# UC Sustainability Office Report 2015

## Contents

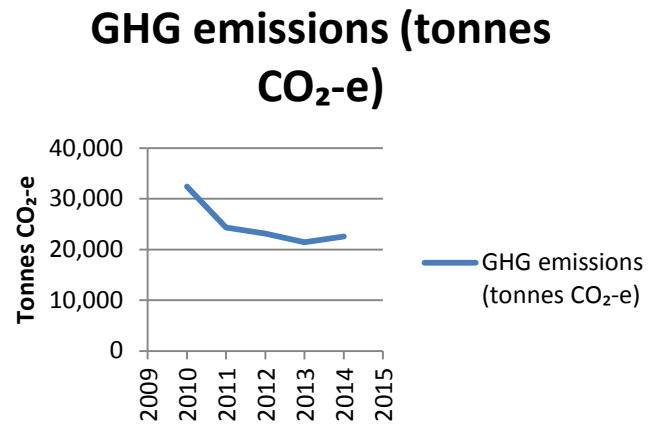
# 1. Introduction

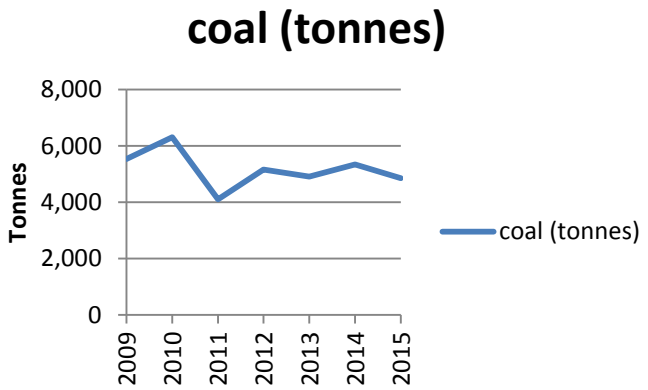
Sustainability planning at the University of Canterbury is based on the draft 'Sustainability Strategy 2012-2022', which breaks sustainability planning into short, medium and long term objectives. Annual planning for sustainability at UC is handled by the Sustainability Office and the operational elements of this are encapsulated in the Engineering Services Operational Plan.

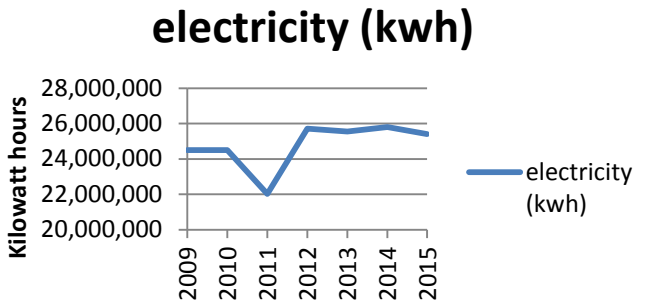
In 2014, the Sustainability Office reduced contact with the student population somewhat and worked to consolidate its focus on the operational matters it had a mandate to influence, (e.g. waste, green cleaning, and transport). Capacity within the office to deliver a work programme similar to prior years was reduced due to the resignation of the Sustainability Advocate, Matt Morris in August.

This 2015 report for the first time presents the continuous data sets collected by the Sustainability Office, in many cases since 2009. This helps to paint a picture of our overall sustainability performance, and helps us to identify some gaps in our current reporting framework (for example on biodiversity/ecological health data).

This 2015 report also for the first time provides an overview of progress against the draft Sustainability Strategy, noting that 2015 signified the completion of the first (short term) reporting period for this Strategy (See Appendix 1).




# 2. Sustainability Indicators

## 2.1 Greenhouse Gas Emissions Reporting and Reduction

The University of Canterbury remains the only university in New Zealand (and was the first in the Southern Hemisphere) to be certified with the Certified Emissions Measurement and Reduction Scheme (CEMARS). This allows us to comprehensively track our Greenhouse Gas (GHG) emissions and reduce them. Our carbon profile can be found here.

Whereas GHG emissions continued a downward trend between 2012 and 2013, there was a slight increase again in 2014. This is due to the increase in coal consumption that year, which in turn was driven by a slightly higher number of degree days (days under 15°) than in 2013 or 2015. Coal use was therefore down again in 2015. In addition, the coal boiler was started slightly later than normal in 2015 due to a mechanical fault.

Late in 2013 a process commenced at UC led by the Energy Manager to conduct a feasibility study into carbon reduction, low-carbon space heating provision and the role of the existing coal boiler facility. In 2015 the contract for this study was awarded to AECOM. A final version of this feasibility study will be presented by March 2016.

## 2.2 Landscape and Biodiversity

The Sustainability Office developed a draft Landscape Strategy in 2013, followed by a Landscape Concept (2014-2022), which was foreshadowed by the Draft Sustainability Strategy in 2011. The Landscape Concept is intended to help immediate landscaping designs as part of specific remediation projects and also to inform the forward-looking Campus Master Plan. It presents a brief landscape history of the Ilam Campus, summarises current thinking and suggests five themes that the new Landscape Plan should take into consideration. These themes are: native landscaping, stream restoration, mahinga kai and edible landscaping and historical associations. This Landscape Concept is one of the key reference documents that the Campus Master Plan draws on.

### 2.2.1 Waterways

In 2015, the Sustainability Office developed a "UC Waterways Issues and Options" document, in consultation with a range of UC academics, Ngāi Tahu Research Centre and UC Grounds. This document is intended to inform the UC campus master planning process, particularly with respect to thinking about waterways within a landscape planning context. It provides background information about the history of the three waterways flowing through the University of Canterbury campus, examines some key issues and risks associated with these waterways within a wider contemporary context and identifies significant potential opportunities for including improving the ecological health of the waterways.

### 2.2.2 Biodiversity

The Sustainability Office has not collected Biodiversity data for many years, but this report marks the intention to start developing some robust metrics in this area.

### *2.2.2.i. Ecological health of Okeover Stream*

The biological health of Okeover Stream has been monitored annually since 2000 by staff and students of Biological Sciences. In 2015 and into 2016 the upper reaches of the stream have dried up during construction and flow now only occurs below the Engineering pool. Thus the upper reaches are currently ecologically dead. Downstream from Engineering the ecology health remains poor with <14 species of stream invertebrates and the MCI (a measure of stream health) indicating the stream is moderately polluted.

## 2.2.3 Community Gardens

Both UC community gardens (Dovedale and Okeover) provide a tranquil space for both staff and students, especially whilst campus is being remediated. In 2015 666kg of food was harvested from 52 different types of crops from both gardens. This represents an impressive 10% increase in volume of food produced and a 7% increase in types of crops grown compared to 2014. Volunteer input also increased significantly in 2015 by 43% (579 instances of volunteering recorded) compared to 2014. Assuming each volunteer works a minimum of 1 hour, this represents 14.5 weeks of volunteer hours at 40 hours a week).

In addition to increasing food production and volunteer hours, UC's Community Gardener Jane Aistrope and volunteer gardeners undertook to rejuvenate the annual vegetable beds in Okeover. DigSoc, a student gardening club, contributed to designing the new beds and SVA Green Platoon assisted with clearing the site of old garden bed edging in a single, highly productive afternoon. Engineering Services staff played an essential role removing soil and building new raised beds in the shape of a hexagon. Grounds also provided invaluable support to this process. Whilst replacement of the vegetable beds will result in a temporary drop in production in 2015/2016 growing season, the new beds have transformed the look of Okeover and significantly improved the long term functionality and productivity of the gardens. The Sustainability Office would like to thank all Engineering Services staff for their contribution in 2015 to securing the future of Okeover Community Garden.

SVA Green Platoon clearing Okeover Community Garden

Dovedale gardens continues to act as a satellite 'staples' garden, and provides allotments for individuals, which include UC staff, local residents, and students.

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## 2.3 Transport

The Sustainability Office continues to provide support to the UC Transport Working Group, which developed a general "UC Transport Issues and Options" document. This summarises the current status of different travel modes used by staff and students, projects implemented by UC for each mode, and future opportunities for innovations and improvements with respect to travel demand management. This paper is intended to inform a Transport Management Plan, which is to be developed in 2016. The TWG also submitted a Parking Options paper for consideration.

'Dr Bike', which offers a modest bike repair and maintenance service for an hour once a week during term times continued to be popular with both staff and students. Dr Bike mechanics (both UC Engineering students) assisted around 100 cyclists in 2015, roughly the same as 2014.

The Sustainability Office developed a Cycle plan in collaboration with the UC Transport Working Group. The need for this plan was indicated in the Draft Sustainability Strategy, and it outlines an eight year programme of works to meet the expectations of staff, students and visitors to the University of Canterbury around cycling. It addresses key areas of cycle parking, route planning, facilities (such as showers, and lockers), plus education/engagement programmes. It is intended to provide guidance to University planners about provision for cyclists required, and has been reviewed as part of the Campus Master Planning process.

2015 Dr Bike Mechanics Vaughn Brook and Karl Jackson

The Sustainability Office has continued its work to increase cycle parks on campus since the loss of spaces after the earthquakes. The successes of 2014 have been enhanced so that since 2013 cycle parks have increased by almost 700, and are 70 spaces short of the pre-earthquake situation. In doing so, the stands have also been upgraded and are more durable and a much better design than previous stock. UC is now looking to see how it can meet the cycle facilities requirements detailed in the new District Plan.

## 2.4 Water consumption

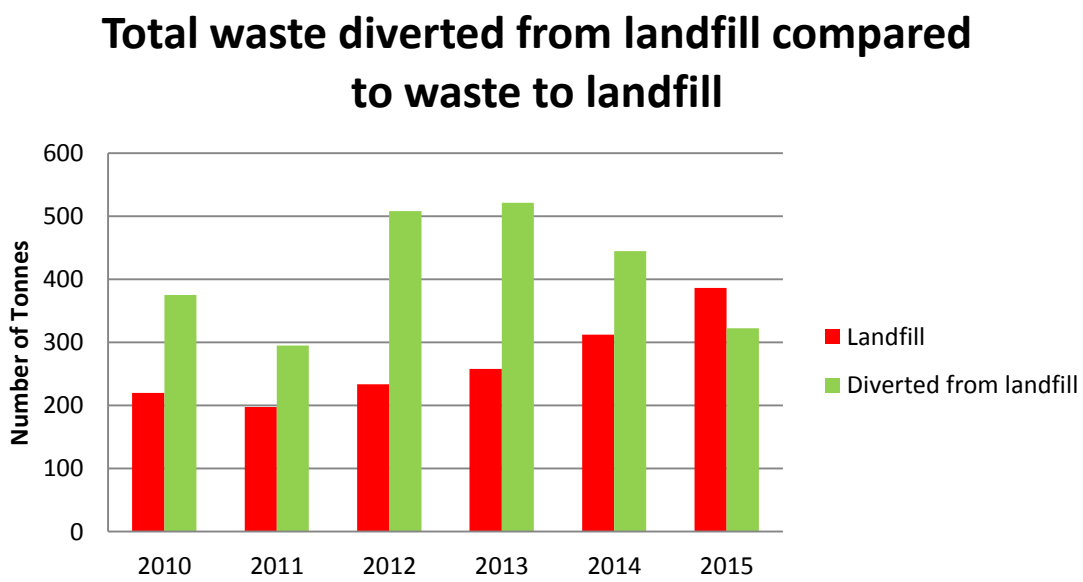
Water metering at UC has been problematic since 2014. Inaccuracies were discovered in respect of the meters and their respective connected controllers and so the provision of information has been suspended whilst remedial measures are being carried out. A new reporting method is to be introduced mid-2016, and provisional data should be available for the 2016 Sustainability Report, to be issued early in 2017.

## 2.5 Waste & Recycling

The Sustainability Office developed a Draft Waste Management Plan, (2014-2022). It outlines the journey UC has been on regarding waste issues over the last fifteen years, establishes some waste reduction targets and key problems that need to be resolved, and creates a programme of work in short, medium and long term increments in order to address those issues.[1]

[1] UC continues to maintain a four bin waste and recycling system, plus back-of-house recycling for cardboard, polystyrene, coal ash, batteries and other items.

Waste statistics continue to trend in a negative direction. The increase in waste to landfill can be attributed to three reasons. Firstly, from mid-2014 a category of waste called called 'dryfill' (construction waste that used to be sorted and where possible, recycled[2]) was no longer separated and was redirected into landfill. This could account for between 30-60% of the additional volume in landfill. The remaining increase is due to end-point recyclers forcing ongoing changes to waste streams additional to the changes already implemented in 2014, and to recyclable items (comingle and organics) being wrongfully placed in the landfill bins. The overall effect of these changes is to considerably reduce the kinds of waste that can be recycled in general. In response to this, the Sustainability Office led an extensive project updating the stickers on approximately 1200 bins across both campuses in late 2015.




The amount of waste being diverted from landfill decreased by 27% or 122 tonnes in 2015, with co-mingle recycling[3] dropping most significantly in terms of tonnage (75 tonnes). Waste to landfill increased in the same period: by 24% or 74.45 tonnes.

Whilst these trends overall are of concern it must be noted that they only partially reflect the total amount of waste produced by UC. Other types of bulk waste, including coal ash, metals, and organic waste generated by Grounds continue to be redirected from landfill. If these categories of waste are included, 75% of UC's waste overall is diverted from landfill.

UC Sustainability Office continued to coordinate waste audits in partnership with UCSA and Envirowaste, UC's current waste provider. These audits proved to be valuable, helping to pinpoint problematic waste streams and identifying strategies to address them.

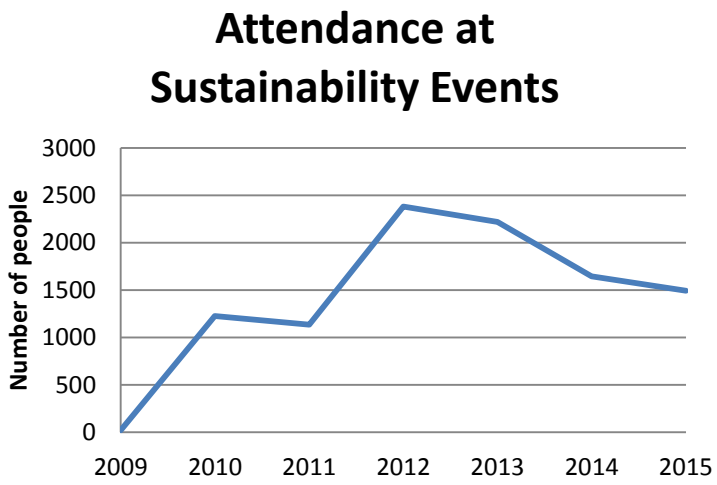
Other waste initiatives supported by the UC Sustainability office in 2015 include the UC Furniture Giveaway, where eight containers of surplus furniture was gifted to UC and wider

UC Furniture Giveaway, February 2015

[2] This service is no longer being offered by the current UC waste provider.
[3] Bins with yellow hoods

Christchurch community (in partnership with Campus Services), and a Toner Amnesty (in partnership with Learning Resources ICT and UC Print).

**2.5.1 Composting Coffee Cups:** A trial to establish a separate collection point for takeaway coffee cups was established in 2014, with the cups collected being sent to the HotRot composting facility near Rolleston. The initial trial was successful and therefore was expanded in 2015, with the cups being sent to the Envirocomp facility near Rangiora (where the University already has a contract to take disposable nappies from its childcare facilities). This trial is to be continued till the end of 2016, when it is hoped the UC waste system will be able to compost more packaging and eliminate a variety of plastic packaging materials. 15,200 cups were diverted from landfill and turned into compost in 2015.




## 2.6 Community Engagement

### 2.6.1 Engagement Events and Eco Week

Community engagement about sustainability issues continues despite ongoing considerable constraints to do so. Attendance at events run by the Sustainability Office (1495) declined again compared to 2014 (1985), but note the large increase in attendance at the community garden in 2.2.2. above.

Key community engagement initiatives for 2015 owned by the UC Sustainability Office included the Sustainability Office O-week stall, Fair Trade Fortnight, and Eco Week. The UC Sustainability Office also supported the UC Furniture Giveaway.

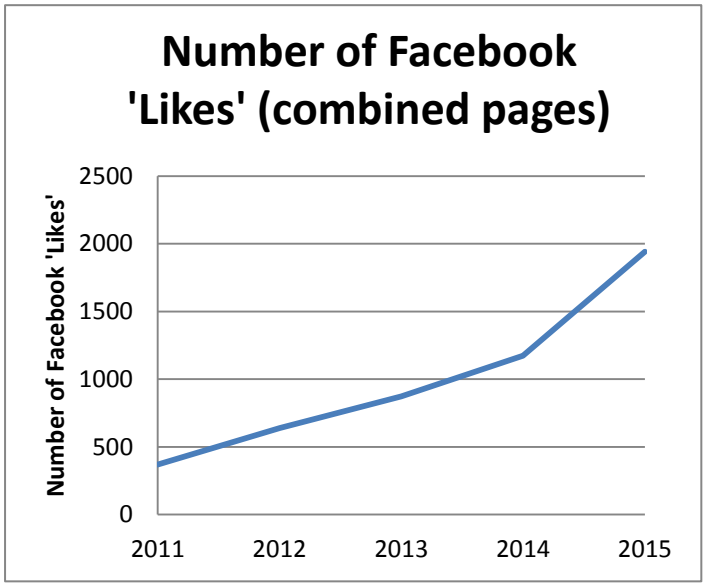
Eco Week consisted of a series of events which introduced students to a range of sustainability issues in engaging, informal learning environments. Events included a tour of two tiny houses

Eco Week: Climate Kilometer Grand Parade

Eco Week: Tour to Stefan Cook's Tiny House

built by UC students, a sustainable food tasting session, a film about ethical fashion, and supporting a carbon-free Climate Kilometer Grand Parade organised by Generation Zero (Christchurch) around campus.

### 2.6.2 Social Media




Upgrades to the UC Sustainability Office e-communications (which started in the last quarter of 2014 using Mailchimp and Word Press) were consolidated in 2015. Subscriptions to our quarterly e-letter increased by 12% to a total of 463 and UC Sustainability blogs were viewed 2735 times in 2015.

In December 2015, the UC Sustainability Community Facebook page was 4th biggest Facebook page formally associated with the University of Canterbury, based on the number of 'likes' (1428). This is a real achievement given that the other units running the three biggest Facebook pages all have dedicated budgets for marketing through their Facebook pages, unlike the UC Sustainability Office. 'Likes' for the UC Sustainability Community Facebook increased by 22% from 1172 to 1428. 'Likes' for the UC Community Gardens Facebook page increased by an even greater percent, at 38% (an increase of 327 to 451).

### 2.6.3 Fair Trade

One of the criteria to certify as a Fair Trade certified campus is that Fair Trade tea and coffee are required to be the default options at all University Council and Student Union meetings and in (as a preferred goal) at least 50% of all university departments, student union offices, kitchenettes and staff rooms.

Whilst a healthy 57% of cost centres purchase Fair Trade Certified products (coffee, tea and hot chocolate) only 19% of all beverages purchased by UC are Fair Trade Certified, suggesting that in general, purchases of Fair Trade products are likely to be on an ad-hoc, inconsistent basis across most cost centres.

Fair Trade certified ground coffee and coffee beans are popular at UC. 76% and 59% respectively of these types of coffee is Fair Trade certified. However these café products combined represent only 21% of all café products purchased.

UCSA staff tasting Fair Trade instant coffee

23% of all café products purchased by UC are instant coffee products, but only 5% of instant coffee products are Fair Trade certified. There is considerable scope for improving the frequency and volume of purchasing Fair Trade instant coffee. Fair Trade Fortnight in May 2015 featured three events for different parts of the UC community (UCSA staff, students and UC staff) which focussed on tasting instant coffee. Data collected showed a clear preference for all Fair Trade instant coffee over non-fair trade, which is promising if UC commits to becoming a Fair Trade campus in the future.[4]

Similar tasting sessions in 2016 could be run for black tea products, which represent 21% of all café products purchased by UC.

The Sustainability Office also collaborated with Procurement to develop a business case which explores the costs and benefits of become a Fair Trade certified Campus, which will be presented some time in 2016.

[4] Data generated and supplied by UC Procurement.

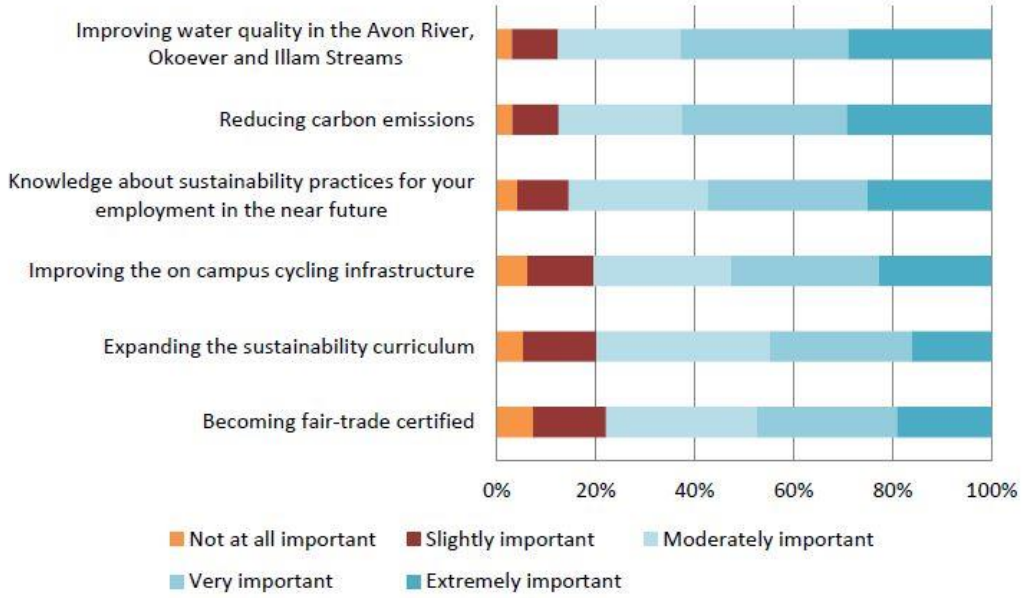
## 2.7 Research

In 2015 "UC Count" was used for the first time to survey students about sustainability issues on campus. UC Count is administered by the UC Academic Services Group to all students enrolled at the University of Canterbury. 3,718 students responded to questions about sustainability - 90% of all the people who responded to the survey.

Responses showed that the majority of respondents considered sustainability issues to be important. The top ranking operational issues were improving water quality in the streams that flow through campus (85% rated this at moderately to extremely important), and reducing carbon emissions (83% rated this at moderately to extremely important). Improving on-campus cycling infrastructure was also considered a high priority at 80%.

However, operational issues are only part of UC's journey towards a sustainable future. Just as important is the task of educating students about sustainability and enabling them to be proactive about these issues throughout their careers.

**Student Perceptions of Sustainability Issues at UC (2015)**




Source: UC Count 2015, Academic Services Group

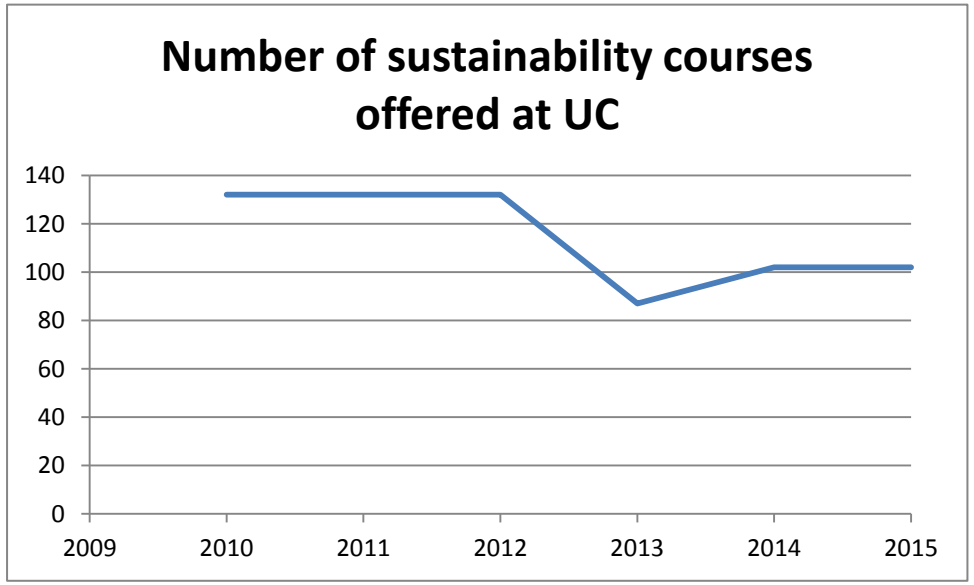
The results from this year's survey show a significant shift in student attitudes with respect to knowledge about sustainability practices and future employment. In 2013, 28% of respondents stated that knowledge about sustainability practices was very or extremely important in gaining employment. In 2015, this has jumped to 58%.

Student attitudes towards expanding the sustainability curriculum were consistent with similar surveys in prior years, with approximately 44% indicating that it was very, or extremely important that it is expanded. Overall, these statistics demonstrate clearly that students care about the future of UC itself, and what they learn whilst they are here.

Summer Sustainability Scholarships were again not offered through the Sustainability Office for 2015/16 due to the absence of a Sustainability Advocate who would normally co-supervise these projects. In the past, these scholarships provided real value for UC. Many research topics provided useful, practical insights into how to progress sustainability practices at UC, plus engage with staff and students. In addition, the lack of summer scholarship students who have in the past assisted with peer-to-peer engagement and outreach activities during O-week has had a noticeable effect on the Sustainability Office interactions with the student community.

An Arts 395 Internship enabled a small amount of undergraduate student research to take place in 2015. Arts 395 Internships enable students to gain 'real world' work experience with a client. This year Bridget Snodgrass conducted a desk top review of student-led activism on sustainability issues from five different local and international campuses. The research was developed with input from UC Kakariki representative Michael Gardner and recently elected UCSA general executive member Johnny Duncan. Key findings include that strongest club activities are often associated with a particular academic discipline, and support from student union executives and/or a Sustainability Office can help to catalyse student activism.

## 2.8 Teaching, Research and Sustainability Curriculum




The number of courses teaching key sustainability issues in 2015 (n=103) has changed little compared to 2014 (n=102). However the types of courses available on a year to year basis can undergo minor changes, due to one-off 'special topics' being offered, courses not being offered for a particular academic year, and others coming back on line after being in hiatus for a year or two. These changes can affect between 2-5% of the total number of sustainability-related courses offered by UC.

Report by Matt Morris (Sustainability Advocate) and Katie Nimmo (Sustainability Projects Facilitator), with input from Tony Sellin (Energy Manager) and Prof. Jon Harding (Dean Postgraduate Research), February 2015
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**Level 2, Engineering Services**
**PO Box 4800**
**University of Canterbury**
**CHRISTCHURCH 8140**
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**Table 1: UC Sustainability Indicators**

| Sustainability Indicator | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| **electricity (kwh)** | 24,497,911 | 24,497,911 | 22,016,328 | 25,712,319 | 25,543,040 | 25,803,113 | 25,414,231 |
| **GHG emissions (tonnes $CO_2$-e)** | | 32,392 | 24,318 | 23,145 | 21,419 | 22,590 | Data not available |
| **coal (tonnes)** | 5,534 | 6,309 | 4,098 | 5,160 | 4,913 | 5,334 | 4,846 |
| **water use (litres)**[5] | 336,526,000 | 250,000,000 | 325,000,000 | 392,000,000 | 475,000,000 | No data | No data |
| **waste to landfill (tonnes)** | | 219.79 | 197.11 | 233.44 | 256.14 | 312 | 386.47 |
| **waste recycled or composted (tonnes)** | | 357.39 | 278.36 | 507.44 | 521.42 | 444.70 | 322.54 |
| **cycle stand count** | | | | 2474 | 1710 | 2402 | |
| **pages of paper purchased (A3 and A4)** | | | | | 17,953,500 | 17,787,750 | |
| **fair trade ground coffee (units)** | | | | 17% | 24% | 18% | 76.00% |
| **fair trade coffee beans purchased (units)** | | | | 21% | 28% | 45% | 59.00% |
| **fair trade black tea (units)** | | | | 0% | 5% | 3% | 5.00% |
| **fair trade instant coffee (units)** | | | | | | | 5.00% |
| **sustainability courses** | | 132 | 132 | 132 | 87 | 102 | 103 |
| **sustainability event attendance** | 23 | 1227 | 1135 | 2383 | 2221 | 1985 | 1495 |
| **newsletter (new signups)** | | 225 | 129 | 95 | 58 | 35 | |
| **newsletter (total)** | | | | | | 416 | |
| **blog views** | | | | | | | 2,700 |
| **facebook (main)** | | | 305 | | | | 1,428 |
| **facebook (garden)** | | | 48 | | | | 451 |
| **facebook (rideshare)** | | | 17 | | | | |
| **facebook (eco-my-flat)** | | | | | | | 62 |
| **facebook (combined pages)** | | | 370 | 640 | 872 | 1172 | 1,941 |

[5] This data is presented as reported in previous reports. However, as noted, it has subsequently been discovered that the electronic communication of data from metres has run into technical problems. Data reporting has been suspended until this problem has been rectified.

# *Development of a robust programme of Sustainability Studies*

**If our core business is teaching and research, our greatest impact is through what we teach and what is researched here. We currently offer approximately 132 sustainability-related courses (5.3% of total courses offered) which is a strong base to build from. Although these are listed on the sustainability website, it is difficult for students interested in pursuing sustainability studies to identify a clear pathway. Ultimately we aim to offer a degree in Sustainability Studies, and to incentivise sustainability research through a range of scholarships.**

SWG member/s: Prof. Eric Pawson

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Take this plan to the Teaching and Learning Committee. Sustainability outcomes identified and applied for graduate attributes and degree profiles. | Plan has not gone to Teaching and Learning Committee. Graduate attributes and outcomes have been developed, but limited to new endorsement. | Graduate attributes and degree profiles influencing case for building a stronger degree pathway around sustainability | Stronger degree pathway around sustainability in place and embedded. |
| | Make existing sustainable courses more easily identifiable, working through Comms, Liaison and the Sustainability Office. Seize excellent marketing opportunities offered through this, particularly linking to sustainable rebuild of Christchurch. | Sustainability website redeveloped, making it easier for new students to find courses. Posters and fliers promoting sust courses have been widely circulated, incl. with Student Services. Comms have done good reporting on sust research on campus. | All new programmes to indicate how they intend to reflect UC's goals around sustainability. | Sustainability is incorporated into all new courses. |
| | Begin a process of engagement with academics regarding an endorsement in Sustainability Studies appended to, initially, BA and BSc degrees. | Endorsement in Resilience and Sustainability and SUST201: Resilience and Sustainability are on the books, will not run till 2017. | Endorsement in Sustainability Studies trialled in Arts and Science as appropriate | Endorsement in Sustainability Studies expanded to other faculties as deemed appropriate by them |
| | Service learning opportunities for students enhanced, in particular by using the earthquakes as a teaching focus to explore issues of urban resilience and sustainability. | A range of Service Learning courses are on offer at UC, many with a strong link to sustainability. | UC demonstrating leadership in Christchurch through expanded service learning opportunities in a range of fields. New research generated through this process. SL providing branding and marketing opportunities | UC at leading edge around service learning and demonstrating strong claim to have actively supported sustainable Chch rebuild through this avenue. |
| | Work with Faculties, Academic Board and Senior Management Team to develop a sustainability studies degree pathway. Begin CUAP process. | First steps (SUST201 and Endorsement) completed. These are on hold until resources become available. | Multidisciplinary degree course of undergraduate sustainability studies offered with involvement from all Colleges. | Interdisciplinary degree course in sustainability studies offered. A large range of post grad scholarships in sustainability studies available |

| | | | | |
|---|---|---|---|---|
| | Explore benefits of signing Tailloires Declaration (signalling a commitment to sustainability in higher education). Already signed by 350 universities in 40 countries. | No progress. | Implementation of the principles of Tailloires, essentially by pursuing the above action points. | Benefits of signing Tailloires, or of implementing this strategy, obvious through enhanced reputation as a leader in the field, and affecting recruitment positively. |

# *Promotion and facilitation of sustainability research projects*

**Research into sustainability-related fields is a strong point of this university. We can build on this strength and make it clear that the University of Canterbury is a great place to come to develop work in this field.**

SWG member/s: Susan Krumdieck

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Sustainability research at UC recognised and rewarded, for example by enhancing the reach of the Sustainability Awards. | Reach of Sustainability Awards expanded to 2013 then stopped due to lack of resourcing. Research routinely reported on now by Comms. | Promotion of sustainability research achievements through Comms channels. | UC recognised as a leading institution in sustainability research. |
| | Fora established for academics doing sustainability research to share their research with colleagues, eg symposia. Occasional research papers released, for example by the Sustainability Office. | Waterways Working Group being reformed. | Clusters of researchers facilitated to focus on key sustainability issues relating to research, teaching and learning. Multidisciplinary collaborations supporting a multidisciplinary sustainability degree. Further publication opportunties pursued. | Initial clusters of researchers now supporting an interdisciplinary sustainability degree programme. |
| | Review how we engage with visiting international experts in sustainability. Establish systems to ensure they are utilised to best effect. | Limited engagement through Prof Peter Newman but significant engagement with Dr Jim Salinger in 2013. Systems still not established. | Ensure that visits of sustainability leaders are fully promoted, and that this informs our general positioning in public discourse as a leader in sustainability research. | Erskine and Canterbury Fellowships used to ensure students can work with international leaders in sustainability research. |
| | Sustainable practice in research guidelines developed. | No progress. | International connections enhanced to access best practice in sustainability research. Sustainable practice in research guidelines promoted. | Sustainable practice in research embedded. |
| | Research focus around sustainability and urban resilience, utilising the Christchurch earthquakes as a case study, identified and pursued. | A lot of progress is happening around this in various departments. | Strong links drawn between this research strand and new knowledge from service learning experiments. Research papers informing future developments in this area. | UC recognised as a leader in sustainability and urban resilience research. |
| | Continue offering summer sustainability scholarships on matters of practical benefit to advancing sustainability at UC | These are continuing. | Undergraduate scholarships offered for students undertaking sustainability studies. | Sustainability scholarships for post graduate studies available. |

# *Bridging programmes to encourage high school students to consider UC as a study option, and the 'informal curriculum'*

**Sustainability is woven into the curriculum of an increasing number of primary and secondary schools. There is a tremendous opportunity to engage with secondary school students through dynamic, original sustainability programmes run by UC both on and off campus.**

**UC has a strong background in offering a range of sustainability learning experiences that are not always directly linked into the formal curriculum, but which capture the imaginations of students and lead them into sustainability-related courses. These opportunities also make UC a more interesting place for students. It is often such experiences that will keep students at UC, even in the most difficult times. These programmes also offer an opportunity for campus innovations and potential cost-savings.**

SWG member/s: Matt Morris, Jeni Moir, Jane Hall

| | *Short Term (2012-2015)* | *Progress to end 2015* | *Medium Term (2015-2018)* | *Long Term (2018-2022)* |
|---|---|---|---|---|
| ***Principles*** | | | | |
| Being sustainable will help us retain and attract quality students and staff and funding, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Work with secondary schools to create opportunities for their students to get involved with green campus activities. | Limited progress, despite attempts with Unlimited. | More student research projects contribute to sustainability initiatives. | Sustainability scholarships offered to school leavers taking up a course in sustainability studies at UC. |
| | Work through College marketing or outreach staff. Identify existing opportunities and build a closer link between the Liaison and Sustainability Offices. | Good progress being made here, including Sust promotional materials being sent to all secondary schools in New Zealand. | Opportunities for school students to learn about sustainability study options at UC are routinely fed through normal liaison channels, and closely linked in with UC sustainability curriculum developments. | Sustainability scholarships offered to school leavers taking up a course in sustainability studies at UC. |
| | Foster the 'Eco Bridging Programme' with Enviroschools, linking it to mentoring and service learning opportunities. | 'Sustainability Experience' for secondary schools piloted in 2013 with over 150 students attending. Mentoring/service learning link not successful to date. | Sustainability mentoring scheme at UC further developed. | Extracurricular sustainability opportunities embedded. |
| | Maintain 'informal curriculum' and student sustainability projects. | Informal curriculum projects being successively handed over to other units/organisations, eg Eco My Flat being run by UCSA (2015). ARTS395 internships links being developed. | 'Informal curriculum' and projects strengthened. | 'Informal curriculum' activity, eg in local community, translating into points towards degree. |

# *Applied research and collaboration with Maori, residents and residents' groups, local councils, and industry*

**Our research and teaching capacity is of great benefit to our wider community and will be called upon increasingly in respect to the sustainable rebuilding of Christchurch.**

**As an institution, we have entered into many collaborative projects with a sustainability impetus, including projects with local residents, councils and businesses. This strategy acknowledges the importance of this work and calls for it to be deepened and expanded, and applying our research both to our campus sustainability needs and the physical, cultural and social context within which we are situated.**

SWG member/s: Te Maire Tau, Jenny Webster-Brown, Susan Krumdieck

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, being sustainable is economically sensible, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Sustainability Office collaborative projects scoped with Maori, Territorial Local Authorities, local community (as for example with the Okeover Stream Engagement Project), especially in regard to the sustainable rebuild of Christchurch. | Mahinga kai joint research project with Ngai Tahu Reseach Centre/Waterways Centre/Sustainability Office complete. | Funding for applied research from Territorial Local Authorities based on genuine sustainability gains. | Off-site collaborative projects with Territorial Local Authorities, Maori and the local community. |
| | Working with Communications to inform the community of our sustainability research projects. | Community engagement events in conjunction with Ecan during 2012 to raise awareness of Okeover Stream. | Enhanced connectivity with wider community: events and educational opportunities about sustainability research. | Community education programmes for sustainability embedded. |
| | Industry liaison determining what sustainability credentials are needed from new graduates/ new employees. | Good level of support from industry during the consultation process for the new Endorsement. | This knowledge fed into the process for designing a suitable sustainability curriculum for UC as part of the curriculum development process. | Graduates have the sustainability credentials that industry needs. |
| | Individual academic applied research projects encouraged that develop operational improvements on campus. | This is happening, but still in an ad hoc way for the most part. Some targeted work around transport especially, and carbon, have been completed. | Pilot projects underway. | Business collaborations generating both new knowledge and operational improvements for sustainability |
| | Community education lectures offered on sustainability topics. | A series was developed and delivered in 2012. Some themes covered in 'What If' series 2013 and other one-offs (eg Salinger talk). | Community lectures continued and translated into publications for wider community. | Community education programmes for sustainability embedded. |

# *Staff and departments: professional development and ownership of sustainability initiatives*

**For sustainable practice to be embedded across the institution there will need to be a strong HR focus. Working through existing channels, and perhaps developing new ones (for example the Eco Office initiative) to deliver professional development opportunities for staff around sustainable practice will support a transition towards sustainable behaviours being part of the Professional Development and Review process.**

**Further, Colleges, Faculties and Departments all need to be part of identifying their sustainability pathways. Each unit should create its own action plan, and be empowered to carry it out. The Green Loans system is one method for this.**

SWG member/s: Matt Morris, Chantel Inch

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, being sustainable is economically sensible, andwe have an obligation to be good stewards, in line with the principle of kaitiakitanga | Staff training and programmes enhanced, improvements rewarded | No progress. | Sustainability KPI's embedded in Professional Development and Review, and further enhance UC Sustainability Awards | On-going professional development programmes reviewed and improved, and integrated. |
| | Dept working groups established. Each group responsible for delivering Department Sustainability Action Plans | Limited progress, although 2013 saw the re-launch of the Eco Office Programme, which is a first step towards this. | Focus on aligning the various departmental plans and initiate Green Loans for departments | Departments have transformed into sustainable operations. Initial Green Loans have been repaid. |

# *Branding and marketing*

**Students are increasingly interested in the sustainability performance of universities, and the demand for green curricula looks set to increase. UC has a strong track record of sustainability initiatives and already offers many green courses. Part of the focus needs to be on harnessing this track record and utilising it in developing our brand and marketing it. However, close attention needs to be paid that we do not 'oversell' what we have on offer.**

SWG member/s: Jacquie Walters

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Ensuring that 'green' rhetoric matches university practice (both operational and academic) | There is still limited green rhetoric, but practice is improving. | As operational improvements implemented, Comms including them in both internal and external channels | UC as a green university marketed as a strong point of difference, and shown to lead in this area. |
| | Include sustainability definition and aspirations in publications, website, email footers, annual report | No progress. | Clearly report back on progress against these stated intentions. PR stories as action points achieved in other work streams | Benchmarking, carbon reduction work included in marketing. UC mentoring/modelling best practice and current thinking. |
| | Include sustainability courses in Community Education Programme. Sustainability programme as a point of connection with local residents and central city, Community Open Day – Sustainability events. Inclusion in Community Engagement Programme and work of Student Volunteer Army | Community Education Programme has been cancelled.<br>Community events, particularly Eco Week, are the key moment for community connection apart from one off lectures.<br>Good connections with Student Volunteer Army Foundation. | Sustainability Programme as a point of connection with local residents, secondary schools and wider community. | Community education programmes for sustainability embedded. |
| | Student services and International involvement through liaison and international team. Investigate offering carbon off-setting for international students. | A project investigating carbon off-setting is being explored by HR (2015). | International students identifying UC as an excellent university to attend to pursue sustainability studies. | UC mentoring/modelling best practice and current thinking. |
| | UC grads are 'sustainability aware' as a key life skill of degree programme, like our aspiration to provide an internship/study abroad and community engagement experience (this could be promoted by Careers and Internships and through Alumni and Development). | Limited progress, but Sustainability Surveys of students 2011-2013, and the U Count 2015 survey (n=3700+) indicate increasing level of interest and awareness in UC sustainability programmes. | Campaign around UC graduates being 'sustainability aware'. | UC mentoring/modelling best practice and current thinking. |

# *Carbon: air travel, video conferencing and daily travel*

**Air travel goes with the territory for many university staff. Academic conferences, in particular, are part of the job. However, high definition video conferencing technology has rendered the need for some flights unnecessary. Reduced flights will save the university money, time and carbon emissions. This work stream will make reaching our CEMARS targets more achievable.**

**The University has made excellent progress over the last decade in altering travel behaviour to and from campus in terms of discouraging cars and promoting more sustainable forms of transport. Some bold moves are required to take this work forwards and build on this success. Success will mean reduced requirement for car-parks that are expensive to build, reduced carbon emissions from our activities, a healthier campus population, improved community relations and a public image that will make UC a more attractive option for new students and staff.**

SWG member/s: Chris Hawker, Nathan Gardiner, Matt Morris

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Progress to end 2013*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Awareness raising about the impact of air travel on carbon emissions. UC policy requiring staff to seek video conferencing viability as first option and needing to justify air travel. | No progress. | Awareness raising of alternatives to air travel continuing. | | Staff air travel reduced as a result of these measures |
| | Exploration of video conferencing options, including improving student access to video conferencing facilities | UC has standardised now on H.323 video conferencing and Skype video conferencing in its dedicated VC rooms. Improvement to card security to some of these rooms has also been added. | Desktop video conferencing solutions mainstreamed throughout computers on campus. Telepresence video conferencing suites. Virtual conferences and seminars (eg Signs of Change).Bandwidth increased. Main lecture theatres equipped with video conferencing and streaming solutions. | UC has adopted Adobe Connect, Skype, Polycom Realpresence, and Scopia Desktop as current desktop video conferencing solutions options. There is no telepresence capability of campus. There is no functionality at present for video conferencing into lecture theatres due to cost restraints. | Virtual offices actualised for some staff. |
| | Promotion of video conferencing on campus. eCampus: remote teaching | UC now has a website dedicated to video conferencing support and promotion at http://www.dmg.canterbury.ac.nz/lts/videoconferencing/index.shtml | Staff training around e-teaching and e-conferencing enhanced. | ELM now has in place options for assisting staff with Adobe Connect for linking up students to their teachers for remote tutorials or presentation. | Staff and student air travel and daily commuting reduced as a result of these measures |

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| | Car parking plan implemented. A percentage of funds raised through parking charges set aside for sustainable transport developments. Carpooling promoted. | Car parking plan partially implemented. Funds are not set aside for sustainable transport. Jayride carpooling system discontinued. | Cycling infrastructure redeveloped. Car parking charges raised. Bus connections improved. | Cycle infrastructure planning going well. Work with CCC on bike network well advanced. | On-going work with CCC to improve bus/bike network. |
| | Transport procurement based around holistic assessment of life cycle costs. | No progress. | | | |

# *Carbon: green energy and green buildings*

**UC is committed to a carbon reduction plan. Part of the solution is to improve energy efficiency in our building stock, centralised boiler plant and heating system, whilst motivating energy conservation awareness and behavioural change. We also need to understand more about our High Country Forest Land and its present and future potential for carbon sequestration. Linking with the School of Forestry, we should seek to manage the land to maximise the potential carbon stock and so increase 'return' in Emissions Units and assist with New Zealand national green house gas reduction obligations. We can then consider the viability and feasibility of UC Biomass resource along with other low or zero carbon technologies to provide for our future space heating needs.**

SWG member/s: Peter Molony, Rob Oudshoorn, Tony Sellin, Euan Mason, Susan Krumdieck

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2013*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, being sustainable is economically sensible, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Green Building Principles adopted (minimum 5 Star Green Star) for new builds where possible. Policy decision to incorporate whole of life costing into all new building work | Green Building principles (5 star Green Star minimum) is the basis for new builds and refurbishments. Whole of life costing in new building is standard practice, though not directed by policy. | Green building principles applied in new builds where possible. | UC's built infrastructure is used as an international case study for green buildings – we have numbers and evidence over many years to inform investment decisions for other organisations considering green building. |
| | Checklist of efficiencies created for retrofits of buildings (double glazing, heating source, lighting), wind, solar (heating domestic hot water, power PV). | Checklist is implicit in the adoption of Green Star principles, as above. | Retrofits of new buildings following checklist as standard practice. | Checklist reviewed, particularly in light of new research and technologies available (especially from within our own research capability) |
| | Consolidate/ concentrate campus, shared use of space (laboratories), centralised timetable | Consolidation of campus is well into the planning stage and centralised timetable in place. | Consolidation of campus underway. | Consolidation of campus continuing and resulting in significant efficiencies |
| | Monitoring systems introduced, including CEMARS, an Environmental Management System, and benchmarking with other tertiary institutions. | CEMARS in its fifth year. There is still no EMS in place. Benchmarking with others (eg through LiFE) is on hold. | Results of this monitoring fed into branding and marketing messages. Monitoring systems refined as required. | Monitoring indicating we are at leading edge internationally, and that this work is positively influencing staff and student recruitment. |
| | Explorations regarding utilisation of forest estate as carbon sequestration. Five decade carbon plan. | No progress. | Explorations of potential for sustainable harvest of forest estate | Sustainably managed forest estate utilised for teaching and research in relation to sustainable energy provision. |
| | Education for users on campus about best practice for using infrastructure (eg through Eco Office, Waste Watchers, etc) | Eco Office programme re-launched 2013 with small but positive uptake. Waste Watchers initiatives in 2012 very strong. | Education programmes refined as necessary. Links developed between these and new, professional development opportunities. | Sustainability performance of staff and students regularly recognised and rewarded |

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| | IT energy savings and initiatives identified, and resourced as possible. | Excellent progress in this area through ICTS. | Initial energy savings from other areas invested in enhanced IT energy-saving solutions. | On-going investment in IT energy savings as possible. |
| | Feasibility analysis of biomass and other alternatives to coal for heating initiated | Feasibility study for low carbon energy put out to tender in 2015. | Alternative(s) to coal for heating identified. Intention to phase coal out guiding investment actions in this area. | Coal phased out for heating. |
| | Work with academic experts in the field of energy systems to enhance applied research opportunities in the area of alternative energy. | Academics are involved in the low carbon energy solution process as above. | Research projects have fed into building projects, generating both an enhanced research profile and energy savings. | Decentralised or partly decentralised heating system in place to ease load on centralised infrastructure. |

# *Grounds, waterways and food*

**With 87ha of suburban land, through which three of the main tributaries of Christchurch's iconic Avon River flow, there is a huge potential to improve our ecological impact. UC's stream restoration work is a signature sustainability initiative that has demonstrated already how students, grounds staff, academics, local authorities and local residents can work together at many levels to produce a positive result. It won an Australasian sustainability award in 2011.**

**Similarly, the two community gardens on campus show that growing food can improve the health of the campus population, improve our community relations, and reduce maintenance costs. It seems sensible to expand on-campus food production, link it with on-site composting, and create an attention-grabbing point of difference our community can readily understand.**

SWG member/s: Rob Oudshoorn, Te Maire Tau, Jenny Webster-Brown, Matt Morris

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, is economically sensible and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Water education campaign, especially regarding stormwater, expanded as a community education programme . | Strong progress made in 2012; limited progress since then. | Strong collaboration with Regional Council enhanced to support this work. | Water flowing into streams from upper catchment is uncontaminated as it enters campus. |
| | Monitor water use in grounds maintenance and research opportunities for utilising permeable surfaces for any new car parks and/or road construction. | No progress. | Irrigate gardens using efficient technology (preventing over watering, not irrigating hard surfaces etc). Permeable surfaces for car parks and roads. | Low irrigation regime embedded. |
| | Continue stormwater mitigation and water quality monitoring. Ephemerals restoration commenced, and SBS wetland work underway. | CCC grant to CCC grant to Civil and Nat Res staff of $250k for stormwater research. Ephemeals/SBS = no progress. | Ensure streams on campus are productive environment and healthy ecosystems. Rainwater collection and gardens utilised for grounds irrigation. | On-site storm water treatment an embedded aspect of all new construction projects. |
| | Review campus landscaping plans | New draft landscaping strategy has been developed 2013 and is being fed into Campus Masterplan. | Plant more drought tolerant plants. | Plantings with high irrigation needs but low production significantly reduced. |
| | 'Edible landscaping' explored within current Grounds budget. Publicise benefits of locally sourced food. | Trial plot by James Hight underway 2012. Okeover Community Garden remodelled in 2015. | Food grown and harvested on campus incorporated into café menus, or given for student hardship. | Community Supported Agriculture programme in place as a teaching, branding and marketing tool. |
| | Mahinga kai joint project with Ngai Tahu Research Centre. | Completed 2013. | Stream enhancement programme continued, building on unique ecological features of this region and building on that point of difference. | 'Edible Campus' concept extending to include an appreciation of urban aquaculture. |
| | Grow acceptance of wilderness design as part of landscaping practice, reducing labour. | In progress. | Build on sustainable garden city idea, especially regarding the city rebuild in media and through research collaborations. | UC modelling best grounds management practice and referred to for local, national and international inspiration. |
| | Limit chemical herbicides and pesticides. | No progress. | Eliminate chemical herbicides and pesticides as practicable and staff training | UC able to offer expert, practical, tested, advice about low or no |

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| | | | on best practice low chemical grounds maintenance in place. | chemical grounds maintenance. |

# *Waste & cleaning*

**Cleaning Services deals with both waste collection and disposal, and with cleaning the facilities. There are many gains still to be made in terms of the waste generated on campus, and how it is disposed. Similarly, there are great gains to be made in the cleaning regimes we use, particularly around chemical use.**

**This strategy highlights the need for increased education and behaviour change programmes about our recycling system as well as key infrastructure improvements that will reduce costs and environmental impacts. It also suggests that new cleaning technologies mean the old need for the full range of cleaning chemicals we use can be reduced significantly.**

SWG member/s: Chris Hawker, Ross Maber, Sharon McIver, Matt Morris

| ***Principles*** | ***Short Term (2012-2015)*** | ***Progress to end 2015*** | ***Medium Term (2015-2018)*** | ***Long Term (2018-2022)*** |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, is economically sensible and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Comprehensive waste education and behaviour change programme for staff and students. Continue work of Waste Reduction Educator and the Eco Office Programme. | Waste Watchers progress strong in 2012, some fine-turning to system in 2013. Waste Reduction Educator role disestablished 2013. Eco Office Programme being rolled out. | 60% of UC's waste is now recycling and organics, with only 40% going to landfill. | On-going reductions in waste to landfill, generating additional income for sustainability initiatives. |
| | Work with vendors to reduce or cease use of certain materials (eg polystyrene). Develop policy regarding purchasing, working with Procurement, and have this referred to in relevant contracts (eg with caterers, UCSA, cafes etc). | Purchasing policy still not in place. Vendors being encouraged to choose suitable products for packaging. New caterers being very proactive around coffee cup composting programme in 2015. | Takeaway plates, coffee cups, etc must be compostable, and organics collection is utilised on site. | |
| | Seeking savings in waste budget by developing a business case regarding the extension of on-site composting. | 'Blue bins' introduced 2014-15 to take coffee cups for off-site composting. CLOEY composting unit installed in UCSA production kitchen, and waste to be used in community garden. | Invest in on-site composting (either centralised high-tech, or decentralised low-tech, such as worm farms) and divert all food waste. Applied research and partnership opportunity around converting waste into energy. | Wood ash (if selected) from boilers incorporated into on-site composting solution. Compost utilised in on-site food production or on-sold to residents. |
| | Seeking savings through trialling chemical free cleaning. | In some areas, microfibre cloths have resulted in a 78% reduction in chemical use. | Chemical free cleaning trial expanded. | Chemical free cleaning standardised across campus. |

# *Procurement and purchasing*

**It is important that the products and services we use on campus meet strong sustainability standards. Buying 'green' means our waste stream is ultimately easier to manage, whilst some items (for example our vehicle and IT fleets) are essential in getting our carbon emissions down. Therefore, a policy decision about this is required.**

SWG member/s: Adrian Teather, Toni O'Donohue

| *Principles* | *Short Term (2012-2015)* | *Progress to end 2015* | *Medium Term (2015-2018)* | *Long Term (2018-2022)* |
|---|---|---|---|---|
| Being sustainable will help us retain and attract quality students and staff and funding, it is economically sensible, and we have an obligation to be good stewards, in line with the principle of kaitiakitanga | Sustainable procurement policy developed and implemented. Whole of life costing a core principle. Research and work towards Fair Trade Campus Certification | No progress on sustainable procurement policy.<br>Life cycle costing is a core principle in certain areas, but decentralised purchasing works against this.<br>Business case for Fair Trade accreditation is almost complete.<br>Sustainable procurement group meeting fortnightly (2015). | Cruelty free and local (minimising food miles) catering suppliers. Gain Fair Trade Campus Certification. | Establish analytics and New Zealand best practice in sustainable purchase. |
| | Work with other institutions and suppliers to bring down costs of eco products | No progress. | Choose cradle-to-grave sustainable suppliers. Work within categories to improve vendor practice (including requesting they remove all packaging) | Lead NZ in sustainable procurement |
| | Work with stationery suppliers to educate buyers about cost-savings to be gained through switching to more durable items. | No progress. | Information about sustainable purchasing choices easy to find and understand for purchasers on campus. | Sustainable purchasing choices contributing to UC's overall brand as a leader in campus sustainability |
| | 'Eco Office' used as vehicle for bringing down quantity of office goods bought. Promote reduce and reuse | Limited progress. | Enhancement of behaviour change programmes engaging purchasers in making more sustainable choices. | Culture of sustainable purchasing, emphasising reducing purchases and reusing where possible, established throughout the institution. |