

Annual Environmental Report: 2017/18

September 2018



The National Assembly for Wales is the democratically elected body that represents the interests of Wales and its people, makes laws for Wales, agrees Welsh taxes and holds the Welsh Government to account.

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Introduction



Manon Antoniazzi
Chief Executive Officer

In this year's Annual Environmental Report we are pleased to report continued progress with our long-term environmental objectives.

Our carbon footprint has reduced again, we are now diverting all our waste from landfill, and utilities use is lower for all buildings.

We are also proud of the fact that a change of environmental management certification was successful, and we are now operating to ISO14001.

We look ahead also to increased efficiency- making best use of resources- as well as encouraging lower-carbon travel options.

Single-use plastics has been the environmental topic of 2018 and we are continuing the work we did five years ago to remove coffee cups with even more work on disposable items throughout the year. This includes phasing out single-use plastic wherever possible by September 2018.

Summary of Performance

We have again reduced our energy use, despite an increase in the number of users of our estate.

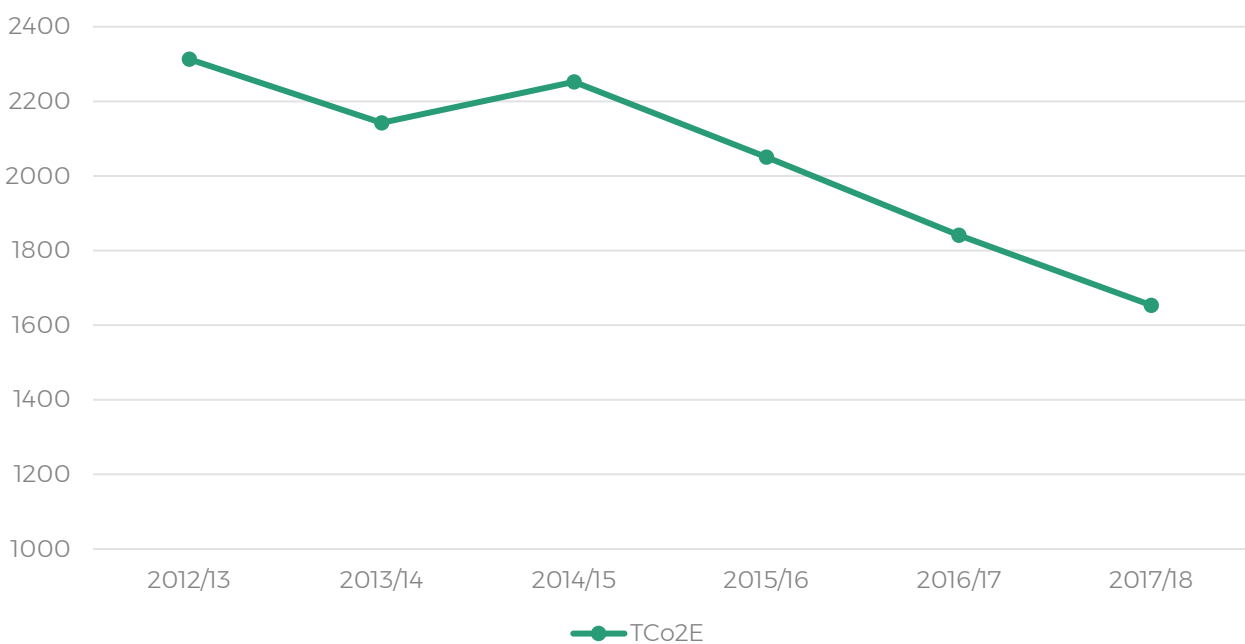
Water, gas and electricity are all lower than last year's figures, which when combined with further greening of the UK's electricity grid has resulted in a significant reduction in our carbon footprint.

Our work this year has included a range of measures aimed at improving the efficiency of our existing technology, as well as looking at more efficient options for refurbishments. Coupled with this we have now eliminated waste sent to landfill and are moving to target total waste and disposable plastics in particular.

We have conducted further work on encouraging low-carbon travel to and from the estate, in particular capacity for more cyclists and for the first time electric vehicles.

Our environmental work operates to a formally-audited environmental management system, using UKAS-accredited auditors to verify our sustainability improvements.

Total Carbon Footprint (tCO₂e)



Improvements to the Estate

A summary of improvements made to the estate and the way we operate includes the following:

- We have brought our energy contracts under the same two suppliers for all sites, via NPS frameworks. This is already improving the clarity around billing and we hope it will help realise some small financial savings.
- We switched our environmental management system (EMS) over to the international standard ISO14001. We use this as the basis for continual environmental improvement and see the auditing process as a valuable extra set of eyes over our work.
- We have trained a new team of internal environmental auditors this year, something which supports the requirements of our EMS but is also highlighting opportunities for improvement.
- We continue to work on the monitoring data we produce to seek energy efficiency savings, for example in managing heating demand where we have identified areas of the building holding heat longer than others. We are also continuing the rolling programme of verifying all our temperature sensors around the estate, to ensure the system controlling heating and cooling receives accurate real-time data.
- We installed electric vehicle charging points for staff working on our estate, and increased the capacity of our bike shed, all to encourage low-emission transport use.
- We have procured further IR (infra-red) heaters, after their successful use in hard-to-heat transitional spaces. We hope to realise savings from their use next winter.
- Some of the pumps associated with hot water for the heating system have been replaced for more efficient units, which we hope to continue to roll out subject to availability of funding.

Progress against targets

Our targets have been amended to look at longer-term objectives across Assembly periods.

These changes will 'iron-out' the fluctuations in demand for resources experienced throughout our five-year Assembly cycles, and will allow us to identify and implement improvement projects with longer payback periods. Our targets take us through to the 2020/21 election year. Half-way through most of the target periods, we are pleased to report good progress towards achieving them.

Objectives	Targets	Progress
Reduction of carbon footprint	Reduce energy emissions by further 30% by 2020/21 (based on 2012/13 baseline)	27% down on baseline year. Further 7% reduction since last year.
	Improve the efficiency of business-related car travel by 10% by 2020/21 (on 2013/14 baseline)	Efficiency has improved 8% since the baseline year; the same as last year's figure.
Reduce the impact of waste	Achieve zero waste-to-landfill by 2020/21	97% diversion for year as a whole. Now operating at zero waste-to-landfill
	Transition from waste management to sustainable resource management by 2020/21	In progress. Working on single-use packaging currently.
Reduce water use	Reduce the consumption of potable water across the estate by 5% by 2020/21 (based on 2014/15 baseline)	Down 32% this year compared to baseline, and over 20% compared to last year.

Energy efficiency measures on our estate, both in terms of equipment and behaviour, have supported a reduction in utilities use again this year. Further greening of the UK's electricity grid, and drop in the associated carbon conversion factor have combined with this lower usage to produce a further drop in our energy emissions figure. We are now well on the way to meeting our 2020/21 target in this area.

We have seen a flat-lining in the efficiency of business-related car travel, but this will be an important area of development in 2018/19 as we encourage the use of electric vehicles.

Whilst the whole year showed similar overall waste tonnages and diversion-from-landfill figures to last year, we are now able to report our operation as zero-to-landfill following a mid-term update from the waste management contractor. All Assembly waste from the Cardiff Bay estate is now sent to recycling or recovery options.

Following a slight rise last year, and despite a large increase in visitor numbers, we have seen a reduction in potable water consumption this year- down 32% against our baseline year.



Electricity use continues to fall



Gas use has dropped slightly this year

Energy

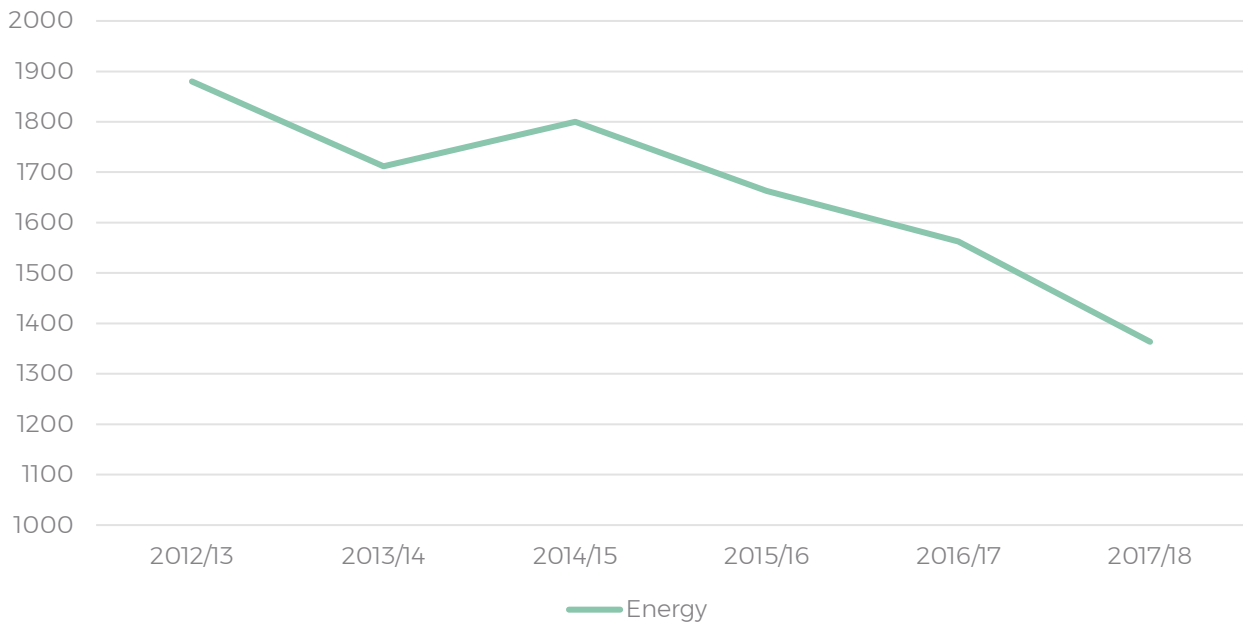
Energy is by far the largest contributor to our carbon footprint, as can be expected from a largely office-based organisation. We focus our efforts on energy efficiencies, and indeed ‘energy emissions’ is our primary environmental target.

Electricity is the largest component of that energy footprint, accounting for around three quarters of these emissions. This is used to power not only the visible services such as lighting and ICT, but also the air-conditioning units, pumps and fans which move water and air around the buildings and keep the working environment comfortable. Our electricity costs have increased over the past year; a per unit rise of around 10% has undermined the slight reduction we’ve realised in actual usage.

Compared to 2016/17 we have seen an increase in use of biomass for the Senedd, largely due to a longer and colder winter. This was combined with an increase in the cost of woodchip of 13%, which resulted in a higher cost of heating for the building. We have worked with a new woodchip supplier though to ensure greater reliability of supply to keep the biomass boiler running more of the time (rather than the gas back-up).

Similarly with gas use, our consumption has dropped slightly, but cost per unit increased over 20% since the previous year, in line with wholesale market prices. Through utilising NPS/CCS frameworks we have brought our utilities supply under two main providers this year which will help realise savings over some of the previous contracts, as well as provide simplicity to the management of these contracts.

Energy Emissions (tCO₂e)



Our overall emissions are down however, both in individual scope areas and our primary target of energy emissions specifically. This *energy emissions* figure, thanks in part to more renewable energy in the UK grid, is now tracking at 27% below our baseline year; well on the way to our 30% target by 2020/21.

We replaced some key hot water pumps this year which will show savings in electricity use throughout their life, and we hope to continue this trend with other pumps in 2018/19. Further 'hidden' energy users will also be targeted, along with other more obvious improvements such as LED lighting. We will also continue our work on energy efficiency- looking at minimising operating time of energy-intensive plant via the system of remote loggers throughout the estate.

Waste

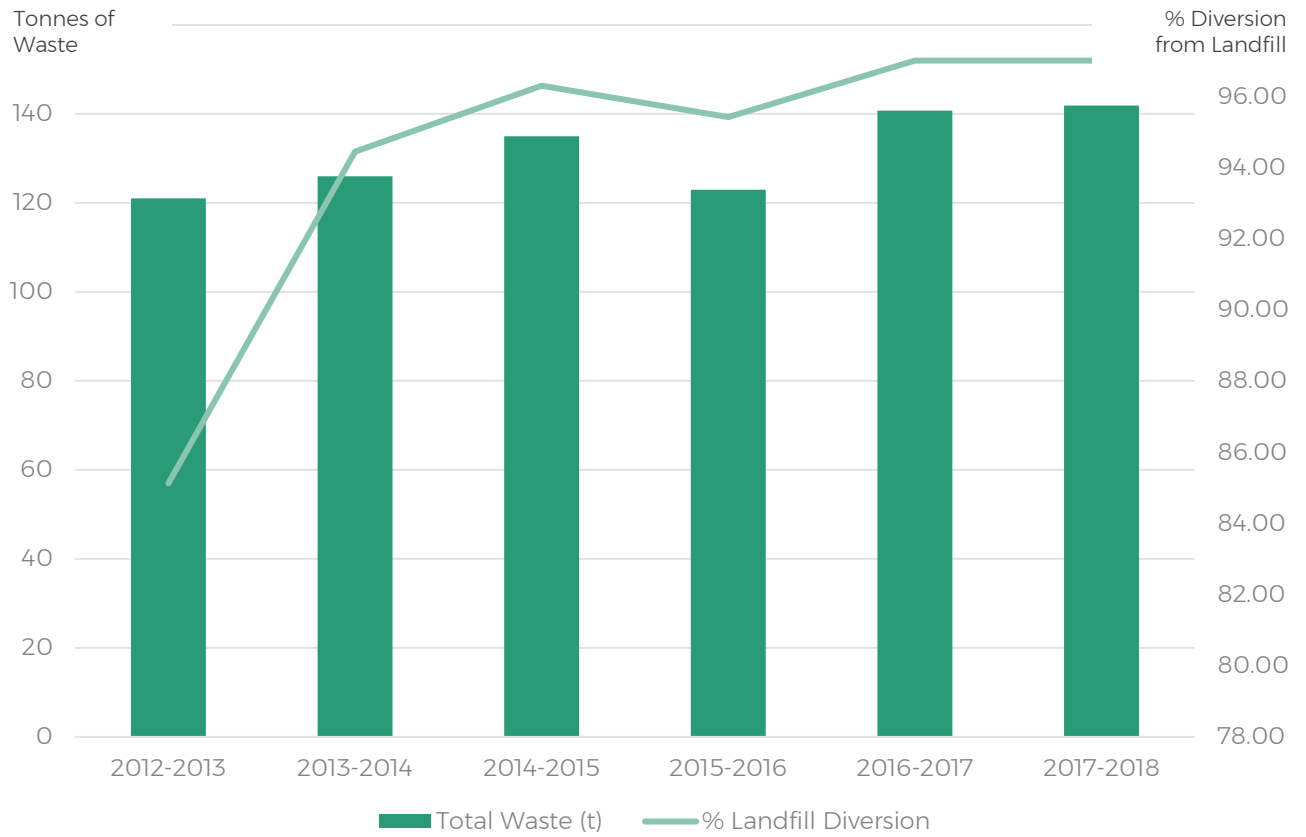
We are pleased to announce that we are able to report our operation as zero waste-to-landfill, ahead of our target year of 2020/21. All of the Assembly's waste is now sent to recycling or recovery outlets.

Whilst the total tonnage of waste produced has increased slightly over time, in line with an increase in the number of building users, we will be targeting this for the next financial year. We have already begun to work with our suppliers to phase-out single-use plastics, which we've committed to doing wherever possible by the end of September and will also be looking at reusable packaging options.

Fewer ad-hoc waste collections, particularly those related to infrastructure and project work, has meant that despite a slight increase in the amount of waste handled our costs have actually reduced slightly this year. Other cost-saving improvements have included amalgamating the waste electrical & electronic equipment (WEEE) collections to one supplier for all our operations. We have been able to source a local SME for this work who are able to satisfy both our governance and environmental requirements.

Paper use falls into the waste category, and we have noticed an increase in this area over the past year. As a service led by customer demand we have seen an increase in printing requests from a variety of areas, including the printing of reports supporting business and other engagement activities. All the paper we use is FSC-certified and/or 100% recycled-content. Further work over the forthcoming year will include continued roll-out of the 'follow-me' printing service which is helping reduce the volume of printing done in the offices.

Total Waste and Diversion from Landfill



Total waste production and the percentage diverted from landfill



Water use has dropped significantly this year'

Water

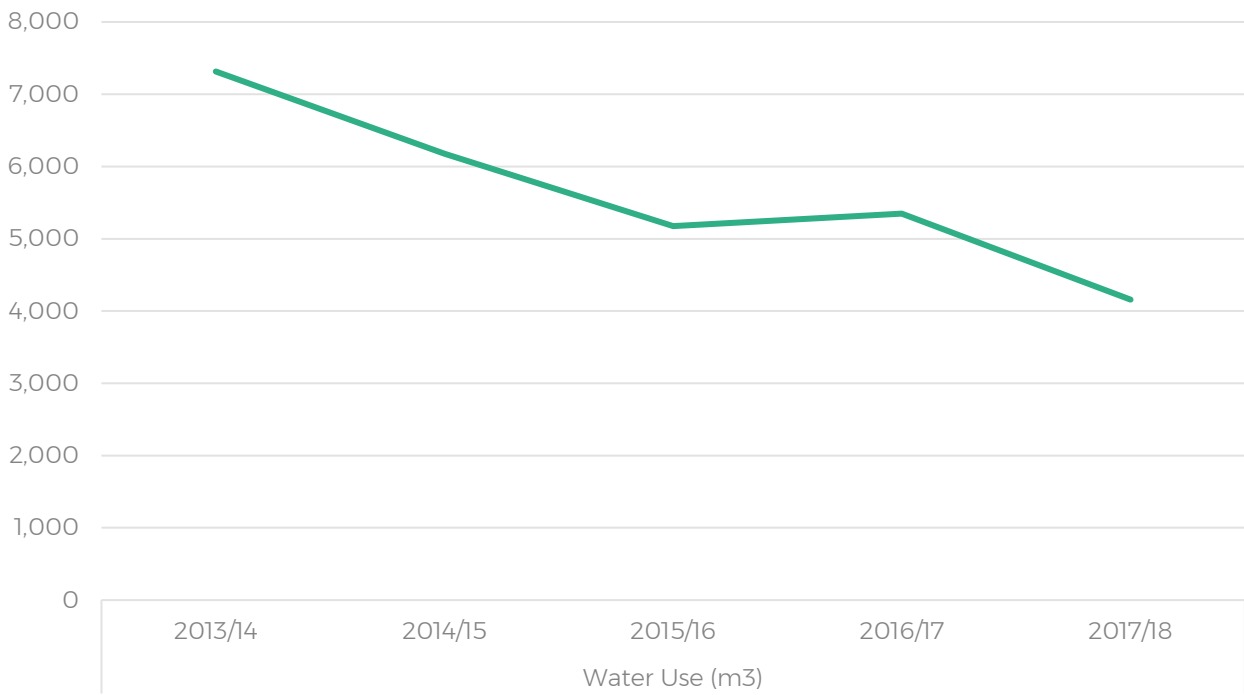
Water is used throughout our Estate for drinking and washroom facilities, including the publicly-accessible Pierhead facilities. We also have catering provision, the canteen facility in Tŷ Hywel and smaller catering facilities in the Pierhead and Senedd.

Following a slight rise in water use last year, our consumption this year has reduced significantly. Usage is down 32% on our baseline year, with costs also down 31% over the same period, and down 20% since last financial year.

These reductions are a result of several variables, including staff and visitor numbers. Although visitor numbers increased, this did not result in significant increases to water use in the Senedd and Pierhead. We have continued to roll out water-saving devices wherever an area has been refurbished. One further factor was some lower-than-usual billing by Dwr Cymru, something which we brought to their attention and was attributed to a faulty meter for Ty Hywel.

The Senedd continues to use greywater for flushing the toilets and washing the building. This is harvested via the extensive roof area and stored in two large tanks.

Water Use (m³)



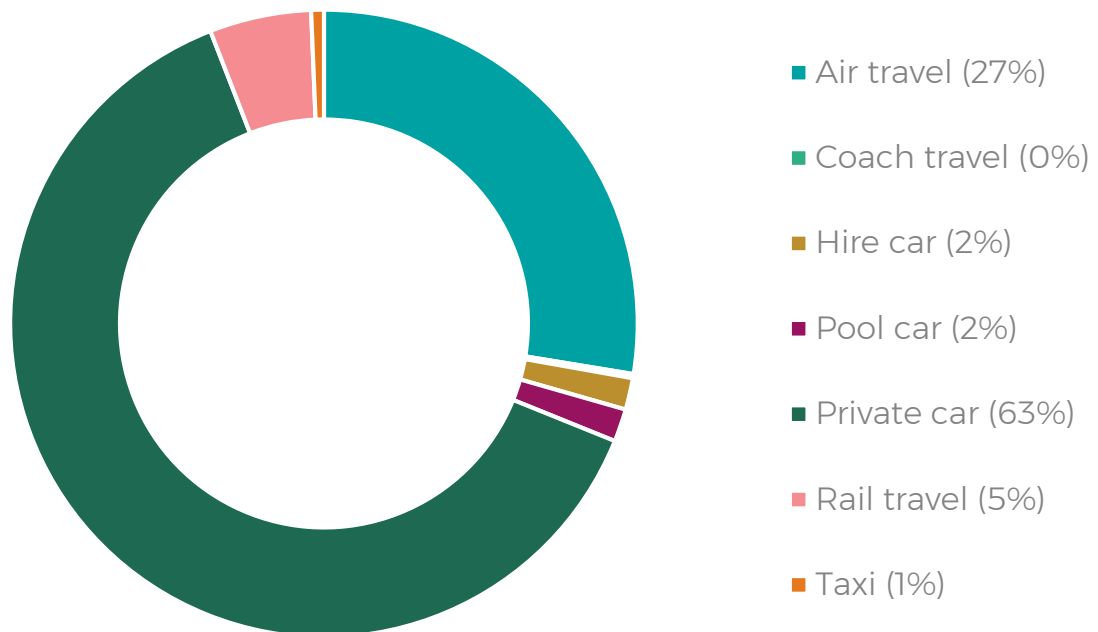
Graph showing mains water use by the Assembly's estate

Travel

Our business travel figures fluctuate across the cycle of assemblies, and this year's are very similar to the preceding 12 months.

Travel modes too have fluctuated according to business needs, but we are encouraging the use of sustainable options where possible. This past year we have increased the capacity for on-site bike storage, to further encourage cyclists, and have recently installed electric vehicle charging points for use by staff working at the estate. These will operate at a cost-neutral level; users being charged for any electricity they consume. For the forthcoming year we will be looking at even more bike storage space, as well as encouraging drivers to switch to ultra-low emission vehicles where possible. We will also changing the Assembly's pool car over to a primarily electric vehicle, which will reduce both our carbon footprint and running costs.

Travel Emissions by Mode

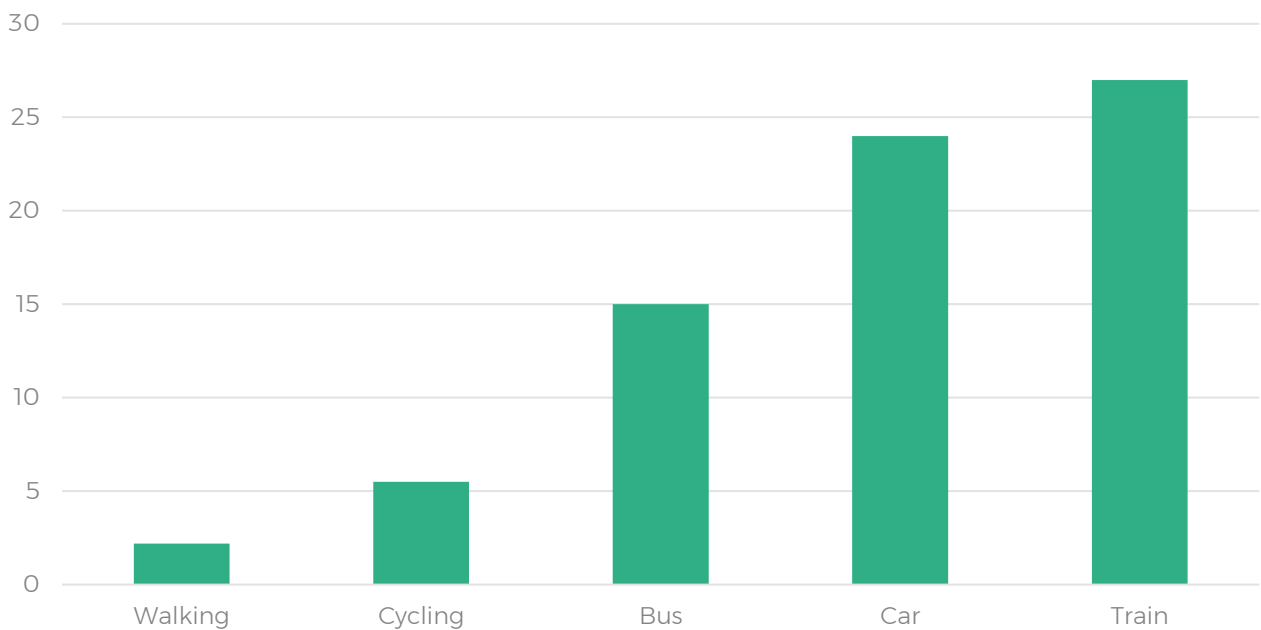


Composition of the carbon footprint of Assembly business travel 2017/18

Cardiff is one of the UK's flattest cities, ideal for sustainable travel such as walking or cycling, and we already have keen staff- the need for extra bike spaces being reflective of this. We want to encourage further uptake in more sustainable modes though so will be producing case studies during 2018/19 of good examples amongst staff, in order to further encourage others away from private car use.

We will conduct another biennial travel survey in early 2019, but here's a reminder of the modes people use to commute each day:

Commuting Distance by Mode (miles)



Average round-trip commuting distance by mode for people working on Cardiff Bay estate

Environmental Management

The Commission has maintained a formal environmental management system for more than a decade. Ever keen to improve and ensure the most stringent standards are adhered-to, we recently moved our EMS certification across to the international standard ISO14001.

This management standard requires a range of measures to be demonstrated at external audit, including controls on key environmental impacts, compliance with legislation, and a programme of internal audits. It is this last, auditing strand which has been most improved recently- with newly-trained internal auditors now checking the site and operations to ensure continued compliance throughout the year. The new standard requires a more stringent audit process, but allows for efficiency savings elsewhere due to less-onerous paperwork demands. We are pleased to announce that, following a two-stage audit by an independent and UKAS-accredited auditor, we successfully achieved the ISO standard.



Impacts

The table shows the organisation's significant environmental impacts. The risk figure for each aspect is calculated using the scale of the impact and the probability of occurrence, taking into account legislation and the level of control offered. Impacts with a score of twenty five or above are then deemed 'significant' and are prioritised by the rest of the environmental system, for example our objectives and targets.

Environmental Aspects and Impacts

Aspect	Activity	Impact	Significance rating
Use of electricity	Lighting the estate	Resource depletion Indirect air emissions Carbon footprint increase	35
Use of electricity	Powering office equipment	Resource depletion Indirect air emissions Carbon footprint increase	35
Waste production	Disposal of general waste	Pollution risk Use of landfill space	35
Transport	Business travel	Carbon emissions Health risk Resource depletion	30
Transport	Commuting by staff	Pollution risk Carbon emissions Health risk Resource depletion	30
Use of electricity	Cooling- operation of air-conditioning equipment and fan coils	Resource depletion Indirect air emissions Carbon footprint increase	28
Use of gas	Heating our buildings	Resource depletion Air emissions Carbon footprint increase	28
Use of contractors	Maintenance and refurbishment projects	Pollution risk Risk of incorrect disposal route (e.g. landfill) Waste production Procurement of new products/ equipment Possible carbon impact	28

As can be seen our key impacts arise from utilities usage, transport and maintenance of the Estate. These are to be expected from a largely office-based environment and for a strongly engagement-focussed organisation.

Pollution Prevention

We ensure we operate strict processes for the prevention of pollution from the activities carried out across our Estate.

Our pollution prevention plan identifies potential sources of pollution and associated mitigation measures. Complimenting this we then have physical barriers, training and procedures to control these risks. However it should be remembered that as a largely office-based organisation we are a relatively low-risk site with few chemicals and no large storage tanks.

Across the site we have a number of available spill kits and have placed them in accessible locations near to any possible source of spillage. These are supported by spill kit procedures displayed near to the kits and all facilities contractor staff assigned to handle any pollution incidents have been trained in spill response. Surface water and foul water drains across the site are colour-coded to ensure clear designation and a double-skinned tank is used for external diesel storage. All paints and COSHH substances are stored securely in locked cabinets and any hazardous waste storage, such as fluorescent tubes, electrical equipment and batteries, are stored securely within a designated cage. Duty of care requirements for the safe storage of other waste materials are followed accordingly by all staff that manage or dispose of waste.

The Year Ahead

We continue to operate towards the targets which will see us through to 2020/21, monitoring and reporting progress along the way.

Objectives	Targets
Reduction of carbon footprint	Reduce energy emissions by further 30% by 2020/21 (based on 2012/13 baseline)
	Improve the efficiency of business-related car travel by 10% by 2020/21 (on 2014/15 baseline)
Reduce the impact of waste	Achieve zero waste-to-landfill by 2020/21
	Transition from waste management to sustainable resource management by 2020/21
Reduce water use	Reduce the consumption of potable water across the estate by 5% by 2020/21 (based on 2014/15 baseline)

The 2018-19 financial year will see us continue to install energy-saving measures in areas being refurbished, as well as continuing to identify efficiency savings using existing equipment. We significantly increased the monitoring data available to us this past financial year, via a system of sub-meters and monitoring software. Key for 2018/19 will be turning this into efficiency savings.

We will continue to target travel emissions; both to encourage people to use electric vehicles as well as to take even lower carbon options such as cycling. The Assembly's pool car is due for replacement too, and we are looking at a low-carbon alternative for this.

Waste will be a key focus area through 2018/19. Although we are able to report that we no longer send waste to landfill, we are looking further up the waste hierarchy and seeking to minimize the amount of material we handle wherever possible. The Assembly recently committed to the phase-out of disposable plastics where possible by the end of September, and we are planning to run the Plastic Free July initiative as a precursor to this.

Appendix A: Data Tables

Environmental Data

Key performance indicators	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total net greenhouse gas emissions (Scopes 1, 2 and 3), tCO ₂ e	2,314	2,144	2,252	2,051	1,841	1,654
Total energy emissions, tCO ₂ e	1,880	1,712	1,800	1,663	1,563	1,364
Waste to landfill in tonnes	17.2 (baseline)	6	4.7	4.6	5	4
Recycle and reuse rate, percentage of total	83%	94%	95%	95%	96%	97%
Total water consumption, m ³	10,069	7,315	6,177	5,174	5,347	4,158
Total business travel emissions, tCO ₂ e	222	231	252	227	206*	207
Paper Use (million sheets)	2.24	2.26	2.09	1.93	1.99	2.92

*updated following receipt of outstanding claims after publication of last year's report.

Appendix B: Benchmarking

Our floor areas (used as a baseline for many years) have remained the same this year, as our primary estate consists of the three Cardiff Bay buildings detailed below.

Building	Area
Tŷ Hywel	15266m ²
Senedd	5121m ²
Pierhead	1821m ²
Total	22462m²

During this target period we are seeking to improve benchmarking by reviewing utilities use against the number of people who use our buildings, as well as degree days. To this end we collate occupant and visitor figures for year-on-year comparisons to help explain changes and recognise long-term trends. There are several contractors and external agencies with staff based in our buildings, but as they use the same utilities we will combine them under the 'occupant' figure. We have already begun this process with the following figures:

	Occupant Numbers	Visitor Numbers
2017/18	970	228748
2016/17	959	188616*
2015/16	923	182485

*Included Ty Hywel visitors for the first time in 2016/17

Building	Annual Water Use - 2017/18
Ty Hywel (per occupant)	6.04m ³
Senedd (per visitor)	3 litres
Pierhead (per visitor)	7 litres

Appendix C: Environmental Policy 2017-18

The National Assembly for Wales Commission ensures the provision of the property, staff and services required for the effective functioning of the National Assembly for Wales. Our aim is to be an exemplary organisation in terms of sustainability and to ensure the efficient delivery of our services with due regard to the principle of promoting sustainable development.

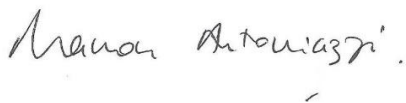
Our day-to-day operations have an impact on the environment, arising mainly through the consumption of resources (utilities and raw materials), travel and the generation of waste.

The National Assembly Commission commits to:

- Ensure the efficient use of our buildings and seek opportunities to minimise the use of natural resources in the delivery of our services.
- Dedicate appropriate time and resource to improving the energy efficiency of our estate.
- Promote our sustainability credentials to the public, our visitors and other stakeholders.
- Ensure all Members, Support Staff, Commission Staff and other building users fully understand the contribution they can make to improve our environmental performance
- Develop a culture of environmental responsibility amongst our occupants, contractors, suppliers and visitors to our buildings.
- Avoid unnecessary travel where possible and promote sustainable travel in the performance of our duties.
- Place sustainability considerations at the heart of transparent decision-making processes and integrate purchasing principles which favour those products and services which cause the least harm to the environment.

- Require our suppliers and contractors to support our environmental policy in the delivery of goods and services.
- Plan, adapt and ensure sufficient measures/resources are in place to future-proof our assets against the challenges of a changing climate.
- Comply with all relevant environmental legislation, standards and other compliance obligations.
- Maintain both procedures and physical measures to protect the environment, including through the prevention of pollution.
- Set ambitious environmental objectives and targets to ensure continual improvement, and publicly report progress against them.

This policy statement applies to the whole Assembly estate (comprising of Tŷ Hywel, Senedd, Pierhead and our Colwyn Bay office) and will be reviewed annually and made available to all staff and other interested parties through our website. It will be contractually binding on suppliers who use our premises and will be made available to anyone on request.



Manon Antoniazzi

Chief Executive and Clerk to the Assembly

Issued: October 2017