan 2010-20
- Environmental Management System
- Sustainable Procurement Policy

## **Water management**

#### Overarching aim

To conserve water through efficient use and management.

#### Target

- To reduce water consumption by 20% by 2020 against a 2005 baseline.

#### Key performance indicators

- Total water consumption ( $m^3$ )
- Total water consumption per staff and student ( $m^3/FTE$ )

#### Key implementation mechanisms

- Ongoing monitoring of water consumption data to assist in identifying areas of potential savings.
- Implement a programme of water efficiency projects.
- Seek opportunities for installing water management measures, such as rainwater harvesting and sustainable urban drainage systems.

#### Supporting policies and plans

- Environmental Management System

## **Biodiversity and Ecosystems**

#### Overarching aim

To be a leading organisation within the sector in limiting negative and, where possible, having positive direct and indirect impacts on biodiversity and natural ecosystems so that the University's practical performance in this area matches its aspirations to be a global leader in conservation and food security research.

#### Target

- In the expert opinion of the Ecological Advisory Panel, that no construction, refurbishment or maintenance work on the estate has a net negative impact on biodiversity and that, where possible, the impact is net positive.

#### Key performance indicators

- Percentage of new buildings and major refurbishments confirmed by the Ecological Advisory Panel as having no net negative impact on biodiversity.

#### Key implementation mechanisms

- Create an Ecological Advisory Panel (with representation from key partners in the Cambridge Conservation Forum) to review and advise on current and planned work on the University's estate that has the potential to have harmful impacts on designated sites or species of conservation concern.

- For the Ecological Advisory Panel to undertake a baseline assessment of existing biodiversity and ecosystems on the University estate and to recommend quick-wins for improving biodiversity (for example, removing invasive plants, incorporating swift nest boxes, reducing frequency of mowing in some areas).
- Develop a Sustainable Food Policy that aims to minimise the indirect biodiversity impacts of the food that we purchase. For example, through adopting Marine Stewardship Council standards and to provide drinking water outlets to reduce or eliminate the need to provide bottled water.
- Seek win-win situations for offsetting net carbon emissions and having beneficial biodiversity impacts through tree-planting and wetland creation onsite.
- Preferentially sourcing all timber and paper from Forest Stewardship Council-certified suppliers and requiring our preferred contractors to do likewise.
- Highlight the benefits of purchasing carbon offsets for flights and encourage institutions to purchase offsets for flights used for business travel.

#### Supporting policies and plan

- University Biodiversity Plan, to be produced by the Ecological Advisory Panel.
- Sustainable Food Policy
- Sustainable Procurement Policy

## **Waste management**

#### Overarching aim

To minimise and actively manage waste through elimination, reduction, reuse and recycling.

#### Targets

- To send zero non-hazardous waste to landfill by 2020.
- To achieve continuous year-on-year reductions in waste arising per FTE staff and students.
- To recycle at least 95% of total waste produced at the University by 2016.

#### Key performance indicators

- Waste sent to landfill (tonnes)
- Waste mass generated per FTE staff and students (tonnes/FTE)
- Percentage of waste generated that is recycled or composted (construction and non-construction waste) (%)

#### Key implementation mechanisms

- Provision of appropriate recycling infrastructure.
- Use of WARPit, an online system to support reuse of materials and equipment across the University.
- Requirement for Site Waste Management Plans to be developed for all capital projects.

#### Supporting policies and plans

- Environmental Management System

## **Sustainable Procurement**

#### Overarching aim

To positively influence the sustainability performance of suppliers and the sustainability credentials of the goods and services that we purchase.

### Targets

- That central University procurement frameworks are more attractive financially, more environmentally friendly and faster than other routes, and therefore, more institutions use it.
- To achieve at least level 4 'Enhance' across all themes of the Sustainable Procurement Flexible Framework by December 2015. This framework is a self-assessment mechanism that allows organisations to measure and monitor their progress on sustainable procurement over time.
- For Institutions to consider sustainability criteria within their procurement activity.

### Key performance indicators

- Level achieved on the Flexible Framework.

During 2015, we will also develop appropriate metrics for measuring progress in influencing sustainability performance within our priority commodity areas.

### Key implementation mechanisms

- Adopt a Sustainable Procurement Policy covering all aspects of sustainability (environmental, social and economic) and including commitments to procure goods and services that minimise energy use, waste and social impacts. To be publicly available online by 2015.
- Provide appropriate training and guidance to staff within Procurement Services and institutions who are involved in purchasing decisions.
- Develop policies and procedures that promote sustainable procurement and encourage institutions to use these.
- Undertake a Commodity Impact Analysis to identify priority commodity areas and develop plans for our top ten commodity areas by December 2015.
- Develop and implement a targeted supplier engagement programme to promote continual improvements by both suppliers and university purchasers.
- Use the Flexible Framework to monitor our progress on sustainable procurement. In addition to our target to achieve level 4 in 2015, we will consider what would be needed to achieve level 5 'Lead' of the Flexible Framework by 2020.

### Supporting policies and plans

- Sustainable Procurement Policy
- Sustainable Food Policy
- Environmental Management System

## **Sustainable Construction and Refurbishment**

### Overarching aim

To reduce the environmental sustainability impacts of our construction and refurbishment projects.

### Target

- To establish and implement a standard for sustainable construction at the University of Cambridge that is context specific and is considered a leading approach in comparison with our peers.
- By 2020, for 95% of buildings (by floor area) to have a minimum Display Energy Certificate rating of 'D'.

### Key performance indicators

- The percentage of new buildings that are certified at least BREEAM Excellent or equivalent.
- The percentage of buildings that have a minimum Display Energy Certificate rating of 'D'.
- External awards for sustainable construction/design.

Following the review of the University's approach to sustainable construction and refurbishment we will adopt appropriate key performance indicators to monitor the implementation of the new approach.

#### Key implementation mechanisms

- A strategic approach to the use of the existing estate through more efficient use of space and increasing the use of shared facilities.
- Review of the University's approach to sustainable construction with a revised approach covering new build, refurbishment, fit-out and masterplanning to be adopted in 2015.
- Through the Soft Landings process, monitor the energy consumption of new buildings and compare to the design estimates for at least three years after occupation. Investigate any significant differences and consider appropriate mitigation measures.
- Development of site-specific sustainability frameworks as part of masterplanning work. For example, frameworks are currently in use or under development for the North-West Cambridge Development, New Museums Site, West Cambridge and Old Press Mill Lane.

#### Supporting policies and plans

- Thermal Comfort Policy
- Sustainable Construction Policy to be agreed in 2015
- Environmental Management System

## **Travel**

#### Overarching aim

To provide viable and accessible sustainable travel options for staff and students for travel to work, travel at work and travel for work which results in a reduction of carbon emissions.

#### Target

- At least 75% of staff to be regularly commuting to work by sustainable modes of travel by 2016.
- By 2020 to have reduced the per capita carbon emissions from flights by 25%.

#### Key performance indicators

- Modal split for staff commuting (as measured through the annual travel survey).
- Per capita carbon emissions from flights.

As part of the review of the University's Travel Plan in 2015 we will develop appropriate performance indicators for at work (e.g. between sites) and travel for work (business travel).

#### Key implementation mechanisms

- Review of the University's Travel Plan in 2015 with the revised Travel Plan covering travel to work, travel at work and travel for work.
- The delivery of the sustainable travel incentives and projects to encourage walking, cycling, use of public transport and car sharing. This includes measures relating to a contracted bus service, public transport ticket subsidies, car sharing, car clubs, cycle schemes, cycle parking, electric charging points and personalised travel planning.
- Installation of improved video-conferencing facilities and the provision of support on how to use them.
- Implementation of improved options for staff and students to travel between University sites via sustainable transport.
- Provision of affordable accommodation locally, for example at North-West Cambridge, which reduces the need for travel.

- Travel Expenses Policy which enables employees to choose a more expensive form of transport where the chosen method of transport is less harmful to the environment. Typically this will involve an election to travel by train in preference to car or short haul flight.

### Supporting policies and plans

- Travel Plan

## **Environmental sustainability in teaching and research**

### Overarching aim

To undertake world-leading research that is related to environmental sustainability and to ensure that our operations are informed by this research where possible.

For all staff and students to have access to formal or informal opportunities to develop their knowledge, skills and understanding relating to sustainability matters and solutions.

### Key implementation mechanisms

Many of the University's institutions and group are concerned with academic activity (teaching and research) relating to global challenges and environmental sustainability. This strategy does not attempt to highlight all of them but some specific examples are:

- The University's strategic research initiatives include conservation, energy and global food security.
- Strategic research areas, for example, climate change and materials.
- The Energy@Cambridge initiative, established in 2010 as a University-wide initiative, brings together the activities of over 250 academics working in energy-related research.
- The Cambridge Conservation Initiative is a cross-disciplinary partnership between the University and the cluster of leading conservation organisations in and around Cambridge established to secure a sustainable future for biodiversity and humanity through collaborative programmes of research, teaching, policy and practice.
- Cambridge Forum for Sustainability and the Environment aims to stimulate cross-disciplinary conversations about some of the great sustainability challenges the world faces in the future and the research pathways that will help to prepare for and address those challenges.
- The mission of the University of Cambridge Institute for Sustainability Leadership (CISL) is to deepen leaders' understanding of the social, environmental and economic context in which they operate and help them to respond in ways that benefit their organisations, governments and society as a whole.
- Make learning opportunities available to all staff and students to develop their knowledge, skills and understanding.
- The Living Laboratory for Sustainability provides opportunities for students to use the University estate to test and research real world environmental problems and thereby develop knowledge and skills with the outcomes of their projects feeding back into estate operations.

## **Partnership and engagement**

### Overarching aims

To facilitate opportunities where staff and students can develop and share their knowledge, skills and experience to engage with and contribute effectively to achieving the University's environmental sustainability aspirations.

To develop formal and informal collaborative partnerships with regional, national and international stakeholders.

### Key performance indicators

- Number of institutions participating in Green Impact.
- Number of members of the Environment and Energy Coordinator Network.

### Key implementation mechanisms

- Green Impact, the University's environmental engagement and accreditation scheme. It supports and encourages institutions, teams and colleges across the University in reducing their environmental impacts.
- Facilitate active networks of staff and students such as the Environment and Energy Coordinator Network.
- Provide improved information at institutional level to support staff and students in understanding the environmental performance of their own institution and to help inform appropriate actions at institutional level.
- Provide appropriate training, both general and role specific, to support staff and students to effectively contribute to achieving the University's environmental sustainability aspirations.
- Deliver regular engagement events, for example Switch Off Week.
- Regular communication with the University community via formal and informal channels to facilitate action at individual and institutional level.
- Actively consult with staff, students and other relevant stakeholders on the development and implementation of operational policies, plans and practices.
- Actively seek formal and informal partnerships and opportunities for collaboration with regional, national and international stakeholders.
- Recognising the symbiotic relationship between the University and the Colleges, seek opportunities to work in collaboration on environmental sustainability initiatives.

### Supporting policies and plans

- Communications and Engagement strategy

### **Arrangements for Governance and Management**

- A Pro-Vice-Chancellor has responsibility for environmental sustainability and carbon emissions.
- An Environmental Sustainability Strategy Committee, chaired by a Pro-VC and reporting jointly to the University Council and General Board.
- Implementation of this policy coordinated and undertaken by the Environment and Energy Section within Estate Management.

### **Monitoring and Review**

- Bi-annual reports on key performance indicators will be presented to the Environmental Sustainability Strategy Committee.
- An Annual Report to the Council and the General Board and such other reports as the Council or General Board may require.
- An annual Environmental Sustainability Report will be published online providing transparency about our approach and progress.
- Our performance will be benchmarked annually against national and international peer institutions.
- The Environmental Sustainability Policy and Strategy will be reviewed regularly taking into account our developing understanding of the scale of challenges, our own performance and emerging opportunities. A full review of the Environmental Sustainability Policy and Strategy will be undertaken in 2020.

## **9. List of recommendations**

**Recommendation 1:** The University adopts the proposed vision that it is committed to making a positive impact through outstanding environmental sustainability performance.

**Recommendation 2:** The University adopts the proposed policy framework contained in figure 1.

**Recommendation 3:** The University adopts the proposed roadmap set out in figure 2.

**Recommendation 4:** An Environmental Sustainability Strategy Committee is established from 1 October 2015 to deliver the proposed policy and strategy.

**Recommendation 5:** True costs of building construction and operations should ultimately be visible and accountable at an institutional level.

**Recommendation 6:** There should be better integration of building and equipment maintenance between institutions and Estate Management.

**Recommendation 7:** The University should implement a mechanism to ensure that the life-time running costs of equipment are taken into account in all purchasing decisions.

**Recommendation 8:** Specifying effective and fine-grained monitoring should become an essential component of all building, maintenance and refurbishment projects, and that relevant information is regularly communicated to institutions to assist in managing their energy consumption.

**Recommendation 9:** As part of the review of the Carbon Management Plan, the Environment and Energy Section should explore further what would be required to achieve carbon neutrality.

**Recommendation 10:** Implementation of a mechanism that enables cost-effective energy efficiency and other environmental measures to be funded by an alternative means if there is not sufficient funding available in the capital project budget.

**Recommendation 11:** Enforcing the effective use of shared facilities, and more rigorous examination and justification of space demands, should be key features of all future major capital projects.

**Recommendation 12:** The University Travel Plan should be reviewed urgently with the objective of producing a comprehensive plan covering travel to, at and for work.

**Recommendation 13:** The Uni4 service should be reviewed with the objective of identifying public transport options for staff and students to travel to work and between sites including the NWCD, West Cambridge, city centre sites, the railway station and the biomedical campus.

**Recommendation 14:** The proposed Environmental Sustainability Strategy Committee should review how the University's car parks are managed and as part of this consider whether and how car park charging should be introduced.

**Recommendation 15:** The need to travel nationally or internationally should be reduced through investment that increases the accessibility and availability of options such as video-conferencing.

**Recommendation 16:** A Sustainable Procurement Policy covering all aspects of sustainability (environmental, social and economic) should be developed and adopted.

**Recommendation 17:** An Ecological Advisory Panel should be established with representation from key partners in the Cambridge Conservation Forum.

**Recommendation 18:** Opportunities for tree-planting on University land should be identified and maximised.

**Recommendation 19:** A Sustainable Food Policy should be developed and adopted.

**Recommendation 20:** Institutions should consider whether environmental behavioural change is a strategic research opportunity that they wish to exploit.

**Recommendation 21:** The terms of reference for the proposed Environmental Sustainability Strategy Committee should include the ability to require institutions to produce and implement environmental sustainability management plans and to submit these plans to the committee for review and comment.

## 10. Key matters for discussion

10.1. The Council is invited to:

- a) Endorse the overall Environmental Sustainability vision that the University of Cambridge is committed to making a positive impact through outstanding environmental sustainability performance.
- b) Approve the proposed governance arrangements for an Environmental Sustainability Strategy Committee.
- c) Endorse the Environmental Sustainability Policy framework and strategy.
- d) Consider the recommendations made in this report.

## **Appendix A: List of those who provided verbal evidence**

- Martin Bellamy – Director of University Information Services
- Caroline Blackman-Edney – Head of Purchasing, Finance Division
- Munish Datta – Head of Plan A & Facilities Management, Marks and Spencer
- Sarah Foreman – Head of Maintenance, Estate Management
- Professor Daan Frenkel - Head of the Department of Chemistry
- Richard Jackson – Head of Environmental Sustainability, UCL
- Professor Ian Leslie - Chair of the Transition Advisory Group
- Professor Duncan Maskell - Head of the School of Biological Sciences
- Professor Patrick Maxwell – Head of the School of Clinical Medicine.
- Sue Mehrer – Deputy Librarian, University Library
- David Peet – Administrative Secretary, Department of Physics
- David Pencheon – Director, Sustainable Development Unit, NHS England
- Dr Mike Rands - Executive Director, Cambridge Conservation Initiative and Judge Business School
- Professor Geoffrey Smith and Prof Nabeel Affara – Head and Deputy Head of the Department of Pathology
- Angus Stephen - Director of Operations, Estate Management
- Professor Steve Young - Senior Pro-Vice Chancellor responsible for Planning and Resources
- Jessica Walsh - Energise Cambridge
- Marita Walsh – Support Service Manager, Department of Chemistry.

## **Appendix B: List of those who submitted written evidence**

- Institute of Continuing Education
- The Students' Vision, a collective response from several student environmental groups.

## **Appendix C: List of those who submitted a written response to the consultation**

- Cambridge Cycling Campaign
- Department of Materials Science and Metallurgy
- Faculty Board of Law
- Institute of Continuing Education (ICE)
- School of Clinical Medicine
- Student response - a collective response from several student environmental groups
- University Library ECRP Working Group
- Prof Bill Adams, Department of Geography
- Helen Jackson, Legal Services

- Tim Kasoar, Department of Zoology
- Dr Ben Phalan, Department of Zoology
- Daniel Thomas, Computer Laboratory
- John Wells, CRUK
- Natalie West, Office of External Affairs and Communication