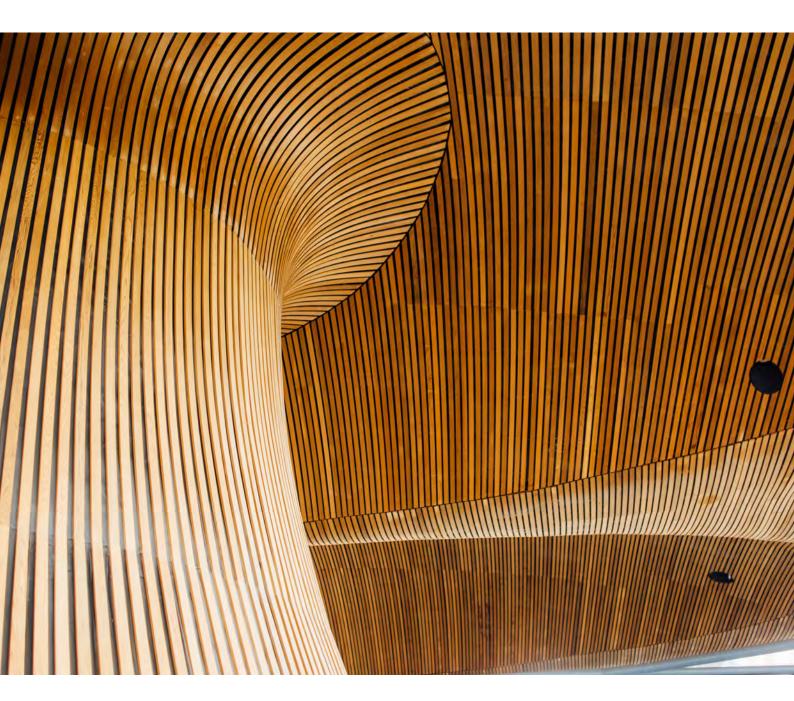
# **Sustainability:** Annual Report 2019-20

June 2020





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# **Sustainability:** Annual Report 2019-20

June 2020



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On 6 May we became the Welsh Parliament; the Senedd. As the Senedd and Elections (Wales) Act 2020 received Royal Assent in January, it marked the culmination of a long and complicated process for the many Commission colleagues who were involved in its passage.

Despite our new title, you will notice this document mostly refers to the institution as the Assembly; a reflection of the fact we're looking back over the past 12 months before the change to our name.

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### Introduction



**Manon Antoniazzi** Chief Executive and Clerk



**David Rowlands MS** Commissioner for Security and Resources

In the final year of our current carbon reduction strategy, we are very proud to report a 49% reduction in energy emissions.

We have continued to make improvements to both our estate and the way we use it, in order to reduce our utilities demand. New boilers, LED lights, and a greater level of automation all help to reduce our demand on finite resources.

Small improvements around the estate this year have shown that, even in an urban environment, we can make our site more accommodating to a range of flora and fauna.

As we move into the final year of our current carbon strategy, we have developed our new longer-term plan; to take us from 2021 through to 2030. As a newly-named parliament, we aim to continue to set the highest possible standard as a public sector body to respond to the climate emergency.



## Summary of Performance

During this past year, we have implemented a number of environmental initiatives around our buildings and wider estate, both to reduce our consumption of utilities and provide a more hospitable habitat for flora and fauna. These efforts, coupled with a further greening of the UK's electricity grid, have helped reduce our energy footprint to almost half the level of our baseline year seven years ago. As we move into the final year of our current carbon strategy our focus now is a new strategy that will take us from 2021 through to 2030.

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

- We replaced the main heating boilers in Ty Hywel with more efficient condensing units. The previous boilers were installed when the building was first opened and had reached the end of their operational life. The new units are able to operate much more flexibly and should help us realise significant gas savings.
- Following on from this, we installed new inverter driven pumps to move hot water around the building. They better moderate their flow speed; improving efficiency.
- We installed new PiR and microwave sensors in a variety of locations in order to minimize the use of lighting.
- We installed more LED lighting in several locations around the estate, including the parking areas, offering further savings.
- The high level dampers in the Senedd building were replaced. The new units offer better control and reduce draughts within the building.

- We upgraded some of the heating controls to improve efficiency and thermal comfort, as well as some of the air-handing units (AHUs) which serve the office space with fresh air.
- We made several changes to reduce pollution risk, including replacing a diesel storage tank and the grease trap for our catering effluent.
- A few of our tea point boilers were still without timers, so these were retrofitted to reduce their operating hours.
- We conducted an audit of our catering and retail outlets to create a snapshot of where single-use plastic was still being supplied.
- We made biodiversity improvements, including installing a small pond in the Ty Hywel garden and planting some bulbs in our wildflower strip.
- We have started the planning of a new carbon reduction strategy, to provide direction from when our current targets expire in 2021.

Whilst the Senedd is not listed as a public body for the purpose of the Well-being of Future Generations (Wales) Act 2015, we are mindful of the 7 Welsh sustainability goals and this Report provides evidence of the progress we have made on reducing single-use plastics and managing our environmental impact.

Our environmental work continues under the banner of a formally-certified management system which includes an annual audit by a UKAS-accredited body against the requirements of ISO14001.



## Progress against targets

With a year remaining of our current carbon reduction strategy, we have far surpassed the original target of a 30% reduction in energy emissions; reporting a 49% drop over our baseline year.

Significant improvements to the estate, coupled with a continued drop in the carbon content of the UK's grid electricity, have seen us reporting almost half the footprint we generated back in 2012/13.

The efficiency of business travel has also continued to improve. Provisions for electric charging on the estate has helped encourage staff to switch to electric vehicles (EVs), and our own electric pool car has also acted as a catalyst for those looking to make the switch to an EV. We have far surpassed our target for business travel efficiency, aided by the introduction of the EV pool car and the discontinuation of the official car service by the current Llywydd, as well as an increase in the efficiency of staff members' private vehicles.

We have continued our work to minimise single-use plastic on the estate, and are looking forward to further improvements in this field in the forthcoming year.

#### 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)	Achieved. 49% down on baseline year. 10% reduction on last year's figure.
	Improve the efficiency of business-related car travel by 10% by 2020/21 (on 2013/14 baseline)	Achieved. Efficiency has improved 32% since the baseline year.
Reduce the impact of waste	Achieve zero waste-to-landfill by 2020/21	Achieved. Now operating at zero waste-to-landfill
	Transition from waste management to sustainable resource management by 2020/21	In progress. Work on plastic packaging continuing.
Reduce water use	Reduce the consumption of potable water across the estate by 5% by 2020/21 (based on 2014/15 baseline)	Consumption is influenced largely by public demand and this year we experienced some maintenance issues. As a result we have seen an increase of 1.6% over the baseline year.,

# Energy

As the data tables show, we have seen a significant reduction in energy use this year, particularly electricity. Gas use has also reduced, despite a longer heating period than last year. We are proud to report a 49% reduction in energy emissions since our baseline year.

Several factors have contributed to a lower energy footprint again this year, including the continued greening of the UK's electricity grid as more renewables are installed, as well as practical measures we have taken on site to reduce our demand.

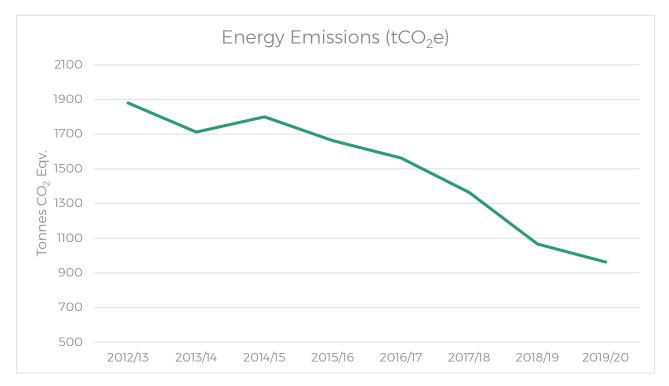
The installation of new more efficient gas boilers for our primary accommodation building Ty Hywel has paid dividends in off-setting the winter heating period, which started earlier and finished later than it did in 2018-19 according to our *degree days* analysis.

Reduced electricity demand, and indeed some of the gas savings, are attributable to the efficiency measures installed throughout the past year. These have included more efficient lighting and controls, as well as efficiency improvements with the heating and cooling systems, the use of more efficient infra-red heaters and life-cycle replacement of air-conditioning units with more efficient ones. We have also added more time-control mechanisms on heat sources and water boilers.

These improvements have also been reflected in the Display Energy Certificate (DEC) scores for our buildings (an assessment of energy use by floor area in commercial buildings), with the Senedd building's rating improving this year, and Ty Hywel reaching a 'D' for the first time. Our DECs are displayed in the reception areas of our buildings and published on the sustainability page of our website.

Lower gas and electricity consumption has been off-set by one of the biggest increases in utilities costs we have experienced in recent years. Electricity prices rose by about 16% this year, and gas a further 20%. Given the nature of our operations, electricity is by far the largest component of our utilities demand, and as such we've seen costs rise despite our efforts to minimise use. We continue to procure energy through the Welsh Government's National Procurement Service (NPS); joining with the rest of the Welsh public sector to achieve the best possible prices.

We will continue to seek out new improvement opportunities to reduce our energy use during this forthcoming year, including both physical measures and further monitoring and analysis to identify options for greater energy efficiency. We will continue to maximise the use of biomass in the Senedd building; more than half the building's heating needs are met by this virtually carbon-neutral fuel source. We will also be looking to replace more of our lighting units with LEDs, and increase the provision of automatic switches for lighting.



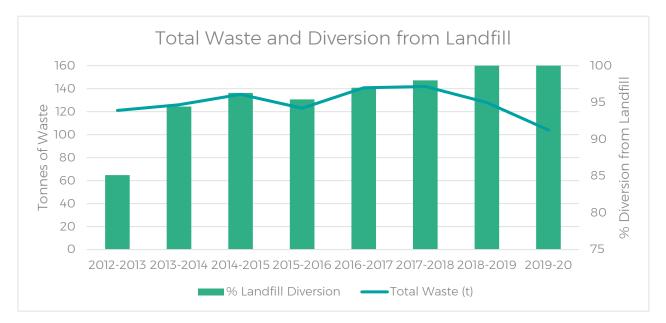
#### Figure 1: Energy Emissions (tCO2e)

### Waste

During 2019, in response to a change in operational requirements, we switched contractors for our waste management provision and in doing so were able to significantly lower the cost of the service. Some initial adjustment period in reporting means our figures are lower than last year, though we believe a similar amount of waste was produced, albeit with more going to the energy recovery facility. We have worked with the contractor to improve confidence in the accuracy of reports, and can confirm that none of our waste is sent to landfill.

We continue our efforts, alongside our catering contractor, to minimise single-use plastic on the estate. We stopped providing single-use coffee cups several years ago and where possible we have replaced disposable containers and cutlery with bio-degradable alternatives. We took part in the Plastic Free July initiative, and have all but eliminated its use in our catering service. A recent audit of remaining plastic in our catering and retail outlets has helped to identify where there are still bought-in items packaged in plastic, such as confectionery. Over the coming year we will be working with our suppliers to source alternatives here.

During the forthcoming year we will be looking to remove plastic from our retail outlets wherever possible, as well as work with the Youth Parliament's Littering & Plastic Waste Committee. We will also be working with our catering contractor to minimise the handling of packaging, including trialling re-usable packaging



#### Figure 2: Total waste production and the percentage diverted from landfill

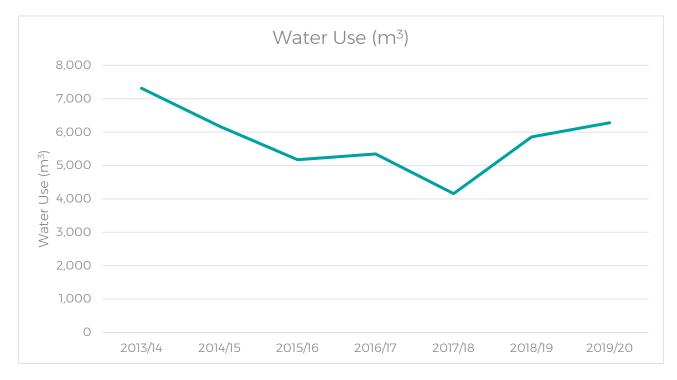
### Water

Whilst water only represents a small element of our carbon impact, it is still an important natural resource. we have not yet met our target for this utility, though we have changed the way we report it to improve accuracy.

Water is primarily used across the estate for domestic purposes, as well as the staff canteen, Senedd building catering outlets, and a small kitchen in the Pierhead. With the majority of staff being based in Ty Hywel, issues with the water meter in recent years have meant a significant discrepancy between billing and use. This has now improved, though to ensure long-term comparisons and reliability of our data, we are reporting manual meter reads for this building to ensure accuracy and prevent any meter issues affecting our figures.

Water use in the Senedd and Pierhead, as publicly-accessible buildings, continues to fluctuate with visitor numbers and the frequency and popularity of events in Cardiff Bay, though the demand in water use is offset in part by the Senedd building's rainwater harvesting system. We also installed more percussion taps in the Pierhead washrooms during the past year, again to reduce mains water use. We have experienced an increase in the amount of water used on the estate this year, specifically for the Senedd building, and this is believed to be related to a maintenance issue with the rainwater harvesting tank. Whilst the rainwater harvesting system is normally efficiently supporting our water demand, any maintenance issue requires the tanks be emptied, cleaned and re-filled.

Having focussed more on energy emissions and transport, there is still scope for improvements to be made to water use, and this will be one of our areas of focus for the final year of our current strategy. Work will include an audit of water use on the estate, as well as the installation of water-saving measures where possible.



#### Figure 3: Mains water use on the Assembly estate

# Travel

We have far surpassed our target for improving the efficiency of business travel; now operating at an average of around 90gCO<sub>2</sub>/km (from a baseline of 135g), thanks in part to the introduction of the electric pool car, as well as the discontinuation of the Llywydd's official car service earlier on in the target period.

We have also recently run our biennial travel survey, throughout March 2020. This provides us a valuable update to calculating the carbon footprint of both business travel and commuting, as well as acting as a source of feedback on our facilities. We ask staff a range of questions including how far they are commuting and by which modes, as well as seeking opportunities for improving our travel offers and facilities. From this we were also able to calculate an improvement in the efficiency of staff members' own vehicles (the *grey fleet*), which contributed to us meeting our target for travel efficiency.

It is not only our own travel that we encourage to be as sustainable as possible, but also that of our contractors and tenants. We have worked with Welsh Government to install new EV charge points on the estate this year to enable more of their official vehicles to make the change to ultra-low emission models. Our facilities contractor is also using an electric van for work around the site, as well as collecting supplies and attending call-outs.

We continue to make improvements to facilities for cyclists, as well as those using public transport to commute to work. We added more storage space for cycles in 2019 as cycling to work in Wales' capital city continues to be more popular than ever, as well as promoting offers available to staff who purchase season tickets for public transport commuting.

Some of these offers were developed through our involvement with the Public Service Board (PSB) for the Cardiff area. Whilst we are not obligated under the Wellbeing of Future Generations Act, we continue to be an active member of this valuable group where best practice for healthy and sustainable travel is shared.

We will continue to promote sustainable travel options over the next year, including the public transport offers and the pool bikes facility. We will be turning the results of our travel survey into an updated travel plan, and feeding this into our new long-term carbon reduction strategy which will run from 2021.

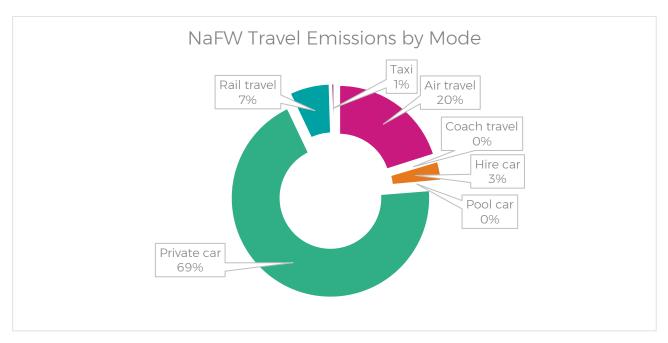
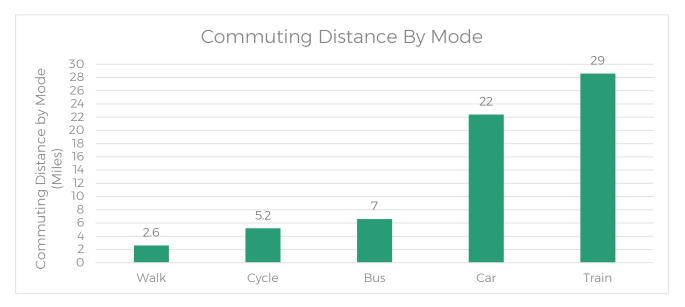


Figure 4: Composition of the carbon footprint of Assembly business travel 2019/20

Figure 5: Average round-trip commuting distance by mode for people working on Cardiff Bay estate, based on most recent travel survey



# Biodiversity

We have partnered this year with RSPB and Bug Life, as part of their Urban Buzz initiative, to make our Cardiff Bay estate an example of what can be achieved in an urban environment with limited space.

We introduced habitat for more invertebrates, including a small pond, and planted more pollinator-friendly plants such as borage, cosmos and lavender. We produced a case study for RSPB detailing the improvements we've made with their advice, setting an example which other organisations with limited space can hopefully follow.

Previously, the strip of land at the side of the Senedd building was cut frequently to keep the vegetation height low, but we have changed the way this is managed this year in order to encourage biodiversity. Reduced cutting frequency has created a haven for wildflower and a level of diversity we didn't expect. The wildflower strip now supports a range of plants including scarlet pimpernel, two types of orchid, and even fungi and mushrooms in the autumn.

These changes were created, and indeed are maintained, by a team of staff volunteers, primarily during their lunchbreaks. We won't simply be stepping back from them either- the gardening & biodiversity club will continue to maintain and improve these habitats, and we've even started conducting pollinator surveys to check their effectiveness.

Our Pierhead Bees project continues to thrive, and 2019 was the first year it produced honey. This was extracted and put into jars by a local SME we partner with on the project, and then sold amongst staff with the profits going back into the project. For 2020 we hope to install a third hive and be able to produce enough honey to sell some in the Senedd shop.



Damsel flies have been attracted to the new pond



The wildflower strip has produced fabulous bee orchids this year



A honeybee (possibly one of ours) making good use of the lavender on site

### Sustainable Procurement and Construction

Our use of paper has reduced again this year, aided in part by the provision of follow-me centralised printing; helping to reduce unnecessary paper use.

We expect a reduction in paper use again next year in response to increased accountability for stationery use. All our paper continues to be FSC-certified, 100% recycled-content, or both.

Similarly, our sourcing of office furniture stipulates the use of FSC timber, with its procurement being done via NPS frameworks.

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 (EMS) for more than a decade.

We believe in transparency as well as setting the highest standards for ourselves, which is why we maintain an EMS which is externally-audited against the requirements of ISO14001. This management standard requires a range of measures to be demonstrated, including controls on key environmental impacts, compliance with legislation, and a programme of internal audits. We have a team of trained internal auditors checking the physical site and our operational controls to ensure continued compliance throughout the year. The auditors also check for pollution risk and look for efficiency savings where possible.

We continue to work with other public sector bodies in Wales, as well as the other UK parliaments, in order to share best practice in continual environmental improvement.



### 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.

Aspect	Activity	Impact	Significance rating
Use of	Lighting the estate	Resource depletion	35
electricity		Indirect air emissions	
		Carbon footprint increase	2
Use of	Powering office	Resource depletion	35
electricity	equipment	Indirect air emissions	
		Carbon footprint increase	2
Transport	Business travel	Carbon emissions	30
		Health risk	
		Resource depletion	
Transport	Commuting by	Pollution risk	30
	staff	Carbon emissions	
		Health risk	
		Resource depletion	
Use of electricity	Cooling- operation of air-conditioning	Resource depletion	28

#### **Table 2: Environmental Aspects and Impacts**

Aspect	Activity	Impact	Significance rating
	equipment and fan coils	ment and fan Indirect air emissions	
		Carbon footprint increase	) )
Use of gas	Heating our	Resource depletion	28
	buildings	Air emissions	
		Carbon footprint increase	2
Use of	Maintenance and	Pollution risk	28
contractors	refurbishment projects	Risk of incorrect disposal (e.g. landfill)	route
		Waste production	
		Procurement of new proc equipment	ducts/
		Possible carbon impact	

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 officebased organisation we are a relatively low-risk site with few chemicals.

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.

During this past year we conducted a life-cycle replacement of the diesel storage tank for the back-up generator. The new tank features improved spill protection and complies with the Oil Storage (Wales) Regulations.

## The Year Ahead

We continue to operate towards the targets which will see us through to 2021, monitoring and reporting progress along the way.

Objectives	Targets
Reduction of carbon footprint	Continue to reduce energy emissions to end of March 2021 (based on 2012/13 baseline)
	Further improve the efficiency of business-related car travel to March 2021 (on 2014/15 baseline)
Reduce the impact of waste	Continue with zero waste-to-landfill until March 2021
	Transition from waste management to sustainable resource management by March 2021
Reduce water use	Reduce the consumption of potable water across the estate by 5% by end March 2021 (based on 2014/15 baseline)

Continuing with the targets above for one more year, we will focus on resource efficiency; trialling reusable packaging where possible to reduce the tonnage of material handled. We will work with our catering team, as well as the Youth Parliament as part of their Littering & Plastic Waste committee, to further reduce the use of plastic items and packaging on site.

Most of our work during the current strategy has focused on energy use and providing facilities for more sustainable travel, so there is scope still to reduce our water consumption, particularly in our publicly-accessible buildings.

Planned life-cycle replacement of key equipment will continue, with more efficient technology installed as part of this wherever possible. This will include more LED lighting in both the offices and public areas, as well as more automatic lighting controls. We plan to replace the window actuators in the Senedd building; their efficient operation provides natural ventilation and reduces draughts at other times. The project to replace the windows for Ty Hywel, one which will provide some environmental benefits, will also take a step forward with the development of the window specification.

Our work around the estate to encourage biodiversity will also progress, both in the wildflower area and the development of micro-habitats around the site to support invertebrates.

As we come to the end of our current strategy, our primary task for this forthcoming year will be the production of a new Carbon Reduction Strategy, to take us from 2021, right through to 2030. This 2030 target date will allow for a longer-term view of improvements and investment, as well as aligning the Senedd's operations with the Welsh Government's target for the rest of the public sector in Wales.

We will likely change the scope of our carbon footprint during the next strategy; encompassing a greater number of the indirect Scope 3 emission sources (e.g. goods & services). We will look to how we manage temperature in the buildings with a strategy that seeks investment in more natural ventilation; reducing reliance on air-conditioning. Currently, the Senedd building's ground-source heat pump is the only source of renewable energy on the estate, something we will also be addressing in the new strategy. Efficiency measures will also be included, with changes to the BMS (building management system) that controls temperatures in the offices likely. Transport will not escape our attention either, both business travel and commuting to the estate as we look to further lower our footprint and make sustainable travel as viable as possible for all our colleagues and visitors.

Key performance indicators	2012/13	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Total net greenhouse gas emissions (Scopes, 1, 2 and 3), tCO2e	2,314	2,252	2,051	1,841	1,654	1,296	1150
Total energy emissions, tCO2e	1,880 (baseline)	1,800	1,663	1,563	1,364	1,066	962
Waste to landfill in tonnes	17.2	4.7	4.6	5	4	0	0
Recycle ,reuse and recovery rate, percentage of total	83%	95%	95%	96%	97%	100%	100%
Total water consumption, m3	10,069	6,177 (baseline)	5,174	5,347	4,158	6,064	6,281
Total business travel emissions, tCO2e	222	252	227	206	207	174	140*
Paper Use (million sheets)	2.24	2.09	1.93	1.99	2.92	2.73	2.33

# Appendix A: Environmental Data

\* Excludes AM and AMSS travel January to March 2020 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	15266m2
Senedd	5121m2
Pierhead	1821m2
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 amended the calculation for this figure slightly this year, to account for the fact that at least half of Support Staff are based in constituency offices.

	Occupant Numbers	Visitor Numbers
2019/20	880	163461
2018/19	883	242223
2017/18	844	228748

Building	Annual Water Use		
	2017/18	2018/19	2019/20
Ty Hywel (per occupant per day)	23 litres	21 litres	22 litres
Senedd (per visitor)	3 litres	3.5 litres	10.4 litres
Pierhead (per visitor)	7 litres	6.2 litres	9.7 litres

# Appendix C: Environmental Policy

The Senedd Commission ensures the provision of the property, staff and services required for the effective functioning of the Welsh Parliament.

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 Senedd 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 Welsh Parliament 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 MS

#### Manon Antoniazzi

Commissioner for Security and Senedd Resources Chief Executive and Clerk of the Senedd