

**Report on Sustainability
and the Environment**
August 2017 – December 2018



**Sustainable Thinking
Meddwl Cynaliadwy**

Cardiff Metropolitan University
Prifysgol Fetropolitan Caerdydd



Cardiff
Metropolitan
University

Prifysgol
Metropolitan
Caerdydd



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FOREWORD

Cardiff Metropolitan University's staff, students and stakeholders are committed to working together to establish the University as a leader in education for sustainable development. We work to achieve this goal within an organisational culture that takes a proactive approach to sustainability in relation to all our services as well as in our education, research and innovation.

As a global university rooted in Wales, and with a history of practice-focused and professionally oriented education, we have adopted a values-driven approach to maximise our impact. Our Strategic Plan 2017/18 to 2022/23 establishes our commitment to developing and delivering education and research for sustainable development to provide tangible benefits for individuals, society and the economy. As shown in this report, Significant progress in 2017/18.

In tandem with improvements to the student experience and our wider working practices, the implementation of our Strategic Plan further strengthens our ability to deliver against measures of success that have been identified for sustainability and the environment at university level and across the wider higher education sector.

Over the past year, we have made great progress in relation to our estate, to energy and efficiency, to procurement, food and drink retailing, waste management, travel and transport, and to the safe use of potentially hazardous or polluting substances. In particular, our reduction in consumption of single use plastic and new initiatives in recycling coffee cups have contributed to our progress.

These efforts have been supported within a university where many of our education programmes and research activities are focused on sustainability and the environment and within a wider policy context in which the University is committed to initiatives ranging from Fair Trade to the Future Generations Act.

By working and studying in an organisation committed to sustainability and the environment our students will become the next generation of global citizens able to conserve, champion and celebrate the planet we all share.

Professor Cara Aitchison

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President and Vice-Chancellor



ABOUT THE UNIVERSITY

We trace our history back to 1865, when the School of Art first opened in the Old Free Library in Cardiff. Since we developed into a university, we have remained rooted in Wales while providing practice-focused and professionally oriented education to students from around the globe. Our vision emboldens this commitment to education, research and innovation undertaken in partnership with our students, governments, business and industry and with tangible benefits for individuals, society and the economy. We are committed to ensuring that every student fulfils their potential to make outstanding graduate-level contributions to their own and future generations.

All our schools specialise in courses that are career orientated and have been designed in conjunction with business and industry. Each school is also heavily involved with research and enterprise activities in their fields and offer thriving study environments. Our academic teams are at the forefront of their fields and are supported in developing their knowledge and skills through the University's staff review and development scheme. We are a values driven University with creativity, diversity, sustainability and freedom at our core.

The School of Technology launched for 2018/19, working closely with employers across the tech industry to be at the cutting edge of meeting both student demand and employer need in a sector with an increasing number of highly-paid graduate level careers. The school will build on an established portfolio of existing industry focused courses at undergraduate and postgraduate level, to offer new degrees in data science, information security, robotics, electronics and systems engineering from 2019.

POLICIES, STANDARDS AND BENCHMARKS

- a) The University's work on the environment and sustainability is guided by an Environment and Sustainability Policy and is attached at Appendix 1
- b) The University participate in the People and Planet League Table. The University will continue to use this league table as a measure of its performance. The latest table was published in November 2017, based on information made public on the University website as well as information collected by the Higher Education Statistics Agency, with an additional audit on some questions.
- c) The University originally achieved ISO14001 in March 2012, with a successful transition to the new 2015 standard.

An aerial photograph of a university campus. In the foreground, there are several large, modern university buildings with grey and blue facades. A large parking lot filled with cars is situated in front of the buildings. The campus is surrounded by lush green trees and lawns. In the background, a dense residential area with many houses is visible, followed by rolling green hills under a clear blue sky. A semi-transparent green box with the word 'RESPONSIBILITIES' in white capital letters is positioned in the upper right quadrant. Below this, a white box contains three paragraphs of text.

RESPONSIBILITIES

The Board of Governors has responsibility for environmental performance and sustainability. The Resources Committee of the Board oversees the detailed work across the University and its business operations. The Environmental Performance Group reports directly to the Vice-Chancellor's Executive Group.

The Environmental Management System (EMS) covers all University activities from energy and utilities, to waste management and recycling. Most significantly, the work includes embedding education for sustainable development in the curriculum and into research and enterprise activities.

The University works closely with the Students' Union to maintain ISO 14001. The Students' Union takes particular interest in the University's FairTrade status and is the vital link to all student activities.

The University has identified environmental aspects and nominated Aspect Owners.

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THE UNIVERSITY'S APPROACH

The University takes its environmental responsibilities seriously and aims to manage its operations in ways that are environmentally sustainable, economically feasible and socially responsible. The continuation to embed and raise environmental awareness through the development and training of its employees and enabling students to explore and develop values, skills and knowledge of sustainability through research, curricula and extra curricula activities.

As a Healthy University, we aim to develop a socially cohesive, environmentally responsible and all-inclusive work and study environment, which looks to engage staff, students and the wider community.

The Strategy, covering the period 2016-20, includes the following three core aims:

- Social Responsibility - Contribute to a fairer society through enhancing the impact of interactions with our local, regional and international communities

- Environmental Efficiency – Embed environmental sustainability as a core organising principle across all activities
- Health and Wellbeing – Create an environment where individuals are inspired and supported to perform to the best of their abilities, and in doing so, contribute to the University's aims, values and success.

As part of its commitment to raising the awareness of sustainability and engaging staff to make a difference, the University has an on-line, e-Learning module, which can be accessed by all staff as part of their induction and staff development process. This course introduces staff to the topic of sustainability and policies of the University, and is a compulsory part of all new staff's corporate induction into the University.

The review and creation of webpages for all Sustainability activities now provides staff, students, prospective students and the community with information on progress, achievements, news and planned activities.

Our Environmental Management System – ISO14001, is defined by the aspects of the University's activities that have the potential to impact upon the environment. The University sets objectives and targets for improvements, see Appendix 2.

The foundation of our Environmental Management System is an understanding of and compliance with relevant environmental legislation and other compliance regulations. We have a Register of Legislation applicable to the University's activities. The Environmental Performance Manager keeps the Register up to date. This includes monthly updates to changes to existing legislation and new legislation via an annual subscription to legal register software and newsletter. Legal Compliance is reviewed monthly and in totality annually as part of the internal audit process to evaluate compliance.

KEY FINDINGS

During the period of this report, Cardiff Metropolitan University :-

Environmental Management

- Maintained its standing of a 1st degree in the People and Planet Green League, achieving 8th position from 154 universities in the UK and 1st place in Wales, in Nov 2017
- Achieved the transition to the new ISO 14001 : 2015 standard in Dec 2017

Environmental Awareness

- Training of 35 students in Environmental Auditing, an addition to their HEAR statement. The students participated in teams of two to complete two internal audits of the University EMS.
- Provide the opportunity for staff and students to engage with the reviewing of the Carbon Management Strategy.
- Continuation of Free Green Workshops for staff and students together to attend taster sessions of green living opportunities, ten different sessions arranged.
- The further development of the Community Days each month term time to raise awareness of University environmental activities and initiatives taking place on Campus and ideas for behavioural change and promotion of local Community partners and groups activities. Eleven Community Day events took place.
- A Students' Union, new part time officer role of "Environmental Officer" created for 2018/19

External Awards

- Improved scoring to 76%, Sustainable Restaurant Association award, maintained 3 gold stars rating, August 2018
- Selected as one of three finalists for the Feed People Well Food Made Good Award 2018
- Won - Cynnal Cymru, Sustainable Academy Award for plastic free pledge for Chilly's bottle implementation, increase in free water vends and reduction in recycling on Campus
- Cardiff Cycle Awards winner for the most cycle-friendly business in Cardiff award 2018
- Shortlisted finalist for Green Gown Award 2018 - Finalist - Student Engagement
- Social Enterprise Mark - awarded the Social Enterprise Mark, Sept 2017, proving that Cardiff Met is in business to benefit society, community and the environment. The first Higher Education Institution (HEI) in Wales to gain this recognition, and one of only ten HEI's across the UK.

- The University and Students' Union were successful in June 2018, on the renewal process for the Fairtrade status until June 2020.

Consumed

- 9,609,208kWh of mains electricity generated from renewable sources such as wind, solar and biomass.
- 14,167,905kWh of natural gas
- 94,082 cubic meters of mains water

Generated

- 89,378 cubic metres of sewage

Diverted

- The University continues to send all of its General Waste (termed as Diverted Waste) that cannot be recycled via one of the several already established recycling routes utilised by the University to the Trident Facility in Cardiff Bay for energy from waste processing. This process is ensuring that the University does not send any of its waste to Landfill. 423,366 kgs

Recycled

- 631,813 kgs

Travelled

- Introduction of NEXT Bike cycle hire scheme on all campuses, with the purchase of 600 free passes for students and staff.
- Met Rider now available online and new enhanced services with an increase in frequency (three an hour from Llandaff) and new routes to Cathays as a direct result of post code analysis and student focus groups.

Maintained

- 392 free bike services for staff and students during monthly Community Days, Go Green Week and Go Green Day and free Bike Maintenance Green Workshop.

Improvements

- Introduction of Next Bikes to each Campus and residential campus (figures)
- The reduction of single use plastic for food and drink containers throughout the University Catering service
- Introduction of a range of re-usable food and drink products throughout the University Catering service
- Commitment to using 100% green electricity from October 2017, generated entirely from renewable sources such as wind, photovoltaic and landfill and biomass gases



PROGRESS ON ACADEMIC DEVELOPMENT

The Healthy University Strategy combined with the values based education EDGE (Ethical, Digital, Global and Entrepreneurial) initiative continue to drive forward Education for Sustainable Development (ESD) oriented academic development work across the institution. Both provide, have and will continue to offer fresh impetus and associated context for the implementation of innovative and impactful authentic learning approaches within new and existing curricula. As such, monitoring of institution wide ESD provision continues via quality assurance and quality enhancement, curriculum design and annual review processes.

Cardiff Met's Learning and Teaching Development Unit continue to evaluate, promote and disseminate good pedagogical practice relevant to the curricular and co-curricular delivery of ESD learning opportunities for Cardiff Met students. In particular ESD specific staff development workshops are being delivered and further developed to meet the needs of academic staff as appropriate. These workshops offer academic staff opportunity to consider discipline relevant ESD issues and approaches from both global and local perspectives and in doing so identify means and modes of generating innovative and personally challenging stimuli that provide the foundation for authentic learning and assessment activities for students. In considering ESD across the spectrum of near and farther experience, academics and thus students are better able to locate sustainability related challenges and issues within the context of their disciplinary learning. By ensuring that sustainability matters are engaged and understood in relevant and meaningful ways that are pertinent to a learner's wider education and personal understanding, real world approaches and solutions are generated in response to real world discipline contextualised problems – a means of learning that is a central tenet of successful values based educational approaches.

LTDU continues to capture and disseminate case study material of good practice. Much of the current dissemination occurs in the two ESD oriented staff CPD workshops run by LTDU. LTDU continue to promote flexible and socially inclusive learning opportunities via Moodle VLE. Key examples include the recent implementation, promotion and training of academic staff in relation to the new e-assessment and feedback policy, as well as the Panopto project. The Panopto project continues to roll out lecture capture technology and associated software integration into Moodle at a pace across the institution. Uptake remains encouraging. The software continues to be promoted and implemented as a tool for encouraging innovative active pedagogies within classrooms (the 'flipped classroom' for example).

LTDU working with Schools and the Environmental Performance Manager provide Student Engagement opportunities for the 'Real World Projects'. Business In Action students worked closely with staff and academics to deliver realistic solutions to a range of assessed environmental challenges. The project aim to create engagement opportunities, further awareness, and behavioural change for all. The students were tasked with exploring how the University could further enhance the sustainable approach amongst the student body. They were given free rein to suggest anything they thought would make a sustainable difference to fellow students, staff and visitors. They were asked to consider a range of areas including transport, catering, community and environmental management.



PROGRESS ON RESEARCH

A number of examples of research areas relevant to environmental sustainability.

While the foci described have emerged naturally and organically from the research interests of individuals and groups, the institution has played a coordinating role in bringing groups into contact with one another and aiding the development of themes with cross institutional possibilities.

Cardiff Met's strategic commitment to create the first Global Academies in the 2019/20 academic year is likely to have a further influence in developing the theme of interdisciplinarity, including for areas of interest linked to environmental sustainability.

Built Environment

A number of groups within the university are dealing with research related to the built environment.

For example Cardiff School of Management (CSM)'s Value Flow Centre has research focusses upon sustainable transport systems, green logistics and reverse logistics in collaboration with the National Institute of Transport and Logistics – Dublin Institute. Meanwhile other CSM researchers have undertaken research into eco-Golf course management, including the development of a specific eco-footprint analysis of existing golf courses and the establishment an International eco-Golf standard.

Meanwhile, CSAD's SurBE research group focuses on the construction and operation of buildings, environmental and energy performance in a variety of global contexts, including South Wales, Ireland, Canada, Kuwait and Abu Dhabi. The group has a number of long-standing partnerships with local housing associations focused on optimising the design, construction and operation of new and existing housing, as well as the diagnostic monitoring and testing of building performance in relation to occupant health, energy use and comfort. Working with Cardiff School of Sport & Health Science (CSSHS)'s Prof. Karani and Melin Homes, members of SurBe have been developing guidance for the management of Government funded dwelling retrofit programmes, for improved occupant quality of life.

Further SurBe/CSSHS collaborative work has involved investigating the impact of using on-site alternative water sources for irrigation in a health care setting in Abu Dhabi, UAE. The aim of this work is to alleviate the use of desalinated potable water and associated carbon emissions.

A third collaborative CSAD/CSSHS research interest involves examining the suitability and practicability of rammed earth for housing in southern Africa.

Materials and manufacture

Cardiff School of Art & Design (CSAD)'s MetaTechnicity and FabCre8 groups place an emphasis on material culture and digital manufacture as a means to guide and inform the sustainable projection of our species. The groups' researchers bring their insights to bear in L&T work, encouraging students to develop a deeper understanding of materiality and fully consider how materials are used as part of their practice.

The International Centre for Design & Research (PDR) and CSAD collaborate on the development of user-centred design (UCD) research methods that place people at the centre of the design process. The approach results in sustainable solutions that maximise resources. For example a low-cost trauma pack for rural Zambia made from locally available materials such as hand-waxed and sealed cardboard for neck braces and re-purposed products such drainpipes used as the basis for splints. Re-used components such as bicycle inner tubes were also re-purposed for pressure bandages.

At a more strategic level, CSM research into the development of high speed supply chain systems and the integration of Industry 4.0 technologies to reduce food supply chain waste integrate the research of the School's academics with the interests of CSSHS's Zero2Five Food Industry Centre.

Other CSM research focuses on the role and significance of behaviour change within green marketing, specifically the drivers and barriers to the effective implementation of environmental management programmes.

Meanwhile sustainability research in PDR focuses on how new materials and technologies could be practically adopted within a circular economy – the subject of an EPSRC funded project which included research on how SMEs could create value from additive manufacturing technologies and associated circular economy business models.



Protecting the natural environment

A number of research projects in Cardiff Met focus on ways in which humans' negative effects on the natural environment can be reduced.

For example, research in CSSHS in collaboration with partners in the UK, Qatar, Kenya, Nigeria, United Arab Emirates and South Africa has examined the effects of land reclamation on the marine environment in Doha. This work was part of efforts to develop a Doha Marine environment benchmark to mitigate the impacts of land reclamation.

Other research by this group has included an evaluation of the environmental impact from petrol stations in Ilorin and a characterization of natural radioactivity sources in the United Arab Emirates aimed at developing a finger printing technique for radioactivity pollution in the region.

Further SurBe/CSSHs collaborative work has involved investigating the impact of using on-site alternative water sources for irrigation in a health care setting in Abu Dhabi, UAE. The aim of this work is to alleviate the use of desalinated potable water and associated carbon emissions.

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Developing appreciation for the natural environment

Some research within the University focusses on developing knowledge on the importance of the natural environment for learning and performance.

For example, Cardiff School of Education and Social Policy (CSESP)'s Outdoor Woodland Centre is a wooden classroom that provides a learning environment used for Forest School activities and short courses (including Environmental Story Telling). It is home to the Outdoor Learning Research Group,

which collaborates with an extensive list of external stakeholders (e.g., Millennium Stadium Charitable Trust, Simon Gibson Charitable Trust, and Waterloo Foundation). The group's work focuses on the development of social and emotional skills, confidence and communication skills, and children's play.

Meanwhile, CSSHS's 'Pathway to Podium' project is a multidisciplinary project in collaboration with Bangor University. Encompassing biological, psychological, and social factors and funded by UK Sport, the Economic and Social Research Council, and Bangor University, it examines the interaction of environmental, athlete, and coaching factors on Pathway athletes' ability to thrive in the high performance sport environment.

Research Degrees

Cardiff Met continues to have graduating doctoral candidates whose programmes of research have also focused on sustainability themes and issues. In 2017/18 these included:

Given Name	Family Name	School	Thesis Title
Simon	Hatherley	CSAD	Space for Creative & Entrepreneurial Activities? Co-working spaces in the Environmental Landscape of an Economically Challenged Region.
John	Cosgrove	CSAD	Development of a Conceptual Framework and Key Performance Indicators (KPIs) for Energy Management in Manufacturing Companies in Ireland

PROGRESS IN SCHOOLS

CARDIFF SCHOOL OF ART & DESIGN (CSAD)

As a community of artists, designers and makers, developing sustainable practices and approaches to material-use are driven by both ethical and economic concerns. Sustainability is embedded in many of the School's research and teaching practices, which underpin a number of research and innovation partnerships and student projects. For example:

- CSAD is part of a consortium led by Wood Knowledge Wales that aims to increase the number and quality of timber homes in Wales as part of Powys Council's Home Grown Homes initiative. Dr John Littlewood, Tony Whyman and Prof George Karani (CSHS) will advise on architectural designs, the innovative use of timber for construction and use in-construction testing to ensure the development of high performance, healthy and low to nearly zero carbon housing.
- Prof Gareth Loudon is working in partnership with the Department of Electronics and Communication Engineering (Amrita Institute of Medical Sciences, India) and the Centre for eHealth and Care Technology (University of Agder, Norway) on a project that combines internationally leading expertise in developing self-reliant villages and remote healthcare solutions, with user-led design. Funded by the AHRC, the project aims to identify sustainable healthcare solutions designed in response to social contexts, technical possibilities, medical expertise, healthcare resources and economic constraints.
- Bethan Gordon and Prof Gareth Loudon are working with Phytophonics, a company specialising in hydroponic growing systems, to improve the sustainability and economic security of the Welsh farming sector. Funded by the Welsh Government's SMART Partnership programme, the project aims to develop a low-cost hydroponic system that will allow farmers improve the efficiency of land-use, diversity the portfolio of Welsh products and deliver closer-to-home crops year-round, therefore reducing the need for transportation and costs to consumers.
- Also supported by the SMART Partnership programme, Gareth Barham completed a project with P&A fencing to embed a robust product development process within its business culture, with a particular focus on developing innovative products that are efficient to manufacture, transport and assemble. As part of the project, final year

BA and BSc Product Design students took part in a 24-hour challenge to create garden furniture designs that took into consideration manufacturing processes and the efficient use of materials.

- Prof Wendy Keay-Bright's "Design for Real Life" project asked BA Graphic Communication students to consider the role graphic design can play in triggering health improvement and behaviour change. Working with Public Health Wales, Cwm Taf Health Board, Food Industry Centre Wales and Stroke Hub Wales, the students designed creative solutions to effectively communicate a number of preventable health issues, such as proper use of medication or the dangers of bad fridge safety. A key goal of the projects is to encourage students to consider the impact of their professional practice, in this case, how graphic design could help to reduce NHS costs and the treatment of preventable illness.
- With support from Dr Kerlene Canavan, CSAD student Borislava Yotsova secured funding from Kew Garden's Grow Wild Youth Projects to create a natural dye garden at the Llandaff campus. The funding provided support for the collection of plants, information resources, an exhibition and seminar on the use of natural plant dyes.
- CSAD's Incubation Unit continues to promote sustainability as an ethical and business concern. Members such as Rhys Bullock and Anastasiou Design incorporate the use of sustainably sourced wood, off cuts and newly cut wood that can be stored for use once it has matured. Inspired from research conducted during her final year dissertation, Chloe Lindsey launched a new brand, Pixie Dust Hut, which offers environmentally friendly, biodegradable stationary and cosmetic products, providing customers with 'guilt free glitter' that does not contribute towards plastic waste in our oceans.
- The school's Fashion and Textiles facilities are working with our supplier Whaleys (Bradford) Ltd. in developing uses for their new polyester fabric constituted from 100% recycled plastic water bottles. The staff and students are experimenting with dyeing, screen printing and garment construction to see just what is possible with this new base fabric. So far the fabric seems to perform favourably when compared to more commonly used polyester based material.

CSAD's aim is to develop artists and designers who reflexively and consciously consider environmental issues in their practice. This starts with the responsible use of materials and well-developed approaches to recycling and up-cycling. Where possible the school opts to use materials which have a lower environmental impact with water based inks and paints in greater and greater use. Workshops and some studios have an offcut, reuse area where items that would otherwise go for waste are used and reused.

CARDIFF SCHOOL OF SPORT AND HEALTH SCIENCES (CSSHS) AND CARDIFF SCHOOL OF EDUCATION AND SOCIAL POLICY (CSE&SP)

With the move to a single administration team covering programme administration, R&I and school support managed by the School (Campus) Resource and Operations Manager for the Cyncoed Campus then the efforts towards sustainability have been cross campus. A single report for the campus has been compiled with details of school specific and cross campus initiatives.

The academic schools on the Cyncoed Campus continue to take steps to embed University and Welsh governmental principles of sustainable practice within the everyday delivery of undergraduate and postgraduate programmes, as a part of a wider perspective of sustainable practice across the Campus. The Schools recognise that this is particularly pertinent for undergraduate operations because the scale of their teaching portfolio and student population means that even modest shifts towards more sustainable practice has potential for significant improvements across a number of sustainability indicators. The move in 2017 to a campus based administrative support for CSSHS (sport) and CSE&SP in the form of Cyncoed Campus Admin has enhanced the ability to widen key social, environmental and economic sustainability initiatives across the campus. This one team approach to Programmes Administration enhanced the move towards paperless information delivery and administration workflows across as much of the teaching portfolios as possible.

The Schools use Sharepoint, Moodle and Turnitin platforms to support the face-to-face delivery of the curriculum. The digital submission of student coursework via Turnitin is mandatory. Moodle is used by all the sport programmes and is being used far more extensively for the education modules. The schools use digital platforms to provide module handbooks, timetable information, lecture schedules, lecture handouts (where used) and assessment information. In the academic year 2018-19 it has also become mandatory to embed a range of core information into Moodle rather than downloadable files. This promotes sustainability through the significant reduction in the waste of digital storage space of duplicated documents for both staff and students and by making the updating of these documents faster and simpler over time thus improving efficiency of administrative processing. Module news to students is delivered via the online messaging component in Moodle. The Schools use online scheduling services (Doodle©) and Outlook for scheduling meetings between staff, and staff and students. These services offer students and staff the ability to make tutorial, teaching and research meeting arrangements from on and off-site locations via either a web interface or a free smartphone app. This has simplified the student/staff processes of booking and undertaking tutorials and reduced unnecessary wastage of time and resources in booking, un-booking tutorials. Combined with this initiative is the use of VOIP services such as Skype, Skype for Business and FaceTime to offer students the option of video tutorials. This practice is encouraged as an option rather than the norm, but provides a social, environmental and economically

sustainable solution for those groups that need it (e.g. athletes away travelling and competing, student's suffering from illness, research students working in the field, as well as part time students and distance learning students). The use of video software Panopto has been adopted for videoing seminars, meetings and is also now used in Postgraduate student induction across School programmes. On-line recruitment has also been rolled out and is now accompanied with online re-enrolment and online module option selections. A recent development is the rolling out of online personalised timetables for staff and students. These are now delivered directly to staff and student outlook calendars and provide sustainability gains in terms of reducing printing, and staff time coordinating timetables. Exam boards and external examiner processes have also been made almost entirely paperless; external examiner paperwork is shared on Moodle and the board are presented via data projectors and laptops rather than paper copies for staff and external examiners. This process has been rolled out for CSE&SP who previously ran most of their boards paper based.

In support of paperless processes, CSSHS (Cyncoed) and CSE&SP issue iPads to academic and senior administrative staff; laptops over desktop computers are encouraged. Outlook calendars are used extensively. This has removed the need to print minutes and papers for teaching committee meetings. Paper diaries are not purchased for staff from either school. Similarly, printers for individual staff offices are no longer purchased. This is realising elimination of costs of toner cartridges (we are using existing stock) and repair bills for printers as well as reducing the environmental involved in the procurement, use and disposal of these devices. The Cyncoed SROM worked with Facilities staff to identify areas for the new MFDs to be sited across the Cyncoed Campus. Recycle bins are available in offices and other well used spaces across the Campus.

The Dean CSE&SP has worked with SROM and Cyncoed Admin staffs to rationalise academic staff visits to partner schools. This will result in financial savings but also greater sustainability in terms of driving requirements. Staff are now encouraged to use the pool car or public transport over their own car. Shared transport is encouraged for conference attendance where more than one member of staff is a delegate. Cyncoed Admin purchasing staffs have a cross campus view on what needs to be purchased and where savings can be made. Good practice is shared across the schools. The campus approach to purchasing has enabled the SROM to reuse furniture, IT equipment and stationery between sport and education. Previously, new items were purchased without cross school consultation. The move away from departmental budgets in CSE&SP has removed the silo approach to purchasing which appeared to have resulted in over ordering and waste.



CSSHS (Cyncoed)

On-going projects include one that focuses on the lives, interests and activities of ecologically supportive athletes. Considering eco-athletes as agents of change in sport, it examines the role of proactive individuals in making sport cultures more environmentally sustainable. A number of CSSHS (Cyncoed) programmes deliver curriculum content from social science perspectives raising awareness and issues surrounding environmental issues, social justice, health, wellbeing and equality in sport. These modules previously were located within the Sport Studies programme realising relatively small numbers of students were exposed to these issues. However, one of the intentional drivers for the transition of this programme to a pathway is to significantly broaden exposure to issues of environment sustainability and social justice issues delivered via curriculum content.

CSE&SP

Many of our undergraduate and PGCE Primary students make extensive use of our woodland area for Forest School and other outdoor activities. This provides a valuable opportunity for students to consider the environmental impact of using outdoor spaces and to explore ways to support the sustainability of woodland and coastal settings. Many students opt to undertake their Forest School Practitioner's Level 2 Assistant Award; this enables students to gain theoretical knowledge and practical experience of working with young children to increase awareness of the ways we can nurture our local environments. In other programmes within the Department of Humanities, one of our English tutors uses the woodland

with her Children's Literature students to embed an awareness of the interrelation between the origins of storytelling and the environment in the English curriculum, whilst promoting the development of environmental responsibility among our students. Our Outdoor Learning Team liaise closely with our Estates and Campus Services team to manage the use, eco-impact and development of QueensWood. Our Department of Initial Teacher Education (ITE) plays a key role in the development and implementation of Welsh school curriculum strategy with regard to sustainability. The Successful Futures curriculum has as one of its four key purposes the development of 'ethical, informed citizens who show their commitment to the sustainability of the planet.' This commitment builds on the seven interlinked themes identified in the Education for Sustainable Development and Global Citizenship (ESDGC) dimension, all of which are addressed and embedded as a core features of our ITE programmes and are part of the Qualified Teacher Status (QTS) Standards that student teachers need to achieve. In the Department of Professional Development, all programme directors have included sustainability as a standing item within their committee agendas. Programmes preparing students for the youth and community development professions promote a commitment towards social justice, inclusion, equality and global citizenship. A recognition of environmental, political and cultural issues is central to these courses and students are encouraged to develop critical faculties that will prepare them for working in a wide range of contexts.



CARDIFF SCHOOL OF MANAGEMENT (CSM)

Degree programmes within the Cardiff School of Management continue to have Sustainability themes and subjects firmly embedded within the curricula. The teaching of sustainability application in both industry and academic contexts helps provide students with the necessary tools and knowledge to apply sustainability in their employment fields following graduation. This is intrinsically linked to the Cardiff Met EDGE strategy, which continues to be a key focus for the School. The CSM Atrium is regularly used for Green and Social events to raise awareness of sustainability for students and staff including Go Green Week and the regular Small Business Enterprise and Community Days to promote local food artisan and crafts businesses. Organised and facilitated by the Environmental Performance Manager, Rachel Roberts, these events are also supported by student volunteers and the Healthy University Strategy team.

In January 2018 the Welsh Centre for Tourism Research (WCTR) began a four-year €3.9 Million European Commission funded Erasmus+ project entitled the Next Tourism Generation (NTG). Working in partnership with seven other European universities and six trade associations NTG aims to identify, develop and implement tools to support innovation in the delivery of digital and sustainability skill sets in the tourism and hospitality industry and associated education providers.

The NTG strategy will help to inform Vocational Education and Training strategies in Wales to improve in-house training, Continuing Professional Development, Work based learning, FE and Higher Education content in digital and sustainability skills, which aligns with Welsh Assembly Government Policy in Employment and Skills development and the implementation of the Well-being of Future Generations Act.

NTG Objectives

- To improve the relationship between Industry and Education Providers in the Tourism sector
- To provide concrete innovative and highly relevant Skills Products and Tools and respond to skills needs in digital, green and social skills
- To provide a detailed assessment of the current and anticipated skills shortages, gaps and mismatches in the sector
- To review and identify the occupational profiles
- To develop a common methodology for assessing the current situation and anticipating future needs to respond to skills gaps
- To develop a common methodology to monitor progress and the evolution of the demand and supply of skills
- To identify, describing and indicating priorities for the review or the establishment of new qualifications on the basis of the relevant occupations
- To improve image of tourism and hospitality career pathways at company and educational level

The NTG Alliance will provide employees, employers, entrepreneurs, teachers, trainers and students with a set of Core NTG modules, HR Guidelines and Delivery methods at Level 3-7 in digital, green and social skills

- Digital/Technological = online marketing, data analytics, use of technology via artificial intelligence, robotics, virtual and augmented reality applications
- Green = Resource management to recycle and manage waste, water and energy services including principles of circular economy in the design and management of tourism value chains, sustainable design and management techniques of hotels and sustainable tour packages.
- Social = Behavioural and practical attitudinal competences in interpersonal communication, accessible tourism knowledge, gender equality, cross-cultural understanding and customer service

Cardiff Metropolitan became the first UK university to become an Accredited Training Organisation (ATO), certified by APMG International, to deliver Project Management for Sustainable Development (PM4SD™) and integrate PM4SD into modules and CPD provision. PM4SD is aligned to elements of the PRINCE2® project management tool with sustainability measurements, tools and benefits factored into the methodology. This is achieved through the following:

- Business justification and sustainability of projects;
- A defined organisation structure for the project management team;
- A product-based planning approach to achieve sustainable benefits;
- Manageable and controllable stages;
- Short and long term sustainable benefits for social/economic/environmental and cultural change
- The use of a multi-stakeholder approach for implementation.

The new BA (Hons) Fashion Buying and Brand Management incorporates sustainability as a core topic aligned to sustainable supply chain management, marketing and sustainable branding development. This provides students with knowledge and case studies to demonstrate how to develop sustainable brands and how fashion garments fit with social and environmental standards.

Throughout the Tourism, Hospitality and Events, Business, Marketing, Economics and Finance departments within CSM sustainability, environmental ethics, human rights issues, consumer protection and advertising ethics, morality and social inclusion in business are all valuable topics actively brought alive in the lecture and seminar sessions. The Level 6 Business Studies module, “Visioning sustainability for change”, helps to increase student awareness and application of sustainability principles in a range of business development contexts. Additionally the modules “Contemporary and International issues in Business Ethics” and “Tourism Ethics” provokes interesting and wide-ranging application of ethics and morality in

Business development investigating business activity through ethical, environmental and political perspectives. Ethical theory is taught to help students appreciate the value and application of ethical theories such as Utilitarianism, Kantian Ethics, Duty and Ethic of Care, Virtue Ethics and Theory of Justice. These subjects support critical thinking and analysis of sustainability in strategic contexts including Corporate Social Responsibility and application of Sustainability indicators to critique the role and situation of business in contemporary society and the leadership necessary to bring change in management and responsible business practice. Other modules that critique the sustainability of supply chains in industries include the Supply Chain Management; Tourism for a Small Planet; International Food and Beverage Management; and Global Hospitality Management. Waste management is an important subject in Hospitality in Practice to provide students with tools to take out into industry to increase the sustainability of food production and service. “Global Sporting Events” helps to provide students practical tools to enable longstanding legacy within communities from hosting large-scale sporting events.

The core “Diversity and Social Inclusion in Tourism, Hospitality and Events” Level 4 module taught to all Tourism, Hospitality and Events students has become a key module using innovative and practical methods of teaching to increase awareness of how to reduce discrimination, stereotyping and marginalisation in the service sector by addressing issues related to race, gender, disability and ethnicity.

Cardiff School of Management in partnership with Cardiff School of Education and the Product Development Research Centre has been pivotal in developing the Regeneration Orbit within the United Nations Initiative, Regional Centres of Excellence (RCE) Cymru network to support the implementation of sustainable development goals. The Regeneration Orbit sits alongside the Healthy University Orbit led by Chris Deacy at Cardiff Metropolitan University’

www.rce.cymru/events/introducing-rce-cymru/

The aim of the Regeneration Orbit is integral to learning, teaching, and research practice of sustainability in society to progress a solid practical multi-disciplinary action-based network, information and skills resource and enhance the capacity of community organisations, local businesses and public sector organisations to achieve environmental and economic regeneration and social inclusion across Wales.

The Regeneration Orbit has helped to bridge university collaboration with community based organisations and sustainable development in Active members of the Higher Education Future Generations Group (HEFGG)

STUDENT UNION AND FAIR TRADE

ENVIRONMENTAL CHAMPIONS

The Students' Union is a partner within the volunteer group organised by Cardiff Council, and Cardiff Digs to focus on 'Environmental Champions' who work on getting students involved in volunteering on sustainability and environmental initiatives. Environmental Champions is a partnership project between Cardiff Digs, Student Volunteering Cardiff, Cardiff Met Students' Union, Cardiff Volunteering and Cardiff Students' Union.

Cardiff Met students signed up to take part in regular projects as part of Environmental Champions during 2017/18.

Projects that took place during this time period included:-

- A new part time officer role of "Environmental Officer" created for 2018/19 with interviews taking place in March 2018.
- Students attended a South Wales Police stand at Cyncoed student hall key collections in order to give living advice to students moving in.
- Cardiff Met students have also taken part in Cardiff Council community walkabouts, where they knocked on the doors of student houses in Gabalfa/Roath to make students more aware of the changes to council waste collections.
- Students took part in the Sleep Out on 10th November 2017, to raise awareness of the homeless in Cardiff.
- Students volunteered at the Cardiff Digs stand for Go Green Week to give out recycling bags and energy saving light bulbs.
- The SU promoted FairTrade by hosting a Fairtrade Football tournament in partnership with the International Department.
- Students volunteered at the International Food and drink Festival 6th - 8th July 2018.

- Students participated in the "Love When You Leave Campaign" (Formerly known as Get It Out for Cardiff). The "Love When You Leave" campaign is the annual end of term waste, recycling and charity collections scheme, set up to ensure that moving out at the end of term is stress free and also leaves our communities clean and tidy. The scheme includes a re-use and charity collection of unwanted items.
- Cardiff Met SU gained The Social Enterprise Award, the first SU to achieve this award.
- The SU pledged no more plastic straws. going home for the Summer.

ENVIRONMENTAL OFFICER

Olivia Bennett has been appointed as our Environmental Officer (Part time); she will begin her role for 2018/19.

POLICE STUDENT VOLUNTEERS

Continued to work with South Wales Police to help with recruitment of student volunteers for exciting operations and events.



POLICE STUDENT VOLUNTEERS ARE RECRUITING!

Volunteer with South Wales Police on Exciting Operations and Events!

How do I join?
To receive an application form please email: SwpStudentLiaisonCardiff@south-wales.pnn.police.uk

Recruitment closes: Monday 31st July 2017

Further recruitment information is available at www.svccardiff.org

Or call into Student Volunteering Cardiff (SVC) at 5-7 Museum Place, Cardiff and speak to the staff.

If you are successful you will be invited to an introduction evening (attendance compulsory)

Logos for Cardiff University, South Wales Police, and other partner organizations are displayed at the bottom.

THE SLEEP OUT

Students took part in raising awareness of homelessness in Cardiff and raised money for local homeless charity.



GO GREEN WEEK 12TH - 16TH FEB 2018

Students helped promoting recycling during Go Green Week.



FAIRTRADE

The SU continue to maintain its Fairtrade status, by continuing to do:-

- Fairtrade steering group featuring staff and students
- Stock Fairtrade products for purchase in on-campus shops and catering outlets
- Serve Fairtrade products at meetings
- Campaigns are run on campus to increase understanding of Fairtrade and consumption of Fairtrade products
- Maintain Fairtrade Policy
- In June 2018, the SU lead on the renewal process for the Fairtrade Status renewed until June 2020.

The SU and International worked in collaboration and raised awareness of Fairtrade Fortnight and Global Week with a Fairtrade Football tournament with students and staff taking place. The event was so successful it is planned to take place next year.



VOLUNTEERS FOR FOOD AND DRINK STALL TO PROMOTE FAIRTRADE JULY 2018

The SU recruited volunteers to help staff their stall at the International Food and Drink Festival 2018, in Cardiff Bay, on 6th -8th July 2018.



Cardiff Met SU & Cardiff Met celebrate the renewal of their Fairtrade status until June 2020.



CARDIFF MET SU - SOCIAL ENTERPRISE AWARD

5/12/2017

The University is celebrating a double achievement as Cardiff Met Students' Union joins the wider University in becoming the first in Wales to achieve the Social Enterprise Mark. As the first university in Wales and the first Students' Union to receive the accreditation, Cardiff Met has proved it is in business to benefit society, community and the environment.

Cardiff Met is one of only ten HEI's across the UK to gain this recognition.

The Social Enterprise Mark is the only internationally available social enterprise accreditation, which enables organisations to prove their commitment to creating positive social change. Only organisations which can prove they use income and profits to maximise their positive social/ environmental impact are awarded a licence to display the Social Enterprise Mark.

NO MORE PLASTIC STRAWS

The SU pledged to remove plastic straws from its operations in conjunction with its retail outlet Starbucks.

Straws will be replaced them with "adult sippy cup" lids. ... Some drinks will continue to have straws, including Frappuccinos, but those straws will be made with either compostable plastic or paper.



EMISSIONS AND EFFLUENTS

We continue to ensure that we maintain a regime of planned maintenance to ensure all the Universities LEV (Local Exhaust Ventilation) systems are maintained on a yearly basis. We are in the process of surveying all our ventilation duct work to confirm that they are fitted with fire dampers that will reduce the spread of fire through these ducts.

We continue to maintain the Universities Air Conditioning units on a yearly basis and last year we identified units that are working significantly more hours and we have ensured that these units were identified as requiring servicing twice per year and included this information in the recent tender documentation that has been put out to the market.

Below ground drainage has been surveyed, and is in a good standard of repair with the exception of the drainage between Queenswood and Circle way which needs major works due to tree root damage.

ENERGY AND UTILITIES

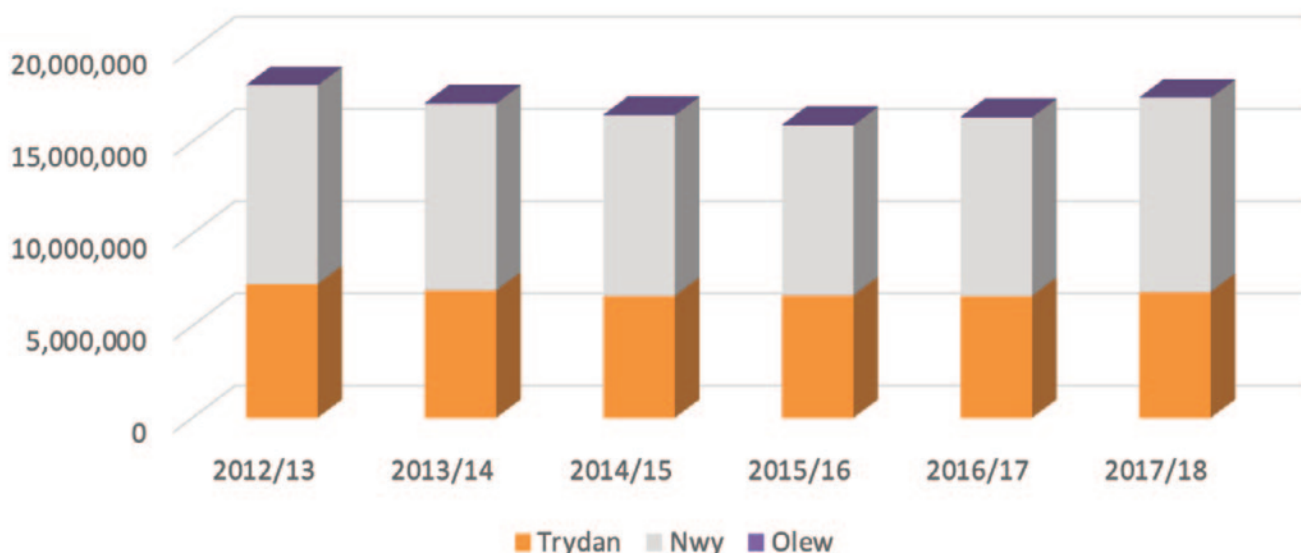
ENERGY PERFORMANCE

This year represented the final period in the current Carbon Management Strategy 2013-2018. The University has achieved overall energy emissions reductions of 3% compared to the previous year from a total of 5,002 tCO₂e to 4,863 tCO₂e and 14% compared to the baseline year of 2012/13 against a 15% reduction target. At the conclusion of this strategy, we have successfully reduced our carbon emissions by 30% in absolute terms since 2008/09.

Compared with the previous year, the University has performed as follows:

- Overall energy consumption has increased by 6.4% due to increased gas use from colder weather and in particular the 'Beast from the East'.
- Electricity consumption increased by 3%.
- Renewable energy generation from Solar PV has increased by 64% and now accounts for 1% of total University electricity demand.
- Absolute Gas consumption increased by 8.5% however when normalised for the weather, represented an increase of 2.14% against the expected consumption.
- Oil consumption increased by 0.8%
- Water consumption increased by 1.3%

Energy Consumption 2012/13 - 2017/18



Despite general increases in consumption of energy and water, overall emissions performance has continued to follow a positive trend, thanks in part to more favourable carbon factors from the ongoing decarbonisation of the grid. Gas consumption was affected sharply by the week of extremely cold weather in late February/early March and changes to some operating hours has increased the demand for electricity and heating within our buildings. Over the course of the year, normalised gas consumption is reflective of the weather being 9% colder than the previous year. Electricity consumption has increased marginally despite no growth in the estate floor area although student and staff demand and longer operating hours within some facilities have increased consumption. Overall performance has resulted in a 6% reduction in electricity consumption compared to the baseline year. Energy efficiency projects such as LED upgrades, building management system upgrades and boiler and plant upgrades have helped to offset these increases.

Water consumption has continued to increase albeit marginally over the course of the year. This has been a consistent trend with demand for water growing year on year in part as a result of increased irrigation of the sports pitches.

Accounting for growth, consumption data per m2 building floor area has also been presented:

- Electricity use per m2 floor area –2.9% increase compared to last year although overall a 12.35% reduction compared to the baseline year 2012/13.
- Gas use per m2 floor area - 2% increase compared to previous year (weather-corrected)
- Water use per m2 floor area – 1.4% increase compared to previous year and 14.75% increase overall compared to the baseline year.

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Change from previous year
Floor area (m2)	89,982	91,224	92,742	93,408	95,648	95,648	+ 0%
Electricity (kWh/m2)	81	76	71	71	69	71	+ 2.9%
Gas (kWh/m2)	120	111	106	99	101	110	+ 8.9%
Total energy use per m2 (kWh)	200	187	177	170	170	181	+ 6.5%
Water (m3/m2)	0.61	0.67	0.66	0.67	0.69	0.70	+ 1.4%

IMPROVEMENTS

A number of energy efficiency improvements have been undertaken across the estate including the following:

LED Upgrades

The year 2 programme of works for LED upgrades funded by a Salix loan was completed over the course of the year. Some key areas included:

- Llandaff A Block - foyer, entrance areas, meeting rooms.
- Llandaff D Block – lecture theatres, print unit
- Cyncoed D Block – Inclusion gym, changing areas.
- Cyncoed B Block – drama studio
- NIAC Arena
- Llandaff L Blocks – Library areas and study rooms.

BMS Upgrade

The second phase of the 2 Year Salix Funded BMS Upgrade Project was completed on our Cyncoed Campus.

This involved the replacement of the existing Satchwell controls system serving 30 buildings with a new Trend 963 controls package. A full block by block review of existing controls strategies was conducted with opportunities for improvements identified and integrated where feasible to help deliver further energy savings whilst improving comfort for both students and staff. This project has successfully upgraded 99% of the University buildings to the Trend 963 platform.

Plant Upgrades

We undertook boiler and plant upgrades in the following blocks:

- Cyncoed B Block
- Cyncoed S Block
- Tennis Centre
- Cyncoed K1

Renewable Energy

With the construction of the University's new Sports Complex on our Cyncoed Campus, a solar photovoltaic (PV) system was installed doubling the PV generation capacity of the university. We also have existing solar thermal systems generating hot water on two of our residential blocks in Cyncoed and within our Cardiff School of Management, Cardiff School of Art and Design Building and A Block on our Llandaff Campus.

The solar photovoltaic (PV) systems currently installed are:

- Cardiff School of Art and Design - 20kW peak generation
- 'Archers Arena' Sports Hall - 20kw

Carbon Management Plan

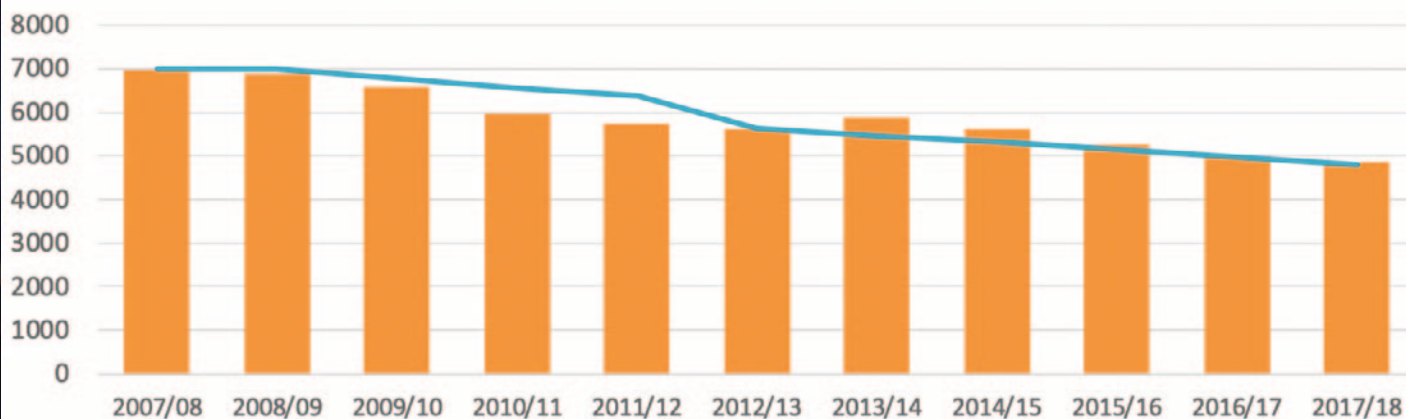
This year represents the final stage of the University's five-year Carbon Management Strategy and Implementation Plan for the period 2013-2018. We have marginally fallen short of the 15% reduction target contained within the plan by 1% but cumulatively over the last 10 years, we have successfully reduced our carbon footprint by 30%. We are very proud of this achievement and aim to build on this success as we develop our ambitions for the next carbon reduction strategy.

The completed five year strategy tasked the University with achieving the following carbon reduction target:

- Reduce carbon emissions by 3% per year against a 2012/2013 baseline.

When these targets were developed, they were based on absolute reduction metrics which makes them increasingly challenging to achieve in light of current estate wide growth and forecast growth in student numbers across the University, however this would not have been anticipated at the time. This is a common trend that many other UK Universities are experiencing across the UK.

Annual Energy Emissions vs Target (tCo2e)



In terms of relative carbon emissions, we also measure the progress of our performance using the following metrics:

- kWh/m²* building floor area - reduced by 9.5% since 2012/13 and increased by 6.5% compared to the previous year.
- CO₂e/m²* building floor area - reduced by 18% since 2012/13 and 2% compared to the previous year.
- CO₂e/FTE* – reduced by 13% since 2012/13 and 0% compared to the previous year.

Our gas performance and associated emissions are affected by the weather and in particular if we experience prolonged cold spells in which gas demand is higher. This also directly increases the volume of emissions produced as a result.

ENERGY & WATER COSTS

In 2017/18, the University spent £1.43m on energy (electricity, gas and oil) and water representing a 7% increase in overall utility costs compared to the previous year.

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Change from previous year
Total Utility Costs	£1,376,465	£1,464,437	£1,411,827	£1,283,021	£1,303,057	£1,438,274	+10.0%

	Electricity	Gas	Oil	Water	Total
2017/18	£936,850	£310,194	£1,633	£189,596	£1,396,137
Proportion of total (%)	65%	22%	0.11%	13%	100%

Of this total, energy costs amount to 87% with electricity contributing approximately 65% of energy expenditure. Electricity and gas costs increased by 11% compared to the previous year whilst water costs increased by 1% over the same period in accordance with increased consumption.

Energy procurement

In response to the increasing proportion of non-commodity costs to the overall energy bill (almost 55%), the opportunity to procure the commodity element at the best value becomes more important. As a result, this year represented the first year of the University's new flexible contract arrangement for purchasing energy with The Energy Consortium (TEC). This new strategy was agreed based on the flexibility of trading energy when the commodity market rises and falls and purchasing energy at favourable times whilst defending our budget position against a risk managed strategy and price 'cap'. In the first year of this strategy, this has led to savings of around £12,000 compared to an equivalent fixed contract that

contains premiums and the restriction of a single purchasing window.

Investment Funds

In December 2016, we bid for and were successful in securing funds of £480k from Salix Finance via the Salix Energy Efficiency Loan Scheme (SEELS) towards the upgrade of the University's ageing Building Management System (BMS) and further LED upgrades across the estate. The completed programmes of work for the LED project has delivered annual savings of £41k, 135 tonnes of carbon and 285,000kWh. This was assisted by a 15% reduction in the number of LED fittings installed whilst maintaining appropriate lighting levels. *Floor area and FTE data used is taken from the University's Annual HESA return.

ENVIRONMENTAL AWARENESS

The University recognises environmental awareness as a key aspect in its Environmental Management System, particularly in respect of the large number and annual transition of students, staff, visitors and contractors on site, presenting a challenging mixture of backgrounds, cultures and interests. Environmental awareness supports all Aspect areas of the Environmental Management System.

Different methods are used in order to engage initially with all, but also to contact the right people at the right time, for example Go Green Week and the e-learning sustainability module for staff induction. There are also compulsory student Halls induction, communicating the recycling and waste on Campus.

The use of television screens, internal staff and student portals, posters, emails, twitter and signage continue to confirm the message. Attendance at awareness sessions e.g. Freshers Fayre, Go Green Week and the collaboration of Aspect Owners and other parties e.g. Cardiff Digs, in terms of waste management, noise pollution and Fairtrade Fortnight, Student Blackout etc.

February 2018 saw the continuation of monthly Free Green Workshops for staff and students, starting with Natural Soap Making, then Upcycled Crafts, Urban Honey and Beekeeping and Willow for the garden.

The monthly term time – Community Days with a local Farmers Market - Riverside Real Food, supported by guests joining them each month, e.g. Free Bike Service / MOT check, Student Entrepreneurs, Measurement Month, LGBT awareness month, Cardiff Council Waste Management, Environmental Champions, Fairtrade, re-use and recycling of books and stationery and promotion of Free Green Workshops. This academic year also included the Environmental Performance Manager providing guest lectures for Vision in Sustainability, Sustainable Tourism and Environmental Health courses on the Introduction of the Environmental Management System (EMS) within Cardiff Met.



A poster titled 'FREE green living workshops for students and staff'. It lists four workshops: 'Natural soap making' on February 20th at Llandaff Campus, 'Upcycled crafts' on February 22nd at Cyncoed Campus, 'Urban honey' on March 22nd at Cyncoed Campus, and 'Willow for the garden' on April 26th at Cyncoed Campus. All workshops take place from 4 - 6:30pm. A note at the bottom says 'Find more details at www.cardiffmet.ac.uk/about/sustainability/Pages/News-and-Events.aspx'. The poster also features a 'green squirrel' logo and the text 'Spaces are limited! Book yours by emailing Sustainability@cardiffmet.ac.uk'. Logos for 'GREEN CITY' and 'Cardiff Met' are also present.



PEOPLE AND PLANET : GO GREEN WEEK 2018

Go Green Week is People & Planet's annual national week of action on climate change in schools, colleges and universities.

The University celebrated the People and Planet Go Green Week 2018 between 12th – 16th February. There were a range of Green events programmed for the week, Free Bike MOT, opportunity to purchase Refurbished Bikes, Bike mechanic workshop, Smalls For All – Recycling initiative, Book swap, Fairtrade, Cardiff Digs and Environmental Champions, Boot camp taster, Yoga taster, Energy Workshops, YMCA Clothes Collection, Waste Management on Campus and Recycling unwanted Christmas gifts. Lots of social media activity took place to promote the events.

The activities were complimented by environmental awareness activities on the Campus, including continuation of Smalls For All, the recycling of old and unwanted bras and donations of new children's and ladies pants for Africa. There were 37 free bike mot's and 42 marked up with security marking. Cardiff Digs provided a stand, highlighting waste, noise and transport arrangements within the local community – giving out free energy efficient light bulbs and food and recycling bags. Guidelines were also discussed at the stand as part of Recycling and Sustainable Travel, this coincided with a project for Business in Action Students. Cardiff Met Recycling initiatives stand - pledge tree for staff and students to make individual pledges to help review their recycling habits and a board game to show what should be recycled on Campus and where.

The pledge tree findings provided the opportunity for staff and students to make suggestions for reducing environmental impacts of the University, highlighting the top answer of reducing single use plastic. Single use plastic was reviewed on Campus, with the introduction of Chilly's water bottles on Campus at reduced rrp. The Chilly's fitted with the already established Hydrachill free water vending machines around Campus, whilst having the benefit of continuously free chilled water and reduction in purchase of single use water bottles and waste reduction. Cardiff Met

were successful in achieving a Sustainable Academy Award, via a public vote for the successful review of the single use plastic on Campus and introduction of Chilly's bottles.

The Sustainable Academy Awards celebrate sustainability excellence, innovation and leadership from across Wales. The Awards recognise the amazing people, projects and initiatives that are contributing towards the seven National Well-being Goals and the five Ways of Working described in the Well-being Future Generations Act.

The success of involving students and staff throughout the process led to the development of a similar trial with the implementation of a new Eco-Food box range, sold via the Catering outlets to encourage reuse of food containers and further behaviour change.



Commercial Services were also finalists in the Green Gown Awards 2018 for Student Engagement for the 'Real World Projects'. Business In Action students worked closely with staff and academics to deliver realistic solutions to a range of environmental challenges. The project aim to create engagement opportunities, further awareness, and behavioural change for all. The students were tasked with exploring how the University could further enhance the sustainable approach amongst the student body. They were given free rein to suggest anything they thought would make a sustainable difference to fellow students, staff and visitors. They were asked to consider a range of areas including transport, catering, community and environmental management.



STUDENT AUDITORS

Engaging with Cardiff Met Students' Union, students are able to participate in the Cardiff Met Award via the Sustainability Pathway, offering students the opportunity to train as environmental auditors and in teams complete audits of the University Environmental Management System (EMS).

Students were able to demonstrate the skills they learnt whilst studying the course by participating in the 2017/18 internal audit of the EMS. The students worked alongside the Environmental Performance Manager and as a result have provided recommendations of improvements and identified and recognised areas of good practice across the University.

COMMUNITY GARDEN

The Cardiff Met Community Garden Project was proposed in March 2016 as a voluntary Wellbeing opportunity for Cardiff Met staff and students.

The Community Garden on Llandaff Campus was supported with the allocation of a raised bed area, funding for purchase of a shed, outside water tap, equipment and materials and support by the Grounds Maintenance contractor. The project aims to seek volunteers of staff and students to manage the area and promote activities and progress to all.



OCCUPATIONAL HEALTH AND SAFETY

The University recognises that the health and well-being of staff and students is essential to its success and therefore has committed to the provision of an environment that supports the adoption of healthier lifestyles. The philosophy which underpins this commitment is one of self-help and individual responsibility within a corporate framework, promoting and supporting good practice to comply with legislation, addressing key workplace risks to health and encouraging a healthy lifestyle culture. The encouragement of healthy lifestyle culture among staff and students includes active support to staff and students that use sustainable forms of commuting (walk/cycle/public transport) to/from and between their places of work and study. Health and well-being development is a key component of the Corporate HR and Healthy University Strategies and improvement goals have been set which target key preventable ill-health issues and the Welsh Government's Health Challenge Wales priorities.

CHEMICALS AND HAZARDOUS SUBSTANCES

Schools and Units are required to identify and assess risks posed to staff, students and the environment by hazardous chemicals and to liaise with Campus Services over their safe disposal. Schools and Units continued to ensure that risk controls implemented for hazardous chemical substances remained effective. Progress continues to be made towards the establishment of a University-wide best practice standards for the use and disposal of chemical substances. A cross school working group was established in the summer of 2013 and a Hazardous Chemicals User Workshop event was held in 2014/15 as part of the Corporate Staff Development Programme. During 2017/18 a use of chemicals protocol was developed in Cardiff School of Sport and Health Sciences. This protocol, which details the safe and environmentally responsible practices to be followed when purchasing, storing, using and disposing of chemicals, is to be adopted for use across the whole of the University in 2018/19.



PAPER

Printing and copying continues to be a necessary activity within the University. All student and staff copying resources are centrally managed through the Print Studio with the lease of multi-function devices. Print resources for staff are the responsibility of respective Schools and Units; student print resources also fall within the remit of the Print Studio.

Paper consumption is considered a significant environmental aspect by the University, due to the associated 'whole life' environmental cost from the supply chain, associated energy consumption, and ultimately the waste product.

The Print equipment and management software was updated in Summer 2018 to Kyocera and MyQ, this installation was completed during October 2018. The reports previously produced on the old print management software are not available on the new software. However an improved range providing more detail is available. During this first year of the new print management system the information and the best way to measure and report print needs will be reassessed. Regular meetings with the Print Supplier will support the identification of areas for targeted improvement. The Environmental attributes were assessed as part of tender – recycling of toners, energy efficiency etc.

SUSTAINABLE ESTATE

During academic year 2017- 18 we completed the construction of a new Facilities Building at the front of the Llandaff campus, housing various Campus Services, such as mail and security. The building achieved an EPC (Energy Performance Certificate) rating of A. For all planned new building projects we continue to adopt a passive design strategy to ensure that our buildings are efficient in use and capital expenditure and designed beyond current building regulation requirements.

The University has also continued its focus on refurbishment and upgrade of existing space. This Refurbishment Programme has allowed the LED lighting programme to be extended, effecting significant reduction in electricity and carbon use which will be supplemented by the phased installation of an upgraded BMS system. All refurbishments now incorporate LED lighting as standard, together with water-based paints and recycled materials where appropriate. We also undertook a significant programme of boiler replacements, for both heating and hot water. Our new boilers are significantly more efficient than those they replaced.

Externally we undertook a number of improvements. These included:

Significant planting at the front of Llandaff campus, comprising hardy plants to cope with traffic on the A48, using recycled Welsh slate chippings for landscaping and sustainably sourced timber sleepers. The small pond and wildlife area at Cyncoed was regenerated, with new benching, together with new recycled benching by the Outdoor Learning Centre.

We continued to add bird boxes, bug and insect boxes on all campuses, and plant wildflower seeds throughout.

All natural waste/debris produced by our grounds team is either left in situ to create new natural habitats, or removed to our compost area at Cyncoed, and re-used on site.

We produced a new and comprehensive map of all drainage systems at Llandaff. This will support our inspection and clearing regime and reduce risk of flooding and cross-contamination.

We continue to follow through the Knotweed Eradication Plan which is greatly enhancing the border areas to our campuses, especially at Llandaff, with 85% of existing knotweed being eradicated.

Campus appearance: Campus walkabouts and rigorous monitoring are diarised at regular intervals throughout the year, to ensure that the campuses retain a welcoming appearance.

Going forward we are implementing new plans to better connect our campus to our adjacent natural environments – the wood at Cyncoed, and the River Taff and fields at Llandaff. A new programme to remove smoking from central points of the campus will allow us to improve landscaping and communal seating areas in key areas.

SUSTAINABLE PROCUREMENT

The University's procurement function is a key contributor to the achievement of sustainability objectives through its role in managing all aspects of the University's supply chains and associated sourcing and transactional processes. The primary objective of all University procurement is the achievement of best value for its goods and service's needs. Within this objective, the University seeks to configure all procurement activity to include outcomes for the social, economic and environmental benefit of the local community, and to do so in a manner consistent with the Welsh Government 'Welsh Procurement Policy Statement'.

The University makes extensive use of collaborative procurement opportunities, actively participating in - and benefiting from – the collaborative procurement activity of the Higher Education Purchasing Consortium, Wales (HEPCW) and the National Procurement Service for Wales. Whether adopting a collaborative procurement agreement or conducting its own procurement exercise, the University applies Sustainability Risk Assessment criteria to the evaluation to help identify sustainability enhancement opportunities and to mitigate environmental risk.

The University also utilises a number of procedural and evaluative criteria to assist in ensuring smaller and local businesses are given credible opportunities to engage and be successful in University procurement exercises and, in turn, to help reduce the University's carbon footprint in its direct and indirect supply chains. A primary indicator of these various 'local supply' initiatives can be illustrated through the fact that in the last twelve months, in excess of 50% of the University's influence-able spend was placed with Welsh based suppliers.

The University seeks to make full use of electronic tools wherever appropriate in its procurement processes. The University has been using electronic tendering for over 10 years and has been 'live' with an e-marketplace for over 5 years. The e-marketplace hosts electronic catalogues and facilitates the transmission and receipt of electronic purchase orders and invoices. The University also transmits non-e-marketplace purchase orders via system-generated emails and uses the same technology to issue remittance advices electronically to suppliers and other creditors. Implementation of these processes has resulted in more than 95% of the University's Purchase Order and Remittance documents now being transmitted electronically, with the consequential dramatic reduction in the use of hard copy documents, stationery and surface mail services.

In the coming twelve months, the University will be seeking further opportunities for upcycling, recycling and the use of products manufactured from post-consumer waste; continue to promote energy efficiency as a significant factor in the evaluation of relevant procurement activity; and further enhance transparency in its extended supply chains to help deliver greater social and environmental benefit

TRAVEL AND TRANSPORT

Cardiff Metropolitan is one of the leading sustainable travel organisations in Wales. Having a history of focusing on sustainable travel for its students, staff and visitors to ensure that the University reduces its impact on the environment, contributes to the positive health and well-being of staff and students and is a responsible member of the local community.

Since 2009 we have witnessed a reduction of 15% in students using a car as their mode of transport. This equates to a significant 1,575 students ceasing using a car as their preferred mode of transport in under eight years.

We are continually highlighted by Cardiff Council as an exemplar organisation with regard to Travel Planning and act as a mentor for other organisations seeking assistance in implementing travel plans in their organisations. Ensuring that staff and students have good and easy access to all our campuses is an important part of an individual's working and learning experience at Cardiff Metropolitan University. The travel plan is a student led working document that will evolve following monitoring and review to minimise any negative transport impacts of our activities.

Cardiff Council introduced a new Travel Strategy 2016/17 and Cardiff Met agreed to work in partnership with the city towards the achievement of their strategic aims. By 2021 Cardiff Councils key aim is for 50% of all journeys to be undertaken by sustainable transport. In the following five years to 2026 efforts will be focused on delivering further improvements in order to increase the proportion of all journeys in Cardiff by walking, cycling and public transport to 60% and achieve the aspirational target of a 60:40 modal split. Cardiff Met has already achieved the City's 2026 modal split with our students having a 76:24 car usage split which aligns with and surpasses the aspirations of the Council 2021 target. The staff modal figure of 46:54 car usage leaves us tantalising close to the councils 2021 target, with the aim to decrease staff car usage by a further 4% prior to 2021.

Cardiff Met was awarded the Platinum Level award for Travel Planning in the Workplace by the Welsh Assembly Government in 2016, becoming one of only three organisations in Wales to achieve the award.

The following highlights achievements and initiatives that have assisted in ensuring that Cardiff Met continue as a 'leading light' in the area of sustainable travel.

WALKING / RUNNING

The past year has seen an increase in walking or running to campus as a lifestyle choice amongst both students and staff. The 2016 Travel Survey indicated that 34.96% of students and 18.84% of staff now daily walk to campus.

This has been supported by:

- An increase number of students and staff accessing the dedicated showers, storage and changing facilities.
- Provision of safe campus walking guides.
- The introduction of a weekly staff/student running/walking club.
- The continued agreement to house circa 700 first year students in private halls located within walking distance of campus.
- Walk to Work free breakfast packs available four weeks a year.

CYCLING

Cardiff Metropolitan University has the largest work based Bike User Group in Wales with in excess of 250 members of staff regularly cycling to work. In addition to this, over 800 students have currently requested card access to the cycle stores be added to their ID card.

Our continued focus on cycling as a preferred travel method for staff and students has resulted in 5.26% of students (550) and 17.84% of staff (250) cycling regularly. This has been supported by the University free breakfast scheme which has witnessed in the past three years an average of 330 members of staff annually participating in the Cycle or Walk to Work weeks. Cardiff Met having provided a staggering 6,565 free healthy breakfasts during this period.

Recent cycling initiatives have included:

- The upgrading and completion of the Cycle Hub at Llandaff – a direct cycle lane from the front of the campus that safely skirts the perimeter and delivers the user safely to the cycle stores and shower facility
- The purpose built Cycling changing, storage and shower facilities that opened in September 2014 in the new Cardiff School of Art & Design.
- The 28 days a year of FREE breakfast for staff who opt to cycle or walk to work.
- The addition of a further all weather, card access cycle stand at Llandaff and Plas Gwyn Campus in August 2016, providing cover for 260 bicycles.
- Continued sales of Grade 10 security D-Locks for to purchase at £20 from Print Studios. RRP £69.99

- The April 2018 participation in the staff Cycle to Work purchase window resulted in a total of 36 new staff bicycles.
- The annual provision of 1,000 Cardiff cycling maps courtesy of the Cardiff City Council given to staff and students from September 2014.
- Donation of 70 discarded cycles on campus to Cycle Training Wales to be rebuilt and reused in the community.
- Cycle maintenance workshops for staff and Free Bike MOT's for students and staff cyclists every month.
- Introduction of NEXT Bike cycle hire scheme on all campuses, with the purchase of 600 free passes for students and staff.
- Winner of the 2018 Cardiff Cycle Awards in the 'Most Cycle Friendly Business' category.

MET RIDER

Since the Met Rider launched in 1997 usage has grown from just 100 permits a year to in excess of 2000 passes a year, making it the largest student bus service in Wales. The Rider offers students and staff an affordable and subsidised method to travel safely around the city of Cardiff. Student passes are valid from 1st September until 30th June each year and costs just over £6 a week for the entire year. Staff passes are valid for the entire year at under £26 a month which is deducted monthly throughout the year.

During the 2017/18 Academic Year, students undertook over 400,000 journeys on the Met Rider services which was nearly 14,000 trips a week during term time. It is not just members of Cardiff Met that benefit though, as the Rider is a public service linking Cardiff East and West with routes that did not previously exist.

The 2016 Student Travel Survey illustrated that 31% of students confirmed they have used the Rider to attend Campus during the past year. Regarding staff, 9% confirmed they had used the Met Rider in the past year to either travel to campus or between campuses.

Following extensive consultation with students from September 2017, the Met Rider routes and schedule were amended to include three services an hour from Llandaff Campus to the Cathays/Roath area, the main residential location for students.

CAR SHARE

Cardiff Met is a founder member of CarShare2Cardiff joining within the first week of the schemes launch in 2006. Since the introduction of the scheme the university has experiencing fluctuating demand for car share spaces dependent upon the success on our periodic car share campaign.

The University currently has a total of 731 members (148 staff and 583 students) and 39 active groups registered with the car share scheme.

BUSINESS TRAVEL

Business travel is an essential part of Cardiff Mets daily operations, but where applicable we always seek to ensure that staff are travelling via the most sustainable option. The University encourages staff to reduce their business travel via the utilisation of technology, such as web conferencing, virtual learning and one to one skype discussions.

With an expanding overseas student market, we will always have a necessity for air travel to promote the University and its courses. Where possible air travel is kept to a minimum with long haul visits being combined to several destinations in one trip rather than repeated long haul flights from the UK.

COLLABORATIVE WORKING

The HE/FE South Wales Travel Group chaired by Cardiff Met with three meetings per year held.

Cardiff Met are currently used as a 'Case Study' in the Cardiff Cycling Strategy 2016-2026

Cardiff Council - Ongoing consultation with Cardiff City Council to explore how we can align our joint Travel Strategies and confirmation that we will be participating in the September launch of NEXT Bike. The University receives continual recognition from the Council as 'best practice' in the Higher Education sector in South East Wales.

SOCIAL MEDIA

September 2014 saw the addition of the Met Rider timetable and directions to campus being added to the Cardiff Met App, along with regular travel promotions via the University Facebook and Twitter accounts.

July 2015 saw the launch of the latest Cardiff Met Travel Plan - Annual Report 2014/15

Link to Travel Plan: http://campaigns.c-cardiffmet.ac.uk/documents/accommodation/TravelPlan_2014-15.pdf

The 2018 Travel Plan is due to be published May 2019

WASTE MANAGEMENT

The University continues to send all of its General Waste (now termed as Diverted Waste) that cannot be recycled via one of the several already established recycling routes utilised by the University to the Trident Facility in Cardiff Bay for energy from waste processing. This process is ensuring that the University does not send any of its waste to Landfill, which is a significant achievement.

The materials recovery process at the Trident Facility, which sorts through the Diverted waste to attempt to identify recyclable items, further facilitates the reduction in the net waste processed via the energy recovery route, thereby increasing the recycling rate of the university by approximately 20%.

The continued use of established recycling routes and implementation of the waste conversion to energy process has maintained performance year-on-year. Recycling rates continue to increase, however the progress is now marginal as the significant step change in waste management has been implemented and zero waste to landfill achieved.

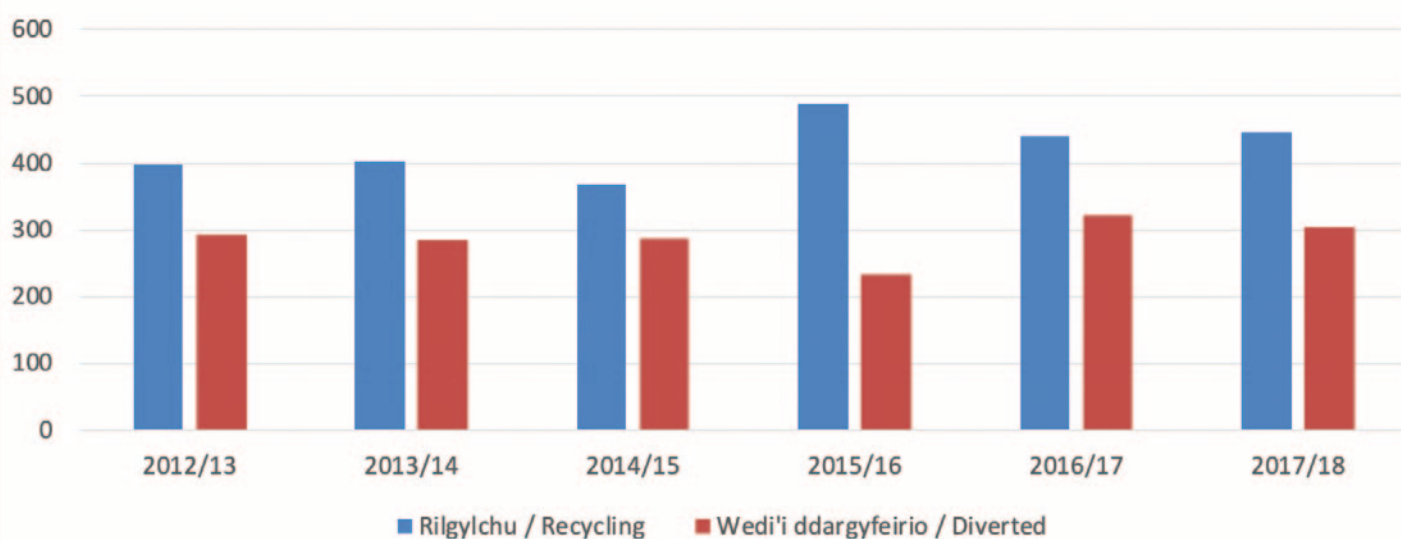
The University continues to recycle the following waste streams:

Paper, Cardboard, Plastics (including Bottles), Glass, Food-waste, Wood, Metal, Batteries, Stamps, Printer Cartridges, Mobile Phones, Clothes, Books, WEEE and White Goods.

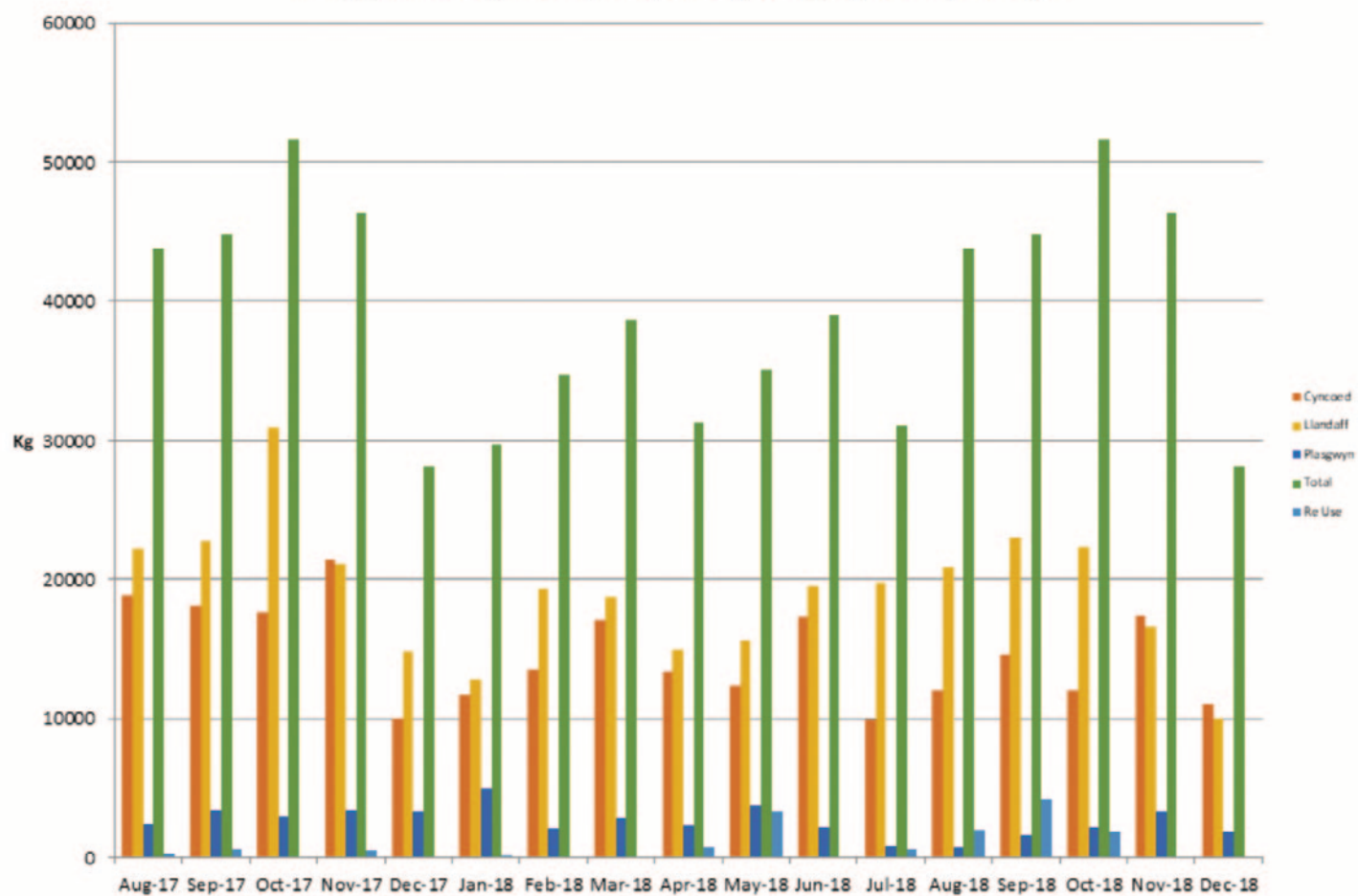
Campus Services staff will continue to scope opportunities with Waste management contractors and key stakeholders within the University for recycling any materials that are disposed of via the Diverted waste route. There will be an emphasis on the need, and importance, of Recycling, and ideally Reducing the usage of items that need to enter the waste disposal streams in the first place.

The Re-Use website set up by Campus Services continues to strongly contribute to the waste reduction target. It has been re-launched and marketed to increase staff and student awareness of its potential use as a key tool in the promotion of the Reuse of equipment and resources.

Recycling/Diverted



Recycling/Diverted





SUSTAINABLE FOOD

Catering & Hospitality Services recognises its responsibility to carry out its procurement activities in an environmentally and socially responsible manner, whilst also encouraging healthy and sustainable food production and consumption.

The University encourages suppliers to minimise the negative environmental and social effects associated with their production and supply chain, and ensure, through active encouragement, that local and smaller suppliers are not discriminated against in the procurement process and tender opportunities.

The University achieved a Gold Award for an SRA Sustainability Rating for the second year running in August 2018, based on centralised procurement and single point of contact for ongoing sustainability support for all University food outlets on Campus. Cardiff Met is the first university in Wales and the fifth in the UK to receive a three star rating by the UK's leading sustainability accreditation and membership body for the hospitality and food service sector. The Sustainable Restaurant Association (SRA) has awarded Cardiff Met's catering team a three star 'Food Made Good' rating – the maximum rating in this category. The three stars rating, regarded as the Michelin stars of sustainability, is achieved by completing a rigorous and wide-ranging assessment that covers the three pillars of sustainability: sourcing, society and environment.

Cardiff Metropolitan Catering, are part of TooGoodToGo – helping to revolutionise food waste. Download the app, browse, pay and collect your food parcel from Llandaff Atrium, CSM. The contents vary each day from sandwiches, bagels or filled croissants, fresh fruit, vegetables, flaky pastries or even a packet of crisps.

FUTURE GENERATIONS ACT AND SUSTAINABLE DEVELOPMENT CHARTER

The Well-being of Future Generations (Wales) Act 2015 became law in Wales on 29 April 2015. The Well-being of Future Generations (Wales) Act is about improving the social, economic, environmental and cultural well-being of Wales, helping to create a Wales that we all want to live in, now and in the future. As the University is not a Public Body, it does not have to comply with the Act, but we still face the same challenges now and in the future, to tackle these we need to work together with Public Bodies to give current and future generations a good quality of life. We need to think and consider the long-term impact of the decisions we make as a University.



CONCLUSION

The University continues to make excellent progress on the environment and sustainability agenda and thanks are due to the staff and students for their contribution. Its pursuit of becoming a top 10 university in the next five years opens up further challenges. There are many examples where the University makes a difference, but it can do more. This is a great opportunity to lead in pushing forward the principles of sustainable development. By committing to the sustainable development agenda, Cardiff Metropolitan University can win the hearts and minds of staff and students, create positive impacts, shift the culture from compliance to alliance and drive up performance and invest in the future.

FOCUS FOR 2019

Future focus may include but not be limited to :-

- Review of all opportunities for the University to submit applications for Sustainability Awards
- Feasibility of a Green / electric pool vehicle fleet
- Investigate new car share resource to aid staff
- Further opportunities to extend the number of NextBikes for all Campuses as part of the City Council Bike Scheme
- The reduction of single use plastic for food and drink containers through the University Catering service
- Implementation of a Single-use coffee cup collection scheme with Keep Wales Tidy and partners, to raise awareness of benefits of Re-usable cups on Campus for both Campuses
- Introduction of a range of re-usable food and drink products throughout all University Catering outlets
- Continual improvement of Environmental Management System (EMS) to adhere to ISO14001 : 2015
- To develop and focus the Community Days each month (term time). The promotion EMS Aspect areas and Healthy University Strategy by continuing to raise awareness of University environmental initiatives on Campus and ideas for behavioural change and promotion of local Community partners
- Further develop sustainable engagement activities with Community Groups
- The continuation of free Green Workshops for staff and students together to attend taster sessions of green living opportunities
- Further opportunities for students to engage and train as Internal Auditors of the Environmental Management System and complete internal audits as part of student teams
- Volunteering of staff and students to support Green events, e.g. Go Green Week and Green Day
- Review of external space and signage around the Campus
- Review of Fairtrade Policy and renewal
- Maintain and improve Sustainable Restaurant Award
- Implementation of Carbon Management Strategy Plan
- Maintain and improve standing within the People and Planet League from 2017 result of 8th in UK and 1st in Wales out of 154 Universities in the UK
- Extending Real World projects to all Schools, in conjunction with all areas of the Healthy University Strategy Team
- Review of Environmental Strategies and Action Plans
- Review of webpages and social media for engagement
- Implement change in reporting structure and focus of Environmental Performance Group
- Issue of Travel Plan report



Sustainable Thinking
Meddwl Cynaliawd
Cardiff Metropolitan University
Prifysgol Metropolaidd Caerdydd

ENVIRONMENT & SUSTAINABILITY POLICY

Policy Statement: Cardiff Metropolitan University recognises the importance of the role it has to play in environmental stewardship of its estate and in promoting principles of sustainability across all its activities, including teaching and research. The University will manage and control its environmental risks in a sustainable manner by complying with relevant legislation and adopting where appropriate best practice.

Application: It is essential that sustainable development is at the core of all activities in the higher education sector and at Cardiff Met. The University is a major contributor to society's efforts to achieve sustainability through:

- ◆ the environment in which its students learn
- ◆ the skills and knowledge that they acquire and put in to practice; and
- ◆ its own strategies and operations

This policy applies to all activities undertaken by (or on behalf of) the University including those of governors, staff, students and contractors.

Objectives of this policy are:

- ◆ To make sustainability a core principle in all that we do
- ◆ To ensure that all environmental risks are assessed, managed and controlled.
- ◆ To promote and adopt best practice within the higher education sector.
- ◆ To maintain and develop the University in a sustainable manner.
- ◆ To work together with our community on matters of the environment.
- ◆ To develop good working relationships with relevant external authorities and bodies.
- ◆ To develop managers, staff and students by providing training and information on sustainable development: environmental management, social justice and economy.

In accordance with the policy statement the University will:

- ◆ **Adopt Sustainable Development: Environment, Social Justice and Economy, as a key principle in the University's strategic planning and delivery.**

Cohere the plans and activities of complementary policies, to enhance efficiency and results: health & wellbeing, environmental management, equality & diversity and staff development.

- ◆ **Control its Environmental Risks**

Meet the requirements of environmental legislation and commit to a process of continual environmental improvement.

- ◆ **Promote and Adopt Best Practice**

Maintain an Environmental Management System; set targets and indicators, measure environmental performance and report progress
Promote and adopt sector initiatives.

- ◆ **Maintain and Develop the University in a Sustainable Manner**

Through sustainable procurement best practice, seek to support, influence and deliver continuous improvement across social, ethical and environmental aspects of products and services, whilst achieving best practice
Maximise energy efficiency, use of renewable resources and use of low carbon technology
Minimise waste generation and facilitate repair, reuse and recycling over disposal of wastes
Audit the ecology and biodiversity of the estate, and develop an associated action plan to enhance its performance and mitigate impact
Actively promote sustainable and active travel to and from the campus
Promote continual improvement in maintenance practices
Encourage activities to enable students to contribute to sustainable development.

- ◆ **Communicate and inform the University Community**

Produce an Annual Report
Produce reports to the appropriate committees
Communicate with the Sustainability Champions.

- ◆ **Working with External Authorities and Bodies**

Develop good working relationships with all relevant external authorities;
Develop links with appropriate environmental bodies and associations;
Report any incidents as required.

- ◆ **Development of Managers, Staff and Students**

Provide appropriate training and information to the University community.

Signed:.....

Date:.....

Professor Cara Carmichael Aitchison
President & Vice Chancellor

APPENDIX 2 ENVIRONMENTAL STRATEGY 2017/18 - 2022/23 - TARGETS AND OBJECTIVES PART OF EMS - ISO14001:2015 (MEASURED AGAINST EMS BASELINE DATA)

Impact Area	Objective	Target	Responsibility
Sustainable Food	Limit the impact of food purchasing	1) To progress Sustainable Restaurant Association feedback report. 2) To progress actions from HU Action Plan - a) Develop and implement a more diverse food offer across the University's (and CMSU's) catering outlets. b) Engage with CSHS (Nutrition and Dietetics) to support development of new product (food) development at University catering outlets, c) Enhance involvement with the Sustainable Food City initiative	Catering & Hospitality Manager
Waste Management	Reduce waste and increase awareness	Comply with Waste Management Strategy targets. To make all Staff, Students and Visitors aware of the Recycling and Re-use facilities at the University and to promote, encourage and inform all parties about sustainable & environmental performance	Campus Services Manager
Travel & Transport	Reduce single occupancy travel to Campus	1) Implementation of the various actions within Travel Plan: Public Transport, Cycling, Walking, Car Share, etc. and associated awareness and promotion campaigns 2) Updated data and statistics of student/staff travel modes, post code analysis and campus traffic 3) Target to increase sales and awareness of Met Rider Service for students and staff via promotion and marketing campaign 4) Review of parking congestion issues on Llandaff and Cyncoed campus and effect on local community	Travel Plan Manager
Sustainable Procurement	Impact of purchasing	1) Ethical Supply Chains – enhance the knowledge of, and influence over the University's direct and extended supply chains 2) Materials and finished goods, seek opportunities to enhance sustainable impact through use of more environmentally friendly products and packaging 3) Suppliers & Sub-contractors, maximise opportunities for local supply 4) Processes and procedures, maximise the benefits achievable through the University's use of electronic systems, particularly electronic trading 5) Commodity profiling, develop a report of sustainability progress and achievements report derived from enhanced commodity profiling and management	Head of Procurement
Students' Union	Assist the community around the Campus'	1) Develop the involvement of Cardiff Met student body with the various actions undertaken within each Aspect. Creation of a Student Environmental Society. Create a link to Cardiff Met Sustainability (information) site from the Student Union web site. 2) Making more Cardiff Met students involved and aware of environmental and sustainability issues. To get at least 25 students signed up to Environmental Champions group. 3) Creation of Sustainability pathway of the Cardiff Met Awards. 4) Development and maintenance of Fairtrade accreditation	Director of Students' Union
Sustainable Estates	Biodiversity	Management of funded knotweed eradication programme	Director of Estates
Paper & Print	Managed print service	1) Reduce Desktop Printers 2) Measure and report on job deleted by the print system across the fleet 3) Measure and report on print as a total volume produced on Multi Function Devices (MFD) 4) Duplex rate increased 5) Awareness activities	Commercial Services Manager
Environmental Awareness	Increase awareness activities, Campus and within Community	1) To review the content of the e-module on Sustainability for completion by new starters to the organisation 2) To review each quarter the volume of new starters completing the e-module on Sustainability 3) To raise awareness of environmental and sustainability issues amongst Cardiff Met staff, students, stakeholders and local community 4) To review the format and content of the Sustainability website 5) Maintain ISO 14001 : 2015 6) Maintain & improve standing in P&P Green League table	Environmental Performance Manager
Energy & Utilities	Reduce Energy consumption	1) Reduce utility emissions to meet reduction targets (currently 3% per annum) as set out within Carbon Management Strategy 2) Development of Carbon Management Plan project list to deliver aims of the Carbon Management Strategy, including prioritisation of projects for implementation 3) Improve awareness of energy and utility consumption across the estate through regular targeted reporting of key data through meetings with schools	Energy and Environment Engineer
Emissions & Effluents	Legislation Compliance / Best Practice	Compliance with Legislation/Best Practice, Drainage Discharge, Emissions to Air, Drainage, Air Conditioning, Lev's and Fume Cupboards, Water Treatment / Control of Legionella	Maintenance and Space Operations Manager
Chemicals & Hazardous substances	Control of chemical & hazardous substances	Development of a Cardiff Met Environmental Good Practice Use of Chemicals Protocol, based upon examples of existing good practice in use within the University's Schools and Units	Asst Dir of HR (Occ Health, Safety & Wellbeing)
Academic Development	Promotion of Environmental studies	1) To monitor the institution's teaching of Education for Sustainable Development (ESD) via the University's QA processes, curriculum design and review 2) To capture and disseminate identified examples of good ESD pedagogy and practice within the institution through case study collation 3) To increase flexible and socially inclusive learning opportunities through the continued use and development Moodle VLE and other associated online learning, assessment and feedback resources 4) To roll out lecture capture software across the institution as a means of enabling staff to provide flexible online learning content 5) To deliver ongoing workshops for academic staff which support the development and delivery of sustainability (global and local), internationalisation and social inclusivity agendas within Cardiff Met curricula 6) To contribute to relevant aspects of the Healthy University community of practice and its aims 7) To implement and promote digital and online communication and collaboration technologies as a means of reducing unnecessary impact on the environment	Learning Development Officer
Sustainable Research	Academic research and consultancy relating to environmental topics	Completion of an annual report summarising academic research and consultancy	Director of Research and Graduate Studies



**www.cardiffmet.ac.uk/about/sustainability
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