

# **Sustainability:** Annual Report 2018-19

July 2019



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Croeso  
i'r Senedd

—  
Welcome  
to the  
Senedd

## Introduction



**Manon Antoniazzi**

Chief Executive and Clerk

In a year of unprecedented awareness of the need to tackle climate change, we have seen the IPCC's report calling for a drastic cut in emissions and the Blue Planet effect focussing the public's attention on plastic use. We are proud of taking action to reduce our impact in these key areas.

Our main environmental indicator for many years has been energy emissions and we are pleased to announce that this year we have met our target for 2020/21 two years early. This is a significant reduction of over 40% on our baseline figure.

Single-use plastics is another impact we have tackled this year; signing-up to Plastic Free July and removing single-use plastics wherever possible from our catering service.

We have also continued our work to encourage low-carbon transport with EV charging points and now an electric pool car for our business trips.

Wildlife has not escaped our attention; this year we have installed two beehives on the roof of the Pierhead building. It's great to be able to provide a home for these important pollinators, in an urban environment.



**David Rowlands AM**

Commissioner for Security and Resources





## Summary of Performance

The past year has seen the introduction of several environmental initiatives around the estate, including more electric vehicle charging points, an electric pool car, and beehives on the roof of the Pierhead building.

Work has continued behind the scenes with more energy-efficient technology being installed and monitoring work that will enable further savings to be realised. Our emissions have reduced significantly again, partly as a result of the greening of the UK's electricity grid meaning a reduction in the resultant conversion factor.

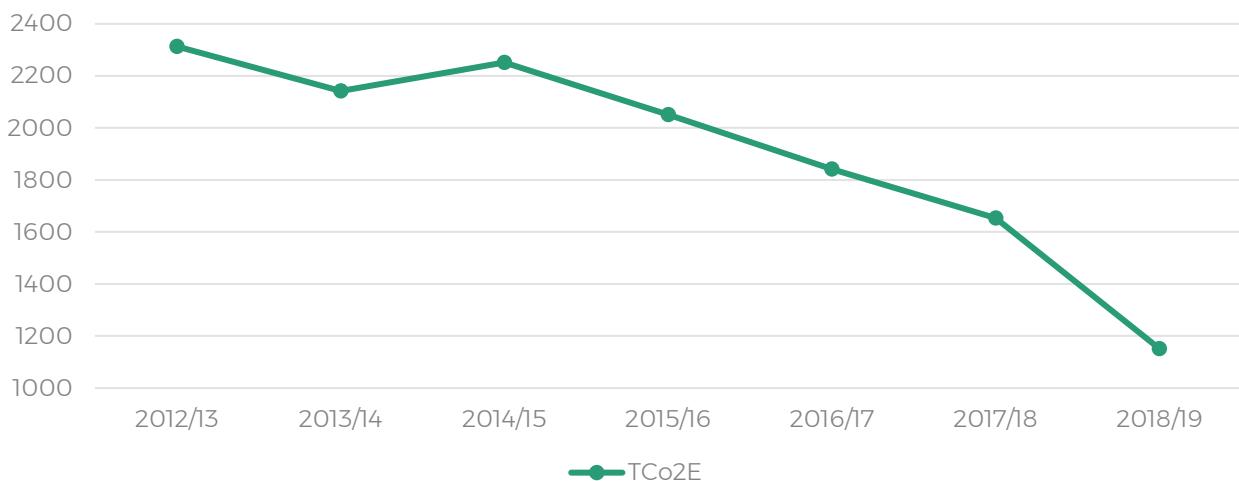
Plastic was a significant topic for 2018 and this was reflected in the number of calls to action being received both directly by the Commission and our Members in Plenary debates. It was also an important focal point for discussions amongst the members of our newly-formed Youth Parliament. Acting on this we removed



single-use plastic wherever possible from our staff canteen and the Senedd café. Several years ago we all but eliminated the use of disposable coffee cups on the estate and so had already significantly reduced our impact in this aspect.

Our environmental work continues under the banner of a formally-certified management system which includes an annual audit by a UKAS-accredited body.

**Figure 1: 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 took part in the Plastic Free July initiative in 2018 and continued this work by phasing out single-use plastic products wherever possible on our estate by the end of September.
- We installed bee hives on the roof of the Senedd building during the summer in a bid to help these important pollinators in an urban environment. The hives are maintained by a team of staff volunteers and we are working with local schools to raise awareness of pollinator habitats.
- We procured a small fleet of pool bikes, not only for staff to use for local business journeys but also to encourage people into cycling.
- We switched our pool car to an electric vehicle. This is not only lowering our carbon footprint and operating costs, but has had the added benefit of encouraging more staff to take up ultra-low emission vehicles as their next car.
- We have installed further LED lighting in order to reduce electricity demand.
- We have installed lighting sensors in some of our committee rooms which use microwave technology to detect occupancy; minimising both energy use and the risk of accidental switch-off during important committee meetings.
- We have installed several boxes for swifts on the upper walls of Ty Hywel in order to help provide a habitat for these unique birds.

## Progress against targets

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

With two years still left to go, we are pleased to announce that we have now achieved our primary target of tackling our energy emissions.

Further greening of the UK’s electricity grid this year, and a drop in the associated carbon conversion factor has produced a drop in our energy emissions figure. We are now operating at a level well below our baseline year and even below our target reduction of 30%.

A significant improvement has been made with the efficiency of business car travel; down 34% since our target year of 2013/14. Introduction of an ultra-low emission vehicle, as well as removal of the Presiding Officer’s car by the current PO has helped achieve this.

Following a significant reduction in potable water last year, we have seen an increase again this year, though still below our baseline consumption.

**Table 1: Progress on targets**

Objectives	Targets	Progress
Reduction of carbon footprint	Reduce energy emissions by further 30% by 2020/21 (based on 2012/13 baseline)	<b>Achieved. 43% down on baseline year. Further 16% reduction since last year.</b>
	Improve the efficiency of business-related car travel by 10% by 2020/21 (on 2013/14 baseline)	<b>Achieved. Efficiency has improved 34% since the baseline year.</b>
<b>Reduce the impact of waste</b>	Achieve zero waste-to-landfill by 2020/21	<b>Achieved. Now operating at zero waste-to-landfill</b>
	Transition from waste management to sustainable resource management by 2020/21	<b>In progress. Working on single-use packaging currently.</b>
<b>Reduce water use</b>	Reduce the consumption of potable water across the estate by 5% by 2020/21 (based on 2014/15 baseline)	<b>Down 4% this year compared to baseline, but an increase compared to last year.</b>

## 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.

We have experienced a slight reduction in electricity use this reporting period, limited by the extended period of hot weather during the summer of 2018 and resultant increase in use of air-conditioning.

We have seen a rise in energy costs, as a result of increases in both unit prices and non-power costs. For example, electricity unit costs (the largest component of our energy bills) increased around 10% through 2018. We continue to purchase energy through the National Procurement Scheme (NPS), in-line with most of the rest of the Welsh public sector.

Our energy emissions footprint has actually reduced significantly- comfortably surpassing the 30% reduction we set ourselves for the 2020/21 year, based on a 2012 baseline. As mentioned earlier, continued greening of the UK's electricity supply has resulted in further lowering of the carbon conversion factor this year; a welcome contributing factor in this achievement.

Work to reduce our energy use will continue through 2019/20 with planned replacement of our gas boilers for heating Ty Hywel likely to bring the most significant impact. Other work will include further installation of LED lighting and more work to improve the efficiency of our site's plant rooms.

**Figure 2: Energy Emissions (tCO2e)**



## Waste

The total amount of waste produced from our operations over this period has reduced, and waste costs decreased slightly too, despite an increase in *per tonne* charges. All of our waste continues to be recycled where possible, with a small percentage sent for energy recovery as an alternative to landfill.

Whilst we are already operating at zero waste to landfill, work on waste management over the next period will focus on reducing the tonnage of waste handled. We will be working with our supply chain and waste management contractors to reduce single-use packaging where we can, as well as ensure the highest percentage possible goes to recycling outlets.

**Figure 3: Total waste production and the percentage diverted from landfill**





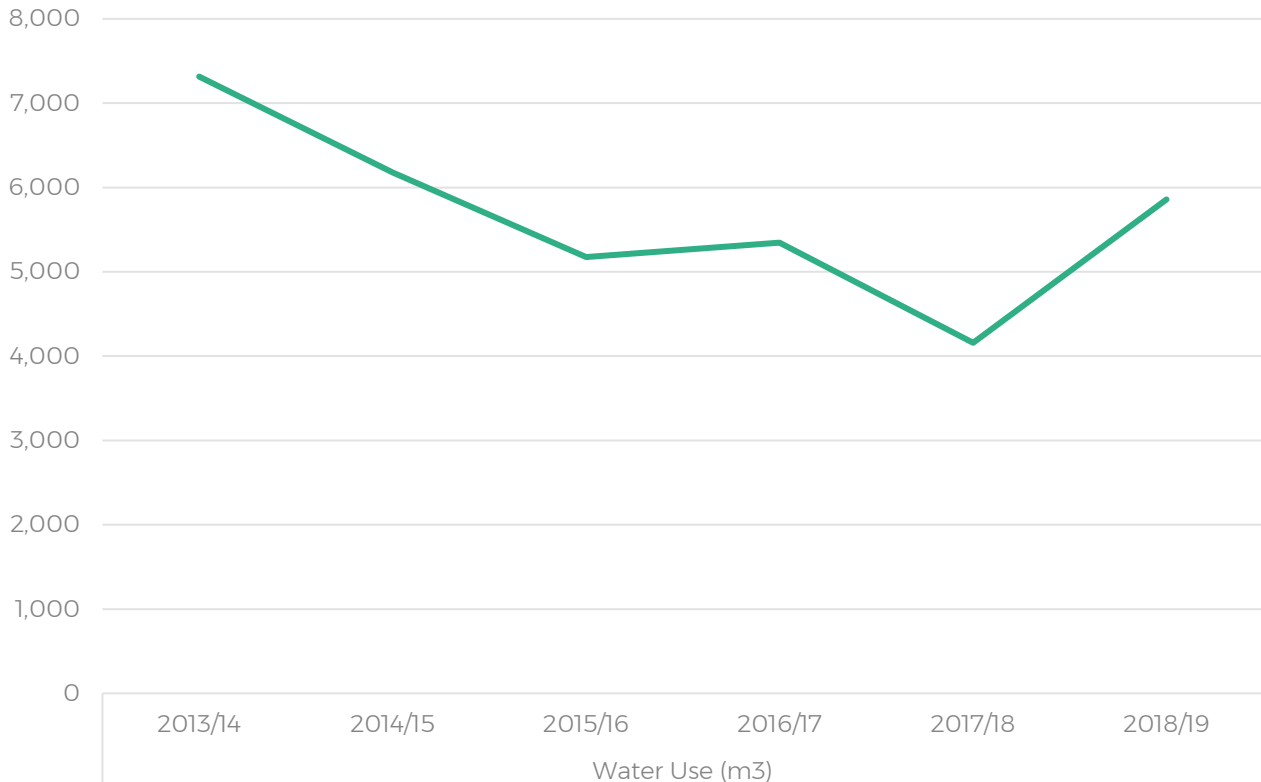
## Water

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.

We have seen an increase in water use over last year. Whilst still operating below our baseline year, events including the popular Cardiff Bay Eisteddfod have increased visitor numbers significantly, but also the resulting water use.

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. A dry summer in 2018 however put additional demand on mains water supply for this building.

**Figure 4: Mains water use on the Assembly estate**

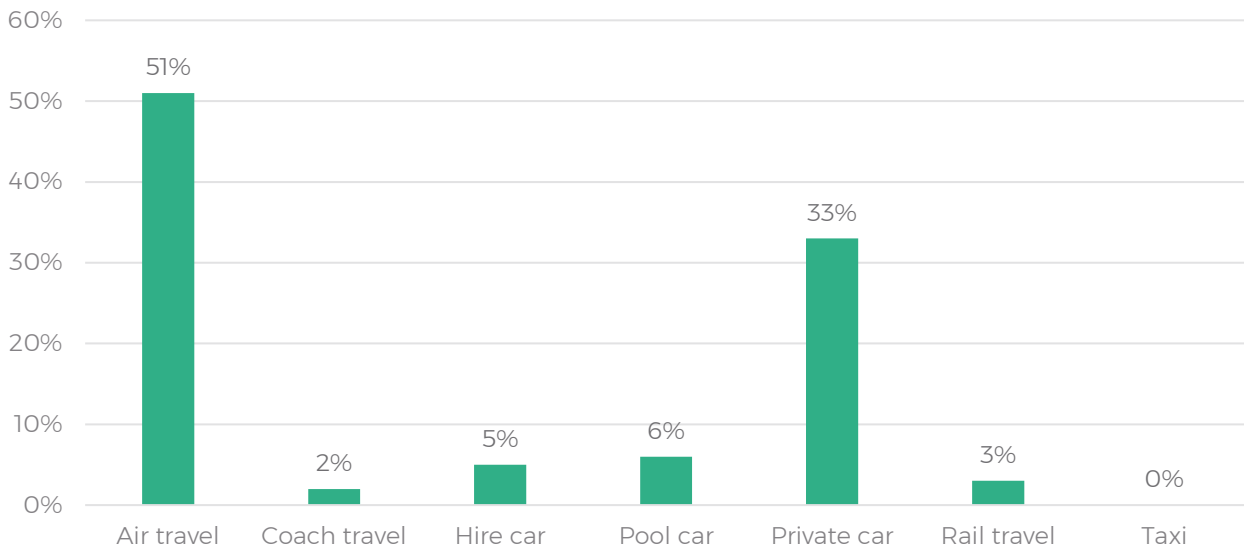


## Travel

Over this past year we have made significant improvements to enable low-carbon travel. We have switched the pool car to an electric vehicle which not only saves several tonnes of carbon being emitted but also around a thousand pounds in operating costs. We have installed further electric vehicle charging points on the estate to encourage building occupants and contractors to take up this low-carbon option, with the cost for charges being reimbursed to the Assembly.

The electric pool car has a small back-up generator to charge the battery; useful for visits to the more remote areas of Wales not yet well served by charging points. Introduction of this vehicle, along with previous emission-reduction measures, has helped us achieve our target of a 10% reduction in emissions of business car use two years early. From a baseline of 134gCO<sub>2</sub>/km we are now averaging 89g – a very significant 34% improvement.

**Figure 5: Composition of the carbon footprint of Assembly business travel 2018/19**



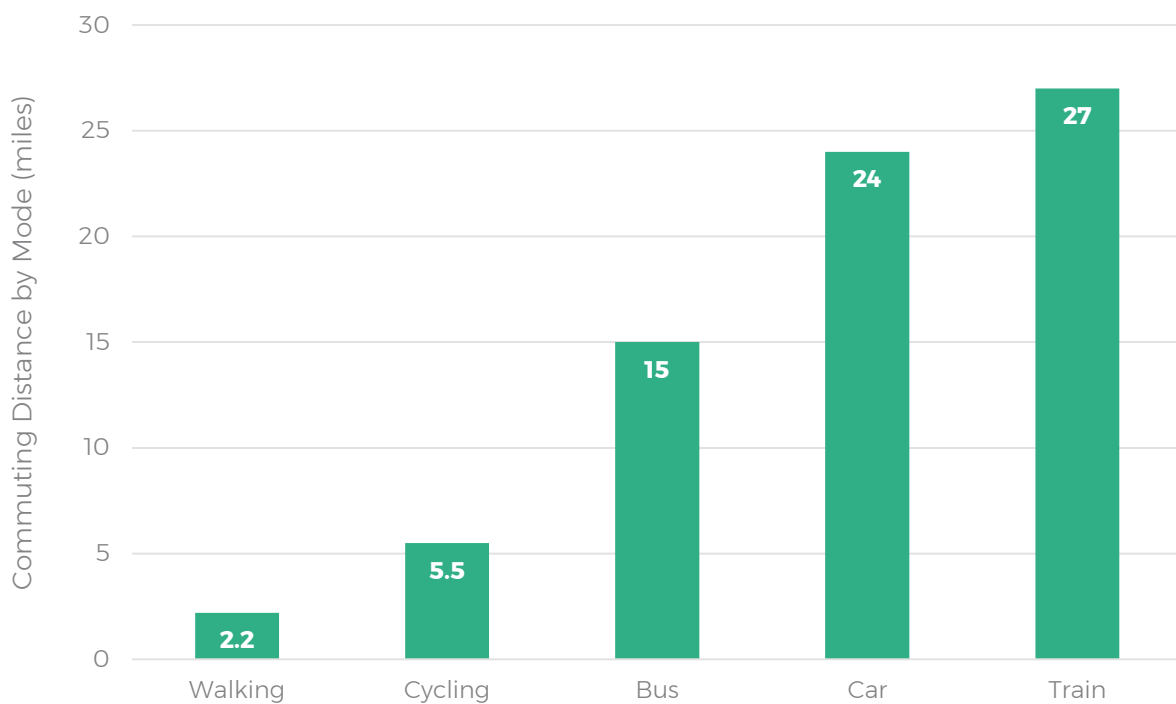
Pool bikes have been introduced, both to facilitate emissions-free travel locally, as well as to encourage people to cycle. Cycling is already very popular amongst staff as a mode of commuting and we will be adding new storage facilities for bikes in 2019.

The Assembly has been an active member of the Public Service Board (PSB) for the Cardiff area. Although we are not obligated under the Wellbeing of Future Generations Act as some other organisations are, we have committed to working towards the common goals of encouraging active travel amongst staff.

Whilst we await the final month of claims for business travel to be approved, we can report that both distance travelled and cost claimed are broadly in-line with last year. We continue to promote sustainable travel options where possible, and, given the provision of charging points on the estate now, hope more of our colleagues will take up ultra-low emission options as they change their vehicles.

We will conduct another travel survey in 2019, a biennial activity which serves to re-calculate our carbon footprint from commuting as well as to identify possible improvements to our facilities for those using active travel modes.

**Figure 6: Average round-trip commuting distance by mode for people working on Cardiff Bay estate, based on most recent travel survey**



## Biodiversity

Whilst we have limited land on our estate, further efforts have been made this year to encourage biodiversity. We already have well-established bird boxes and pear trees in the car park area, as well as a herb garden used by our catering team.

As mentioned previously, in 2018 we installed two beehives on the roof of the Pierhead building, in order to provide a habitat for these important pollinators. We have trained staff as volunteer beekeepers; increasing their knowledge about the need to protect such important insects. At a launch event for the bees the local primary school's gardening club attended and viewed the bees, as well as learning more about their lifecycle. The school is close enough to the Pierhead for the bees to visit their garden. This engagement work is something we hope to continue over the coming years with further schools already interested in visiting.

In 2019/20 we will be furthering our work on biodiversity by growing plants and wildflowers attractive to pollinators and other insects. We will be working with wildlife organisations to make the site an example of what can be done in an urban environment.



## Sustainable Procurement and Construction

Our use of biomass has increased this year; something we actually aim for as it lowers our carbon footprint for heating the Senedd.

Paper use is similar to last year, with a slight reduction being reported. All the paper we use is FSC-certified and/or 100% recycled-content. Further work will include continued roll-out of the *follow-me* printing service which is helping reduce the volume of printing done in the offices.

As part of life-cycle replacement we provided new ICT equipment for staff during 2018, including a switch from desktops to laptops for most posts. This more efficient equipment will reduce energy demand and we hope will encourage both more flexible working and further reductions in paper use.

We have not undertaken any major construction or refurbishment projects over the past year.



## 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 below 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.

**Table 2: Environmental Aspects and Impacts**

Aspect	Activity	Impact	Significance rating
Use of electricity	Lighting the estate	Resource depletion	35
		Indirect air emissions	
		Carbon footprint increase	
Use of electricity	Powering office equipment	Resource depletion	35
		Indirect air emissions	
		Carbon footprint increase	
Transport	Business travel	Carbon emissions	30
		Health risk	
		Resource depletion	
Transport	Commuting by staff	Pollution risk	30
		Carbon emissions	
		Health risk	
		Resource depletion	
Use of electricity	Cooling- operation of air-conditioning	Resource depletion	28

Aspect	Activity	Impact	Significance rating
	equipment and fan coils	Indirect air emissions Carbon footprint increase	
<b>Use of gas</b>	Heating our buildings	Resource depletion Air emissions Carbon footprint increase	28
<b>Use of contractors</b>	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.

Our only change from recent years has been the reduction in significance rating of general waste production, given it is no longer sent to landfill.



## 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.

In response to our external ISO14001 audit, we now more frequently check the car park interceptors on site and empty these each year.

For 2019 we plan to replace the diesel storage tank for the back-up generator with one that will feature improved spill protection.

## 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
<b>Reduction of carbon footprint</b>	Continue to reduce energy emissions by 2020/21 (based on 2012/13 baseline)
	Further improve the efficiency of business-related car travel by 2020/21 (on 2014/15 baseline)
<b>Reduce the impact of waste</b>	Continue with zero waste-to-landfill until 2020/21
	Transition from waste management to sustainable resource management by 2020/21
<b>Reduce water use</b>	Reduce the consumption of potable water across the estate by 5% by 2020/21 (based on 2014/15 baseline)

Throughout 2019 and into the following year we will continue to implement energy-saving technology and practices throughout the estate. The most significant of these will be the gas boilers for Ty Hywel which we will replace over the summer recess period. Ty Hywel is our primary office accommodation and new condensing boilers will help us to realise demonstrable savings over the winter of 2019/20.

We will also continue work to minimise energy demand through more efficient use of existing infrastructure. Both the necessity and operating schedules for key plant room apparatus will be reviewed, as well as the more visible introduction of further LED lighting.

Whilst we are able to report a zero-to-landfill status for waste management, we will be continuing work to minimise the amount of waste handled. We hope to work with suppliers more through 2019 to seek opportunities for re-usable packaging options wherever possible.

Single-use plastics have been eliminated almost entirely on the estate. Again we will continue this work with our supply chain to improve the provision of more ecologically-sound options where we can.

Our work to improve biodiversity around the Bay estate will continue through 2019. We have already installed some bug hotels but hope to expand on this work by improving the habitat more generally for pollinators and other insects. We will look to grow more native vegetation around the site where possible, including a wildflower area.

## Appendix A: Environmental Data

Key performance indicators	2012/13	2014/15	2015/16	2016/17	2017/18	2018/19
Total net greenhouse gas emissions (Scopes, 1, 2 and 3), tCO <sub>2</sub> e	2,314	2,252	2,051	1,841	1,654	1,275*
Total energy emissions, tCO <sub>2</sub> e	1,880	1,800	1,663	1,563	1,364	1,066
	(baseline)					
Waste to landfill in tonnes	17.2	4.7	4.6	5	4	0
Recycle ,reuse and recovery rate, percentage of total	83%	95%	95%	96%	97%	100%
Total water consumption, m <sup>3</sup>	10,069	6,177 (baseline)	5,174	5,347	4,158	5,857
Total business travel emissions, tCO <sub>2</sub> e	222	252	227	206	207	156*
Paper Use (million sheets)	2.24	2.09	1.93	1.99	2.92	2.73

\* Excludes AM and AMSS travel during March 2019 due to delayed reporting requirements. Previous years have been adjusted as final claims for those years have been processed.

## 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 <sup>2</sup>
Senedd	5121m <sup>2</sup>
Pierhead	1821m <sup>2</sup>
<b>Total</b>	<b>22462m<sup>2</sup></b>

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
2018/19	1009	242223
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	2018/19
<b>Ty Hywel (per occupant)</b>	6.04m <sup>3</sup>	4.75m <sup>3</sup>
<b>Senedd (per visitor)</b>	3 litres	3.5 litres
<b>Pierhead (per visitor)</b>	7 litres	6.2 litres

## Appendix C: Environmental Policy 2018/19

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.

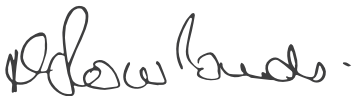
Our aim is to be an exemplary organisation in terms of sustainability and to ensure the efficient delivery of our services with due regard to the principle of promoting sustainable development.

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 consumption of natural resources in the delivery of our services, including single-use plastics.
- 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 methods amongst staff and visitors.
- Place sustainability considerations at the heart of transparent decision-making processes including the procurement of products 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.
- Support and encourage biodiversity around our estate.
- 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 and contractors who use our premises and will be made available to anyone on request.



**David J Rowlands AM**

Commissioner for Security and  
Assembly Resources



**Manon Antoniazzi**

Chief Executive and Clerk to the Assembly