



FACILITIES MANAGEMENT SUSTAINABILITY PLAN

2012-2013



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1.0 Introduction

With approximately 50,000 student enrolments and over 4,500 staff, the UNSW campuses are equivalent in population to a small town, and consequently have potential for wide-ranging and significant environmental impacts. UNSW is a major consumer of energy and water, and a large producer of solid and hazardous waste. It spends over \$10.5 million a year on utilities (electricity, gas, water and sewage), a cost that is steadily increasing, and produces over 67,000 tonnes of greenhouse gases each year. The University also produces significant quantities of waste, well in excess of 2,000 tonnes per annum (although it should be noted that a significant proportion of this is now extracted for recycling). Other potential impacts of UNSW activities include the consumption of significant quantities of resources apart from energy and water (including construction materials, furniture and consumables such as paper), and the potential for health and safety issues if not adequately considered and planned for.

Facilities Management (FM) at UNSW is responsible for the management and maintenance of over 500,000 square metres of buildings (gross floor area) and some 200,000 m² of land (including playing fields), across a number of campuses within Sydney, and associated facilities including research field stations across NSW. Activities for which FM is responsible include master planning of the campus environment; space management; construction and refurbishment of buildings and infrastructure; maintenance; grounds management; cleaning and waste management; and security services. FM also provides a range of other services to the University including transport information and liaison with the relevant bodies; the mailroom and printing facilities (P3 - Print Post Plus); management of the University fleet; running the FM Assist help centre; and leasing University facilities.

This plan summarises some of the key sustainability-related areas of focus for the FM team, summarising initiatives and programs currently in place, as well as outlining a number of planned future initiatives. Specifically, the plan describes FM initiatives related to:

- Energy and greenhouse gases
- Water
- Waste
- Green building and space
- Grounds
- Transportation (including fleet management)
- Procurement and resource consumption

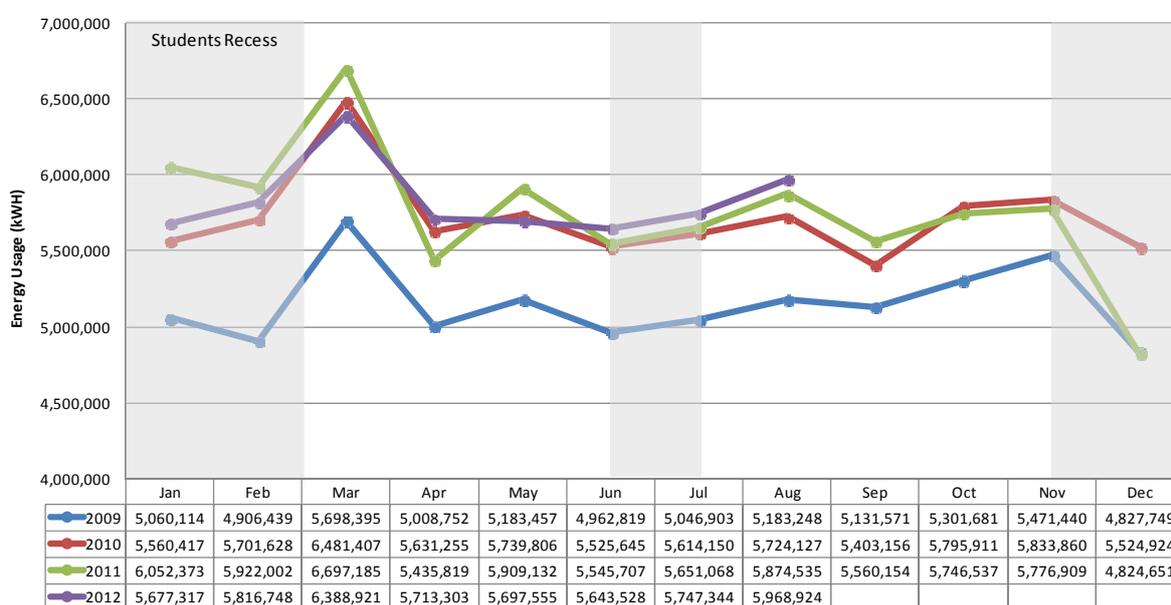
FM works closely with the UNSW Sustainability Office, part of University Services, which is responsible for managing the overall University strategic approach to sustainability, including greater integration of sustainability into research, teaching and learning. FM supports the goals of this Office through the delivery of a number of campus operations sustainability initiatives and through the provision of data which is used in corporate sustainability reporting.

This plan is a living document and will be updated by FM's Manager, Quality and Sustainability as required.

2.0 Energy and greenhouse gases

Even with a range of energy management programs in place, energy use at UNSW continues to increase, driven primarily by increases in energy-intensive research equipment, growth in student numbers and, to a lesser extent, factors such as increasing use of other electrical equipment such as student laptops on campus. Figure 1 shows how electricity consumption varies seasonally throughout the year, including use of electricity purchased from Energy Australia and also produced by the cogeneration and trigeneration plants on-site. Consumption tends to spike in March which is typically a warmer month and when student numbers on campus increase significantly, resulting in a higher demand for air conditioning. As can be seen below, there has generally been a small but steady increase in total consumption each year, though this trend stopped in early 2012 due to the cool summer conditions, which reduced the need for air-conditioning.

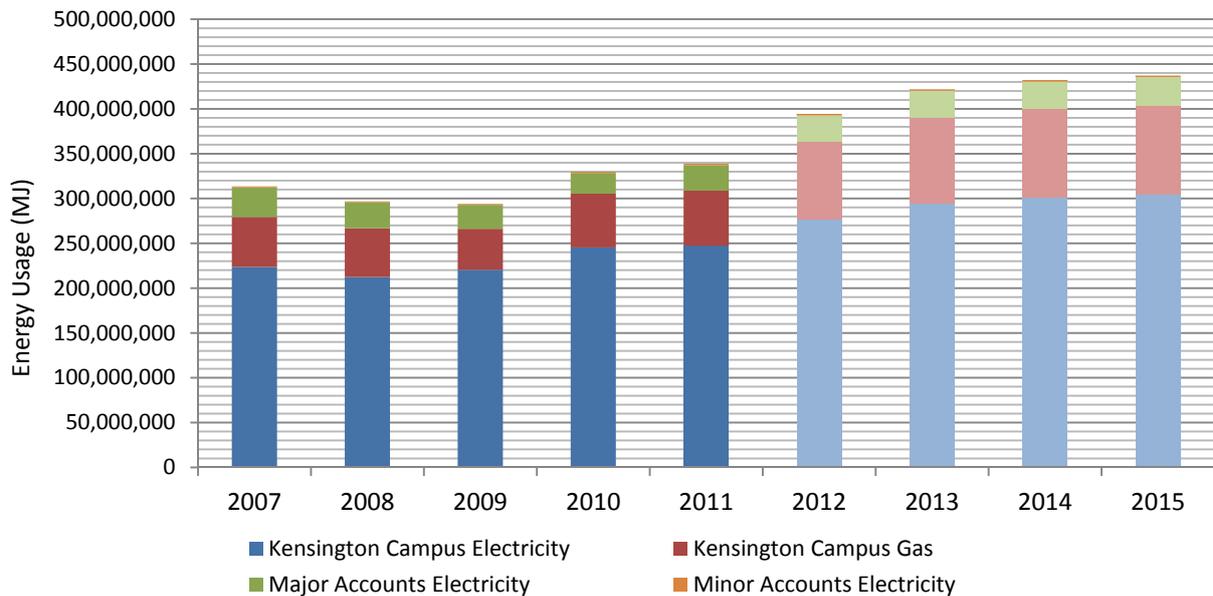
Figure 1 – Kensington Campus Electricity Usage 2009 - 2012



Reducing energy use, or at least the greenhouse-gas-intensity of energy use, is important for a number of reasons. Firstly, fossil fuels, which are the primary source of electricity generation, are a finite resource which should be used as efficiently as possible, particularly from a perspective of intergenerational equity. Steadily increasing energy costs provide a more self-interested reason for operating as efficiently as possible. In just four years, the price per kilowatt hour of electricity for UNSW doubled. It is anticipated that it will come close to doubling again by around 2020, caused by a combination of factors including major upgrades of energy networks, increased national and international demand and other factors such as the carbon tax and other government programs. However, there is still considerable uncertainty about prices, particularly related to the impacts of the carbon tax. The trend for gas prices is also expected to rise, although possibly less dramatically.

In 2011, the University consumed over 77 million kWh of electricity at a cost of approximately \$8.7 million, and nearly 62,000 GJ of gas at a cost of around \$450,000. For the 2010-11 financial year, the University produced 67,812 tonnes of greenhouse gases (Scope 1 and 2). Based on current trends and available information, it is predicted that not only with the cost per unit of energy increase, but so will our consumption, as illustrated in Figure 2 on the following page.

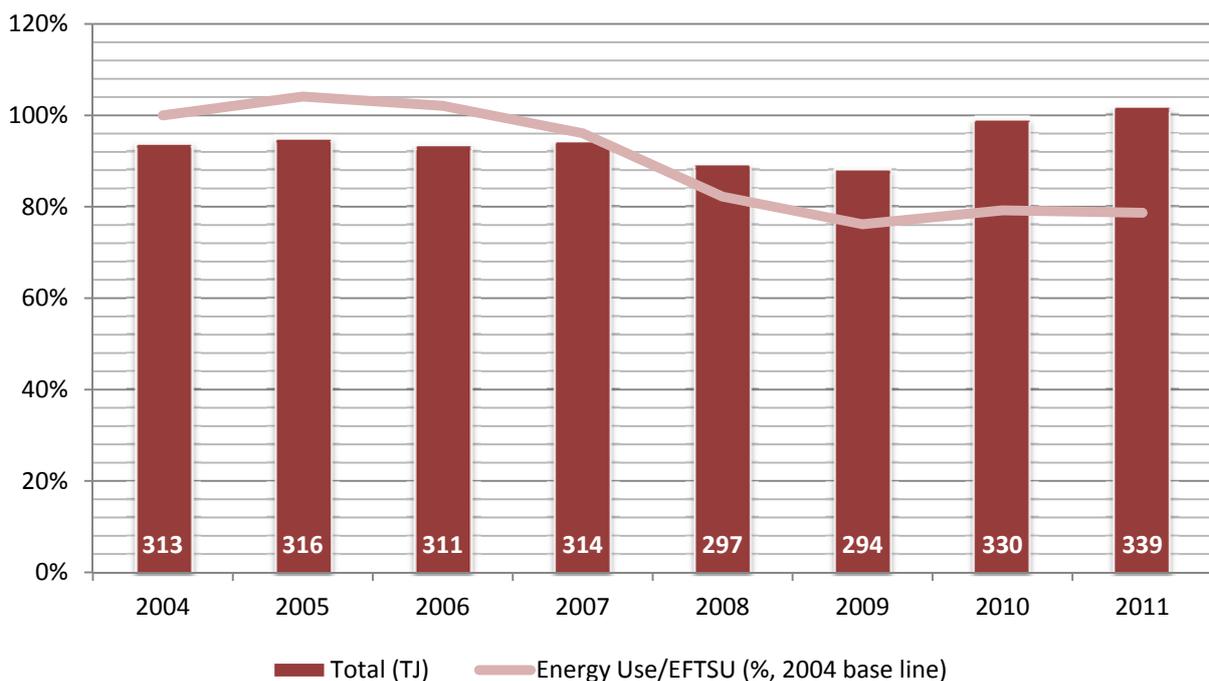
Figure 2 – Predicted UNSW energy use trends



Energy at UNSW is managed by a dedicated energy team within FM, with support from FM’s engineering team. This team conducts procurement of energy utilities, negotiating favourable contracts, and then manages the ongoing administration of these contracts including handling invoices. The team is also responsible for recording energy consumption, monitoring trends and investigating any concerning trends or anomalies and projects to reduce energy usage.

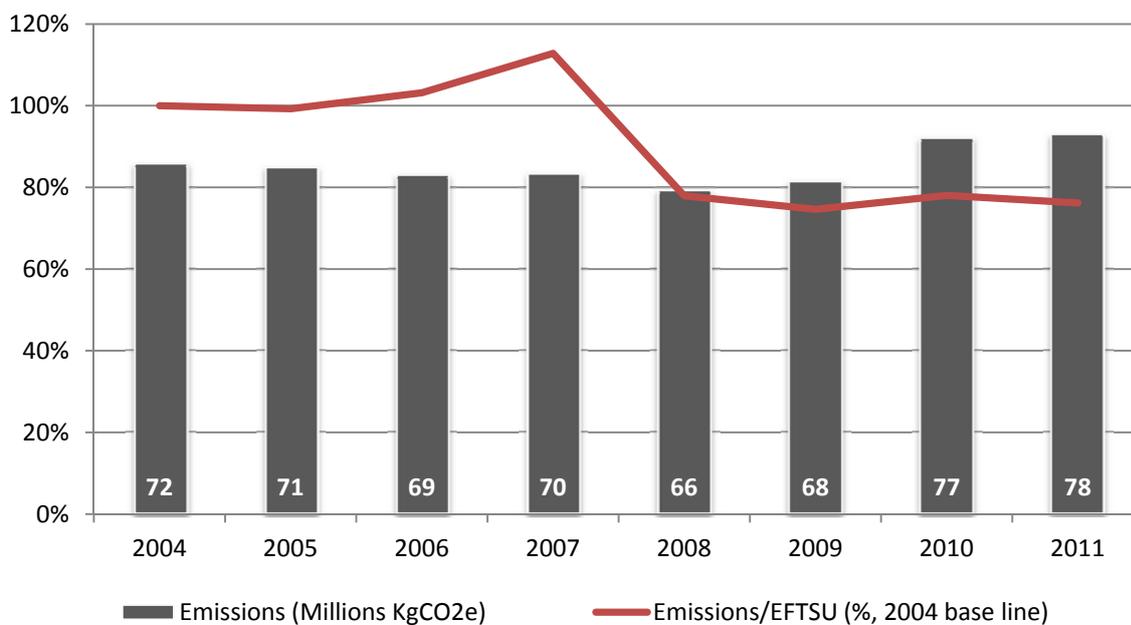
Despite increasing overall energy consumption, through the efforts of the energy team to implement energy efficiency initiatives over recent years, UNSW has significantly decreased our energy consumption relative to the equivalent full time student load (EFTSL). This is illustrated in Figure 3.

Figure 3 – UNSW Energy Use 2004-2011



We have also significantly reduced the greenhouse gas emissions per equivalent full time student load, in part because of energy efficiency but also because of a gradual shift to greater use of less greenhouse-gas intensive energy sources (such as using more natural gas in preference to electricity, or use of electricity produced on-site from photovoltaic cells.) This is illustrated in Figure 4.

Figure 4 – Kensington Campus Emissions 2004-2011



UNSW maintains its own high voltage electricity infrastructure on campus. The University does not buy GreenPower, as a decision was made that it currently offers better financial and sustainability returns to invest the same amount of money in energy efficiency or renewable energy projects. A limited number of photovoltaic (PV) cells and tri/cogeneration plants are installed on campus – described further below.

2.1 Current or recent FM energy initiatives

- **Energy audits** – in 2011, FM tendered for Level 3 (in-depth) energy audits of approximately 50 buildings across the campuses which are the major consumers of energy. This was done to allow for planning and optimisation of energy efficiency improvements. A program of works to implement the recommendations of these audits will be progressively implemented as it is economically viable to do so;
- **PV systems** - FM has installed a number of photovoltaic (PV) generation plants around the campus. There is a 42kW plant on the roof of the Quadrangle building (2005), a 10kW on the roof of the swimming pool building (2010), a 150kW plant on the roof of the new Tyree building (2012) and a total of 22 kWp on small systems currently installed on several properties surrounding the Kensington



A 10 kWp PV system on top of the UNSW swimming pool building

Campus. This electricity is consumed in the buildings where it is generated. In 2011, electricity generated by all PV cells equated to only around 0.1% of total energy consumption, but it is expected this will make up about 0.4% of consumption during 2012 with the Tyree plant operational;

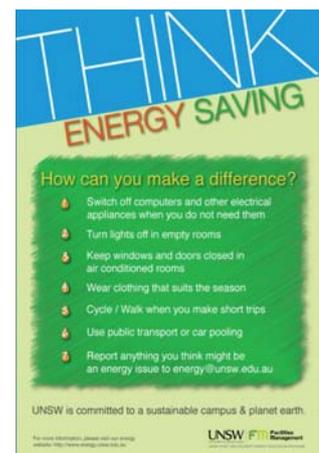
- **Cogeneration/trigeneration** – UNSW has one trigeneration (which burns natural gas to produce electricity on site and uses the waste heat for various purposes, including conversion to cooling) and two cogeneration systems (which work similarly to trigeneration systems but do not convert heat to cooling) on campus. The Tyree building has an 800 kW capacity trigeneration plant, and the Lowy building has a 750 kW capacity cogeneration plant. The swimming pool has a 180 kW cogeneration plant which is currently under maintenance and not in operation.
- **Energy efficient building upgrades** – the energy management team runs a steady program of energy efficiency projects. Initiatives include switching electric hot water systems to solar or gas powered systems, replacing inefficient lighting systems, and supporting the FM engineering team when required. One notable success story was in the AGSM building, where after a major refurbishment a new efficient PowerPax Chiller was installed together with a new cooling tower. The results show estimated savings of up to \$70,000 per year in electricity costs. Another example is the installation of new chillers in the Library Data Centre. This has allowed for the separation of the cooling needs of the data centre to the rest of the building, which resulted in a more efficient operation of the library energy plant.
- **Energy management and operations** – a constant monitoring of the performance and energy usage of the equipment across campus is required to maintain an efficient and effective operation of our plants. The energy team works in conjunction with the engineering team and our major maintenance contractor to reduce unnecessary energy consumption. Examples of this include the discovery of economy cycles not working properly, adjustment to temperature set points and schedules for different buildings, and load management in order to keep maximum demand under the required limits.
- **Switch-off programs** – Security staff patrolling buildings at night and cleaners switch off lights left on and report to the energy management team.
- **Hot water** – new bathrooms are only fitted with cold water taps
- **Awareness campaigns** – have included posters such as '7 things you can do' to save energy and a switch off lights campaign for plant rooms, as well as promoting Earth Hour via the internet and social media to staff and students.



New magnetic bearing PowerPax chiller. AGSM Building



New chillers for the Library Data Centre during Installation



Awareness campaign poster

2.2 Planned energy initiatives 2012-13

Initiative	Project lead	Timeframe
Finalise Level 3 energy audits, and develop operational plans allocating resources as reports progressively become available.	Manager, Energy Management	Audit stage 1 projects to be planned by quarter 3 2012
First priority following receipt of the level 3 energy audit reports will be to implement lighting efficiency projects	Manager, Energy Management	Quarter 4, 2012 and continuing
Develop a real-time energy monitoring website and launch with an awareness campaign	Systems Project Manager/Manager Energy Management	Quarter 3, 2012
Support the IT Department with the introduction of automatic shut-down/sleep software for PCs	Manager, Energy Management	Quarter 3, 2012
Discuss collaboration opportunities with relevant staff from the School of Photovoltaic and Renewable Energy Engineering (SPREE).	Manager, Energy Management	Quarter 1, 2013
Subject to obtaining funding, install additional PV systems on the Kensington campus	Manager, Energy Management	2013/14
Investigate the feasibility of installation of another trigeneration plant into the Mechanical and Manufacturing Engineering Precinct Development project.	Project Manager, MMEPD project	Quarter 4, 2012

Further initiatives will be prioritised and planned based on the Level 3 energy audit report recommendations. This plan will be updated accordingly.

3.0 Water

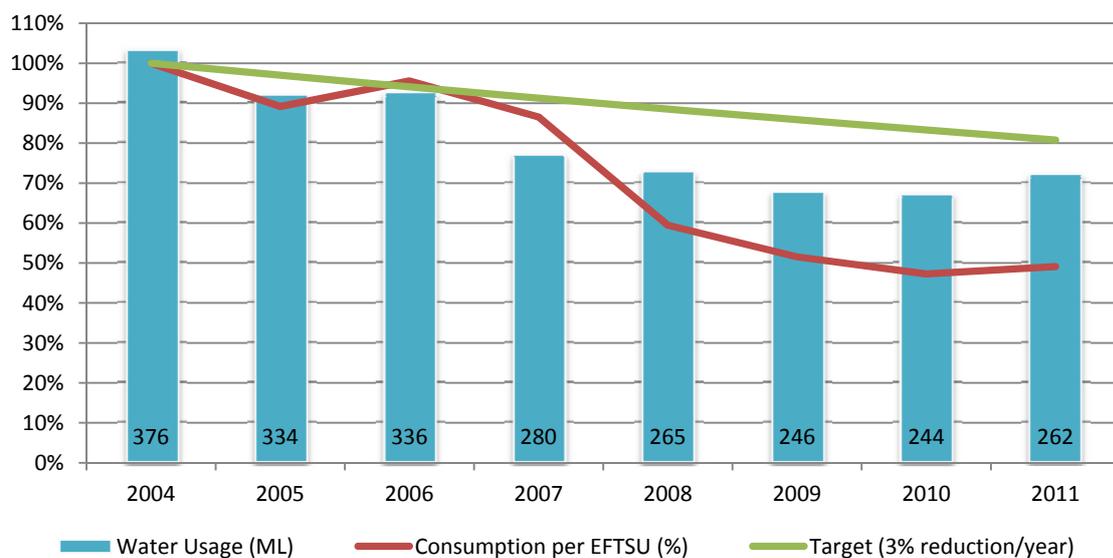
Despite Sydney’s record rainfall in recent years and the Warragamba dam reaching capacity for the first time in 14 years, water efficiency is still an important issue for UNSW to manage well. Weather patterns fluctuate from year to year, and as Australia is the driest inhabited continent on the planet, future droughts are to be expected. Using less water also increases the availability for environmental flows in rivers, which need periodic heavy flows to flush out sediment and debris.

Another compelling reason to become more water efficient is that water prices have also steadily increased, again in part to fund government infrastructure upgrades such as the construction of the Sydney desalination plant.

In 2010-11, UNSW consumed 237,314 kilolitres of water from the mains, spending approximately \$1.3 million on potable water supply and sewerage costs. UNSW also drew 178,483 kilolitres of bore water, which is primarily used for irrigation, cooling towers and toilet/urinal flushing. The University also has a licence which allows it to withdraw over 200,000 kilolitres of water from rivers and streams. UNSW Kensington Campus sits on top of the Botany Sands Aquifer, a large underground reservoir that runs from Centennial Park to Botany Bay and is Sydney’s most important underground source of groundwater. Taking too much bore water from the ground can deplete an aquifer, so UNSW practices managed aquifer recharge. Surface runoff that would normally flow down the street and out to sea is filtered and fed to percolation chambers under the Village Green to recharge the aquifer.

Thanks to a range of water saving initiatives, managed by FM’s energy management team with support from the FM engineering team, potable water usage at the Kensington campus decreased steadily between 2004 and 2010 as illustrated in Figure 5. In 2011 the water consumption increased for the first time in five years, mainly due to two major leaks occasioned by construction works. Despite this, potable water consumption is today around 70% of 2004 levels even though the University has 42% more full-time equivalent students.

Figure 5 – Kensington Campus potable water usage 2004-2011



3.1 Current or recent initiatives

- **Participation in government water efficiency programs** - UNSW has participated in the Water Saving Energy Plan program administered by NSW Environment and Heritage department since 2006, and in the Every Drop Counts program, run by Sydney Water.
- **Water efficiency projects** – In recent years, UNSW has implemented various water efficiency projects, including the installation of the borewater treatment plant for use of groundwater in laboratories, resulting in a savings of approximately 82 million litres of potable water each year. The University also recently implemented a major water efficiency project at the UNSW Fitness and Aquatic Centre with funding provided by the former Department of Environment and Climate Change. This project included the installation of water and energy saving initiatives including timer flow-controlled showers, sensor taps, waterless urinals, a thermal pool sand filter cover and a UV water treatment system. The funds were also used to rationalise pipe-work, and install a solar boosted gas hot water system to reduce natural gas energy consumption. Educational story boards, interactive touch screens, and informative ‘how to use’ signs, were also installed to engage patrons in the project, build sustainability awareness, and influence behaviour in order to maximise the projects savings and generate ongoing and wider benefits. The project is expected to save up to 7 million litres of drinking water and 200 tonnes of green house gas emissions every year.



Water awareness poster, Sports and Recreation Centre

- **Waterless urinals** – UNSW has trialled and installed these urinals in the past. However, because of the wide variation in use patterns we have not always found them to be successful. Current policy is to install low water use urinals with sensor control to limit flushing water use to a minimum consistent with acceptable odour control.



- **Cooling Tower Replacement** – In 2010 the AGSM building the old cooling tower for the air conditioning system was replaced with a water-efficient cooling tower. The effect of this was significant as the water consumption reduction as a result was around 70% compared to the previous year, with annual savings in the order of \$60,000.



AGSM Building water-efficient cooling tower

3.2 Planned water initiatives 2012-13

Initiative	Project lead	Timeframe
Install monitoring of aquifer recharge affluent	Manager, Energy Management	Quarter 1, 2013
Ongoing monitoring and maintenance management to keep maintain water consumption reductions	Manager, Energy Management	Ongoing with quarterly review
Installation of very low water use urinals	Manager, Energy Management	Ongoing
Removal of hot water from toilet facilities	Manager, Energy Management	Ongoing
Incorporation of minimum efficiency requirements for appliances and equipment using water into the <i>UNSW Design and Construction Guidelines</i> .	Manager, Energy Management	Quarter 1, 2013

4.0 Waste

UNSW generates a large amount of solid and hazardous waste. The following table outlines the approximate quantities of waste produced by type over the 2010-11 financial year.

Waste type	Approximate amount generated
Solid (mixed) waste*	1,337 tonnes
Office paper/cardboard (segregated)	775 tonnes
Regulated waste (chemical/biological)	135 tonnes
Green (garden) waste	564 m ³
Electronic (e-)waste	40 tonnes
Batteries	273 kg
Mobile phones	80kg
Toner/printer cartridges	1,685 cartridges
Fluorescent lights	1,000 kg
Furniture (as collected for reuse)	1,000 m ³

* Includes a proportion of the other waste streams listed

Until recently, due to limited recycling facilities and programs, a large proportion of this waste ended up in landfill, where it not only contributes to a range of potential environmental issues including groundwater pollution and greenhouse gas (methane) generation, but also takes up land resources which could be better utilised in other ways. Further, the materials sent to landfills represent resources which have not been optimally used.

The waste management hierarchy states that waste is best managed by avoidance or at least reduction of quantities, then through reuse, then recycling, with disposal a last resort.

4.1 Current or recent initiatives

- FM ran a public tender for solid waste and recycling collection and processing in 2011, with an emphasis on sustainability performance and innovation/value-add from tenderers. The contract was awarded to a contractor who offered, amongst other things, the use of their Materials Recovery Facility (MRF) at Silverwater, where recyclable components on mixed general waste are extracted through a series of mechanical and manual processes (refer to Figures 6 and 7). As a result of this process, the University now extracts for recycling approximately three quarters of waste that is placed in mixed waste bins, as illustrated in Figure 5.



Figure 6 – Doyle Bros Materials Recovery Facility

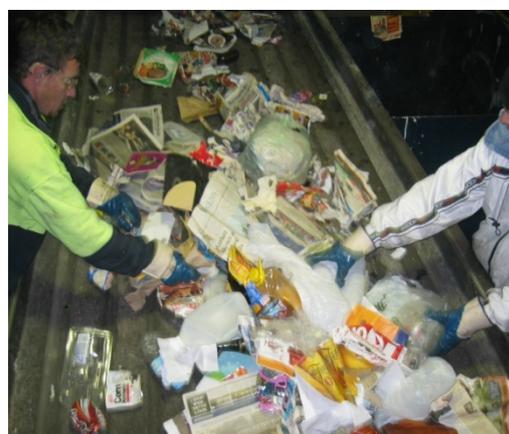
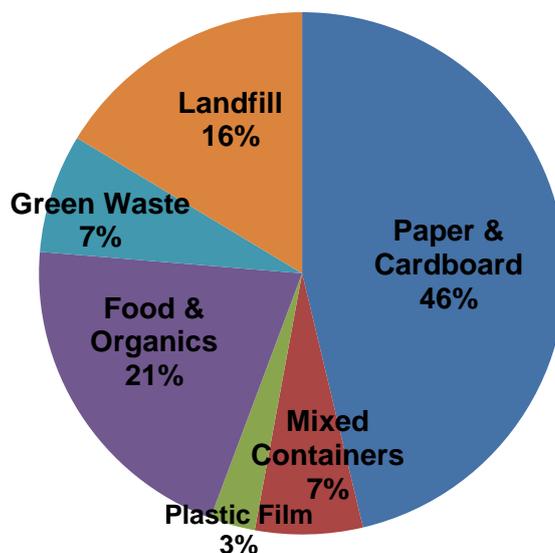


Figure 7 – Manual sorting line

**Figure 5 - Average percentage of Recycling Streams
(Nov 2011 - Apr 2012)**



- FM has operated a successful paper recycling system for many years. Paper/cardboard separated by staff in offices for recycling is taken to a paper mill where the University is reimbursed per tonne of paper. As a result of the recent tender, UNSW now receives significantly more money for each tonne of paper collected than previous years. Given the significant amount of paper and cardboard used by UNSW staff and students, this has strong environmental and economic benefits.
- FM has provided technical and logistical support to efforts from the IT Department to implement an e-waste recycling program in conjunction with our current IT equipment provider.
- FM manages and has renegotiated the biological waste contract, and is currently tendering for the chemical/regulated waste contract.
- FM organised a public forum, aimed at students and staff, in May 2012. This outlined the recent waste tender process, performance outcomes and included a screening of a waste documentary by the Total Environment Centre to help raise awareness of waste issues and processes.
- A program to recycle waste cooking oil from food outlets was formalised in 2009.
- During the previous tender for cleaning a few years ago, green cleaning specifications were incorporated into the contract, meaning that the contractor is required to use less environmentally harmful or toxic products and to use technologies such as microfibre cleaning cloths. It is intended that similar requirements will be included in the next cleaning tender.



Separated paper and cardboard from offices is aggregated into blue bins for collection and transportation to a paper mill

4.2 Planned waste initiatives 2012-13

Initiative	Project lead	Timeframe
Review hard waste (skip bin) disposal and e-waste gap	Manager General Services and Grounds	2013
Implement food waste recycling program	Manager General Services and Grounds	2012/13
Introduce new furniture re-use contract with green disposal options	Manager General Services and Grounds	2012
Review green waste operation	Manager General Services and Grounds	2013

5.0 Buildings and space

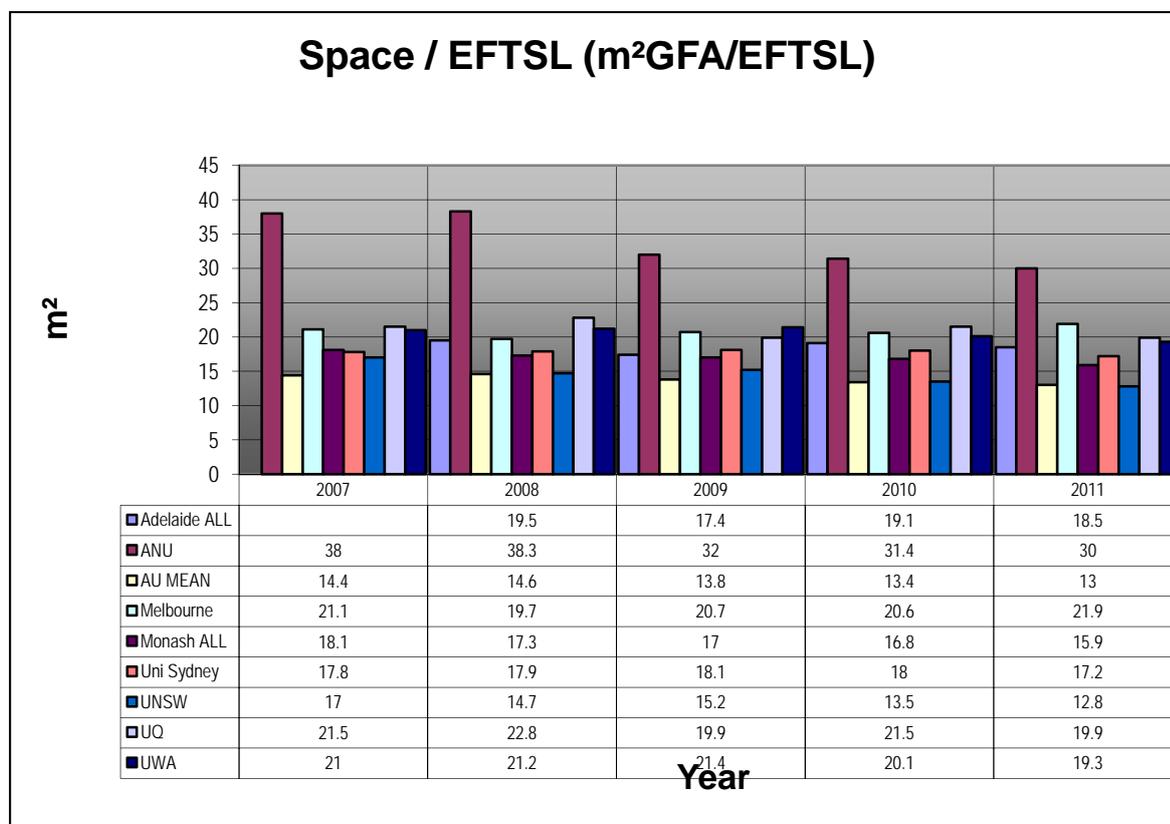
The built environment contributes significantly to pressure on our natural resources. It has been claimed that the construction, refurbishment and operation of buildings is responsible for about 40% of global use of energy and virgin resources, 25% of the use of virgin wood and 16% of total water withdrawals. Buildings are also considered to contribute to approximately 40% of all solid waste.

FM maintains over 500,000m² of gross floor area, and continues to refurbish a percentage of building stock each year or build a number of new facilities. As a result, FM has significant potential to reduce the environmental burden of its buildings through careful planning, design and construction. As the owner and occupier of the majority of these buildings, the University has a vested interest in ensuring the buildings operate as efficiently as possible over their lifetime, given that UNSW ends up bearing the full lifecycle costs.

One of the ways FM can reduce the environmental footprint of its buildings, at least on a per capita basis, is by using the space available efficiently, and over a longer period of time.

UNSW performs well compared to other Group of Eight (G08) universities, as shown in Figure 8 below which is collated from data reported to the Tertiary Education Facilities Management Association (TEFMA) each year.

Figure 8 – Internal space required (gross floor area) per equivalent full time student load, G08 universities



5.1 Current or recent initiatives

- FM's recently constructed Tyree Energy Technology Building (TETB) obtained a 6 Star Green Star rating (design) from the Green Building Council, the highest possible rating, providing independent verification that the building design achieved International Best Practice with regard to sustainability.
- The recent fit-out of the P3 (Print Post Plus) work area was done with attention to green building principles, using the Green Star Education tool to inform the design.
- FM is in the process of reviewing space management processes with a view to continue improving efficiencies of use. This also includes the development, currently underway, of draft 'Workspaces Guidelines', which define the allocation of space to major functions; and the development of a set of standard space metrics which are reviewed for each new project, allowing comparisons with campus averages and historical data. It also includes the implementation of space management software to facilitate information sharing and enhance decision-making. Through a combination of better governance and improved metrics, it is hoped that space efficiency will continually improve.
- A sustainability clause has been incorporated to the new draft retail lease agreement. This clause includes requirements covering the following:
 - separation of food waste and use of food waste bins for composting;
 - donation of food waste to groups such as OzHarvest where possible;
 - minimisation of food waste packaging, use of products such as cutlery and napkins with a recycled component and a charge to provide plastic bags which must also be biodegradable;
 - requirement to prepare a Waste Management Plan detailing how waste is to be managed;
 - separation of waste cooking oil for collection and conversion to biodiesel;
 - provision of discounts of at least 10 cents for use of reusable cups for hot beverages;
 - for retailers selling coffee or chocolate, provision of at least one Fair Trade product;
 - catering for cultural and dietary diversity by meeting a range of dietary requirements (such as vegetarian, halal, kosher, nut free, gluten free and dairy free) and labelling food appropriately;
 - use of green cleaning products;
 - use of energy efficient equipment.

5.2 Planned buildings and space initiatives 2012-13

Initiative	Project lead	Timeframe
Review and enhance sustainability content within the FM Design Guidelines, which inform consultants and contractors working for FM of minimum standards concerning a wide range of building elements.	Manager, Quality & Sustainability	June 2013
Ensure that there is an ambitious sustainability framework governing the design and construction of the new Materials Engineering building, a \$100 million new building project	Project Manager, MS&E building	Schematic design – end July 2012
Incorporate additional sustainability requirements (described on the previous page) into food outlet leases	Senior Manager, Property Services	Already commenced; ongoing

6.0 Grounds

The University maintains approximately 120,000 m² of landscaped areas and another 80,000 m² of playing fields. Sustainability issues associated with grounds management include planting of appropriate plants (preferably native and/or drought-tolerant), improvements to soil to enhance plant growth and minimise required chemical treatments, and appropriate waste management processes.

Trees also significantly contribute to reducing the 'urban heat island effect', thus indirectly affecting the amount of energy used in cooling buildings. With over 1,000 trees on Kensington campus, this has an impact on the comfort and energy consumption of the campus.

6.1 Current or recent initiatives

Some of the sustainability initiatives implemented by our grounds staff recently include:

- Updating and auditing of landscape irrigation systems to ensure efficiency;
- Preference given to drought-tolerant and/or native plants to reduce watering requirements;
- Use of slow release organic fertilisers to improve soil structure and biology and wetting agents to improve soil structure and reduce watering requirements;
- Use of woodchip mulches to reduce watering requirements by reducing evaporation and improving the soil as the mulch decomposes. As much as possible, this is derived from tree maintenance works on campus to apply on garden areas for nutrient recycling and water retention, with the added benefit of reducing waste to landfill and reduces the amount we are required to buy;
- Use of computer-controlled watering systems and water sensors, as well as night-watering to approximately 80% of the campus to reduce overwatering;
- Use of low toxicity chemical solutions for pest and weed control, and only as a last resort;
- Collection of green waste and removal for off-site composting;
- Recycling of landscape materials where possible e.g. sandstone, clay pavers, steel and concrete bollards; and
- Green waste was included as a separate recyclable stream in the 2011 solid waste and recycling tender. It is segregated for collection and taken off-site for composting.

6.2 Planned grounds management initiatives 2012-13

Initiative	Project lead	Timeframe
Develop a plan outlining how some non-natives or formal plantings will be progressively replaced with natives/drought-tolerant/low-maintenance plants	Manager General Services and Grounds	Quarter 4, 2012
Implementation of plan	Manager General Services and Grounds	Commencing 2013, ongoing

7.0 Transportation

Unlike many other Sydney-based universities, UNSW is not located close to a railway station, meaning there is a heavier reliance on the use of buses and private cars. In 2011, about 72% of students and 40% of staff travelled by public transport (a slight increase on the previous year), while some 13% of students and 46% of staff travelled by motor vehicle (a slight decrease on the previous year for both staff and students). The percentage of staff and students cycling, walking or living on the campus has only marginally decreased.

There are approximately 2,800 parking spaces on campus (including loading bays), with another 500 or more in the surrounding streets. There is typically a requirement from local government when obtaining building approvals to not reduce parking on campus, as this may increase the congestion on the surrounding streets.

FM also maintains the UNSW fleet, which comprises about 83 vehicles. In 2010-11, the fleet produced approximately 268 tonnes of greenhouse gas (CO₂ equivalent). FM also manages the novated leases of staff with vehicle leases.

7.1 Current or recent initiatives

- FM works with Sydney Buses to optimise the provision of bus services to the University. This includes discussing alternative bus routes to facilitate pedestrian management; provision of travel statistics to support requests for additional services; discussion of upgrades to facilities such as at Eddy Avenue and Gate 9; and provision of security staff at Central station, Gate 9 and NIDA to monitor queuing and bus services. FM also promotes alternative bus routes to UNSW through posters and the FM website to smooth out any peaks and reduce the pressure on individual services.
- FM has been involved in the Sydney Light Rail Working Group for the provision of a light rail service to the University. Options for routes and stops have been agreed and proposals sent to the UNSW Executive round table for discussion.
- For four years now, FM has coordinated a car pool program, My Carpools. It has recently been relaunched to help provide a more user-friendly experience.
- FM ensures that a high proportion of its fleet vehicles are energy efficient or alternative fuels. Of the 137 novated vehicles between 1 January 2012 and 30 June 2012, almost 80% were four cylinder cars, with only one vehicle an eight cylinder.
- FM includes fuel-efficient vehicles in the fleet such as hybrid cars (Toyota Priuses), and introduced an electric vehicle to the UNSW Car Hire pool in April 2011.
- FM has installed some 50 bicycle racks on the Kensington campus. The locations of these facilities are promoted at the following website:
http://www.facilities.unsw.edu.au/maps/pdf/Kensington_Bicycle_Map.pdf
- FM recently upgraded queuing paths and loading for the 891 bus at Gate 9.

7.2 Planned transportation initiatives 2012-2013

Initiative	Project lead	Timeframe
Provide additional information about the ability to pay for quarterly and yearly public transportation passes by salary deduction on the FM website site once updated.	FM Communications Manager	Q3-4, 2012
Promote the student-run (Arc) bike repair service on the FM internet	FM Communications Manager	Q3-4, 2012
Develop a Cycling Master Plan for UNSW	TBA	Q4, 2013

8.0 Procurement and resource consumption

In 2011, FM spent approximately \$235 million, predominantly on building-related activities. Given the strong purchasing power this creates, there is significant potential early in the procurement process to identify sustainability opportunities and ensure they are appropriately incorporated into tender criteria. This not only improves the sustainability performance of the University, but also helps to drive improvements throughout our supply chain.

FM, through P3 (Print Post Plus), is a major purchaser of paper, which it both uses within its printing centre operations but also distributes to other users across the university. In 2011, P3 supplied approximately 1,000 cartons (5 reams, or 2,500 sheets) of 100% recycled paper to other users. Although preference is given to supply of paper with a high recycled content (typically at least 80%, and more commonly a 100% recycled component), for multi-function devices which cannot use recycled paper, paper from sustainably managed forests (certified under either the Programme for the Endorsement of Forest Certification (PEFC) or Forestry Stewardship Council (FSC)) is supplied.

Within the printing centre, some 21 million sheets of paper are used each year. As of Quarter 2, 2012, 74% of all paper used had recycled content (80%-100%), with another 22% being paper that is either PEFC or FSC certified. Other resource consumption sustainability initiatives within the P3 printing centre are that toner cartridges are recycled, and that more than 90% of the components of the printing machines are used to remanufacture new machines at the end of the machine's life.

Current or recent initiatives

- Sustainability was a key consideration during the solid waste and recycling collection and processing tender conducted in mid-2011.

Planned procurement and resource consumption initiatives 2012-13

Initiative	Project lead	Timeframe
Develop a 'toolkit' of sustainability considerations which can be used in each tender process as relevant	Manager, Quality & Sustainability/ Manager Procurement	Quarter 4 2012
Ensure sustainability is a significant evaluation criteria in the impending cleaning tender	Manager Procurement	Quarter 3 2013