

**National Assembly for Wales**  
Environment and Sustainability

## Environmental Report 2014-15

Cynulliad  
Cenedlaethol  
Cymru

National  
Assembly for  
Wales





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

A summary of this document can also be obtained in an accessible format such as braille, easy read, large print, audio or hard copy from:

**Assembly Communications  
National Assembly for Wales  
Cardiff Bay  
Cardiff  
CF99 1NA**

Online: **[www.assembly.wales](http://www.assembly.wales)**  
Email: **[contact@assembly.wales](mailto:contact@assembly.wales)**  
Telephone: **0300 200 6565**

We welcome calls via the Text Relay Service.

**© National Assembly for Wales Commission Copyright 2015**

The text of this document may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading or derogatory context. The material must be acknowledged as copyright of the National Assembly for Wales Commission and the title of the document specified.

**National Assembly for Wales**  
Environment and Sustainability

## Environmental Report 2014-15

Cynulliad  
Cenedlaethol  
Cymru

National  
Assembly for  
Wales





# Contents

<b>Foreword.....</b>	<b>1</b>
<b>Environmental Policy Statement 2014-15 .....</b>	<b>2</b>
<b>Environmental Management.....</b>	<b>3</b>
Impacts.....	4
Pollution Prevention .....	5
<b>Monitoring Progress .....</b>	<b>6</b>
Reviewing 2014/15 Objectives .....	7
Emissions data.....	9
Improvements.....	11
<b>Management Review .....</b>	<b>12</b>
<b>The Year Ahead.....</b>	<b>13</b>







# Foreword

We are pleased to present our eighth Annual Environmental Report for the National Assembly for Wales to highlight our progress and achievements over the past year. As an Assembly we are committed to ensuring continuous improvement against our published objectives and targets.

The 2014-2015 period saw continual progress in support of our planned environmental objectives, and was the last year of our five year Carbon Reduction Strategy. At the conclusion of our strategy we are proud of achieving a greater than 35% reduction in our energy emissions from the estate; a fantastic performance that sets us in the best practice category for the public sector.

Not content to rest on our laurels we are pleased to confirm the setting of a further 30% energy reduction target for the next period of improvements to 2021. To accompany this energy target we are also improving the efficiency of our business travel, looking again at improving waste management around our sites and reducing our water use.

We remain committed to being an exemplar sustainable organisation that aims to promote environmental best practice in Wales throughout all of our working practices and to consider and implement improvements wherever possible.



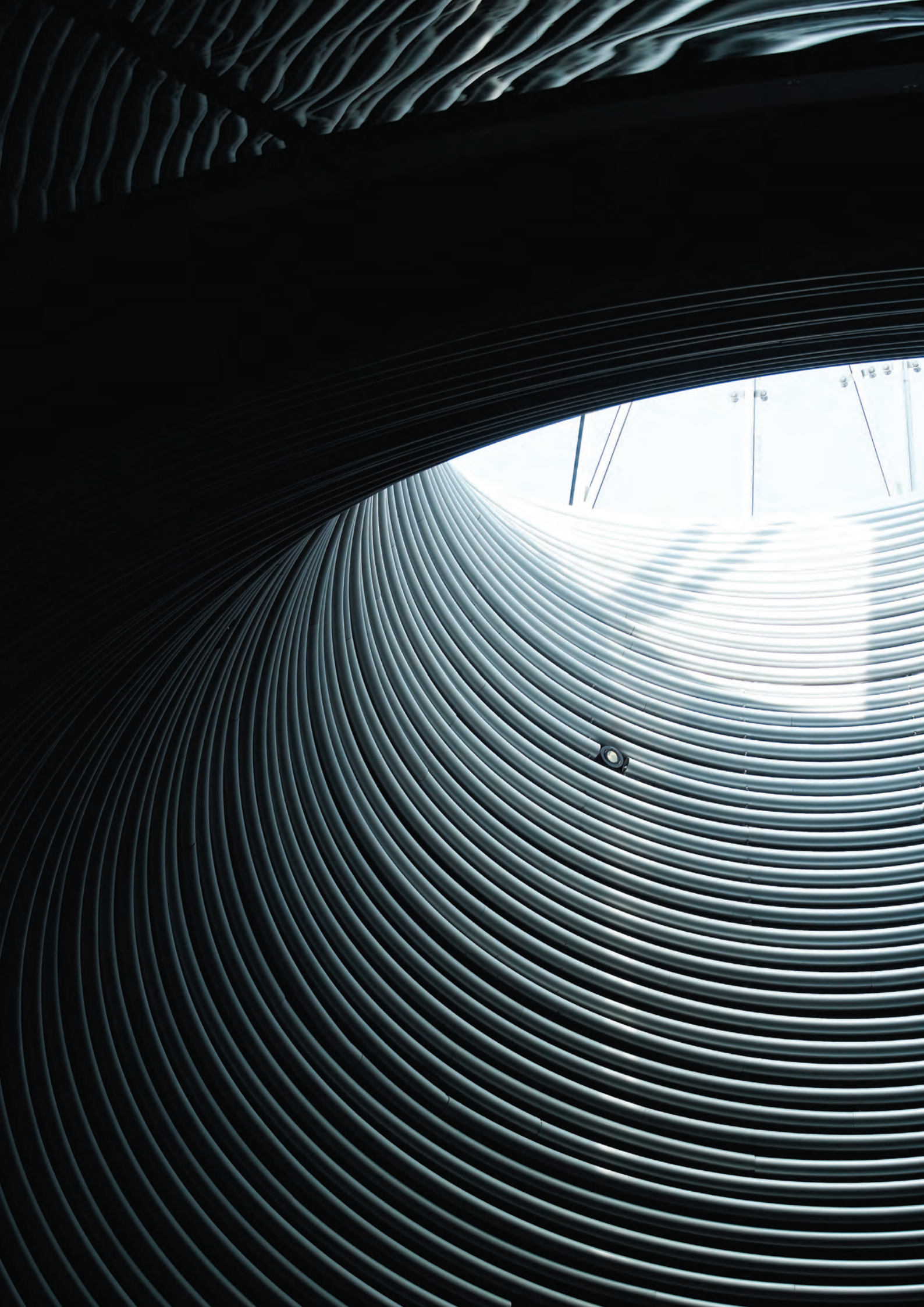
Claire Clancy  
Chief Executive Officer

A handwritten signature in blue ink that reads "Claire Clancy".



Peter Black  
Commissioner for Sustainability

A handwritten signature in blue ink that reads "Peter Black".





# Environmental Policy Statement 2014-15

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 (energy, water and paper), travel and the generation of waste.

The National Assembly Commission commits to:

- ensure the efficient use of our buildings and seek opportunities to promote the sustainable credentials of our estate, in particular the Senedd, to our stakeholders, the public and visitors alike;
- ensure all our staff, Members and their staff and other building users fully understand the contribution they can make to improve environmental performance;
- minimise the use of natural resources in the delivery of our services, specifically energy, water and paper, minimise waste and prevent pollution;
- dedicate appropriate time and resource to improving the energy efficiency of our estate;
- reduce the need to travel, where appropriate, and promote responsible and sustainable travel in the performance of our duties;
- place sustainability considerations at the heart of transparent decision-making processes and integrate purchasing principles that favour those products and services that cause the least harm to the environment;
- 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 regulations, standards and other codes of practice;
- monitor and report progress against stretching objectives and targets to ensure continuous improvement;
- develop a culture of environmental responsibility amongst our occupants, contractors, suppliers and visitors to our buildings; and
- require our suppliers and contractors to ensure that goods and services procured support our environmental policy.

This policy statement applies to the whole Assembly estate (comprising of Tŷ Hywel, Senedd, Pierhead and the Colwyn Bay office) and will be reviewed annually and made available to all staff of the National Assembly for Wales through our intranet site and any 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.

# Environmental Management

Currently the Assembly operates to an externally-certified environmental management system (EMS). We use the Green Dragon Environmental Standard and have maintained a system to Level 5 of the Standard for the past eight years. Our Green Dragon system covers the Cardiff Bay estate, but in our reporting we include our impacts from the North Wales facility. The estate is a mixture of owned and leased properties, each with its own benefits and challenges, including the BREAAAM Excellent Senedd building, and the Grade 1 listed Pierhead.

Our EMS follows the principles of Plan – Do – Check – Act and is steered from involvement of our senior management team. We have built up a comprehensive monitoring system for all of our key environmental aspects over the years operating the EMS and review these annually as part of the Green Dragon requirements. We check the performance of the environmental plans we have put in place, as well as the efficiency of the EMS itself. The more formal aspect of this is the Management Review, which is discussed further on in this report.

We also monitor environmental legislation as part of our EMS, receiving updates on new laws and incorporating these into our register of environmental legislation. We then check how any new laws may affect our operations and make adjustments to our procedures accordingly. To provide external assurance we also monitor our legal compliance using persons independent of the system to ensure we are doing what we say we are and are compliant with these requirements. Over the last year we have not had any breaches of legislation nor adverse regulatory contact.



## Impacts

For 2014/15 we kept our scoring methodology the same for evaluating environmental impacts. We have assessed the impact of each risk, the probability of occurrence and taken into account legislation and the level of control offered. This has given us the following significant impacts for 2014/15:

Environmental Aspects and impacts			
Aspect	Activity	Impact	Significance rating
Use of energy	Heating and lighting, powering IT equipment, air conditioning and server rooms	Resources depletion, air pollution – greenhouse gas emissions by electricity generators, use of renewable energy resources (+ve)	30
Buildings use of water	catering/dishwashing, chillers/humidifiers, heating, showers, washbasins/WC's, cleaning/building cleaning	Greenhouse gas emissions, resource depletion, use of grey water (+ve)	30
Waste management	Disposal of landfill waste, glass, plastic, composting (food waste), cardboard, tins, fluorescent tubes, furniture, ink toners, replacement fittings	GHG emissions, resource depletion, use of water, oil, leather, nutrients put back in soil from composting (+ve), reduced use of chemical fertilisers	30
Paper use	Printers, office activities, emails, copying, publications	Resource depletion, raw materials, 100% recycled paper supply (+ve)	30
Transport	Business travel, official travel, home to office travel, parking facilities	Noise and air pollution, GHG emissions, water and land pollution, congestion	30
Delivery of goods/materials from supply chain	Fuel consumption, noise and traffic congestion from transport to and from site, spillage from deliveries	GHG emissions by suppliers/deliveries, environmental impacts of suppliers, resource depletion, land contamination	30

As can be seen, our key impacts arise from utilities usage, the consumption of some raw materials and transport. These are relatively self-evident 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. There are formal procedures in place to prevent or mitigate any potentially polluting incidents and a full pollution prevention plan compliments this, which identifies our principle pollution risks and the measures and controls in place to mitigate these risks.

Across the site we have a number of available spill kits and have placed them in accessible locations near to any possible sources 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 recently 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.



## Monitoring Progress

After several years of environmental management we have increased and refined our monitoring to ensure it captures as many aspects of our operations as possible. These aspects are monitored against our targets with outcomes detailed in this section. We benchmark against our floor areas, which have remained constant since the previous financial year:

Tŷ Hywel	15266m <sup>2</sup>
Senedd	5121m <sup>2</sup>
Pierhead	1821m <sup>2</sup>
North wales	254m <sup>2</sup>
<b>Total</b>	<b>22462m<sup>2</sup></b>

For 2014/15 we have looked at further improving energy efficiency as we approach the end of our ambitious target period for a 40% reduction in emissions since 2008/9. Again, this has required physical improvements, such as increased PiR lighting controls to save energy when it is not needed, as well as continued staff awareness to support behavioural change.

## Reviewing 2014/15 Objectives

Our objectives and targets are sourced from a review of our environmental aspects and have been discussed at management review. The targets are ongoing for this period and progress against them can be seen below:

Objectives and Targets				
Aspect	Objective	Target	Progress	Status
GHG emissions	To minimise the Assembly's carbon dioxide emissions.	Reduce the Assembly's net greenhouse gas emissions by 3% per annum on the 2008/09 baseline.	Slight increase in emissions this year of 5% despite overall reduction in energy use, due to significant increase in the conversion factor for UK grid electricity (+11%).	Ongoing
Environmental improvement	Ensure the highest levels of environmental stewardship are upheld, maintained and externally audited to the standards required for certification.	Maintain certification to a recognised environmental management system for the whole Cardiff Bay estate.	Last certification audit September 2014, with Green Dragon Standard maintained since.	Ongoing
Use of energy	Reduce energy consumption and greenhouse gas emissions across the estate.	Reduce energy emissions by 40% compared to the 2008/09 baseline by 2015.	Reduce energy emissions by 40% compared to the 2008/09 baseline by 2015.	Completed
Transport and travel	Minimise the Assembly's business travel related emissions through the promotion of sustainable travel modes.	Reduce business travel emissions by 15% compared to the 2008/09 baseline by 2015.	We have seen a slight increase in travel emissions for the Assembly's operations, in part due to a change in the conversion factors for CO <sub>2</sub> e output.	Ongoing
Waste	To minimise the amount of waste produced by the Assembly and maximise recycling and reuse where waste could not be prevented.	Reduce the volume of waste sent to landfill by 5% per annum on the 2010/11 baseline to achieve zero waste to landfill by 2015.	We have now reached a diversion from landfill rate of 95% for our waste. To achieve zero to landfill we require a greater reliability in destination infrastructure.	Ongoing



Water use	Minimise the volume of water consumed and treated across the Assembly.	Reduce water consumption by 10% by 2015 compared to the 2009/10 baseline.	Water consumption has reduced by just over 25% since the baseline year.	Achieved
Procurement	To minimise the environmental impact of purchasing decisions wherever practicable.	Aim to embed sustainable assessment into procurement processes and project management.	We continue to carry out sustainability risk assessments on new contracts, complete the Government Flexible Procurement Framework to benchmark performance and include sustainability criteria in all contract tender specifications as standard.	Ongoing
Occupant engagement	Raise awareness of the importance of sustainability throughout the Assembly and enhanced ownership and engagement of the environmental agenda.	Develop targeted communication mediums for encouraging all occupants to 'work sustainably' and embed sustainability in work.	Internet web pages have been redeveloped, numerous news items have been posted on the intranet, a 'heating and cooling toolkit' has been provided on the intranet to help people understand how temperatures are controlled.	Ongoing
Office activities	Ensure 95% of all paper stock purchased for copying and printing is 100% recycled and/or from legal and sustainable sources.	Ensure 95% of all paper used by the Assembly for copying and printing is sourced from legal and sustainable sources.	At least 99% of all paper stocks purchased for printing and copying were 100% recycled and/or from legal and sustainable sources.	Achieved
Legal compliance	Ensure all legal aspects of the Assembly's operations operate according to legislative requirements.	Ensure we receive zero notices or breaches of environmental legislation.	Again for this last year no breaches/warnings were received.	Achieved

## Emissions data

Key performance indicators	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Total net greenhouse gas emissions (Scopes, 1, 2 and 3), tCO<sub>2</sub>e</b>	2,456	2,345	2,314	2,144	2,252
<b>Total energy emissions, tCO<sub>2</sub>e</b>	1,947	1,828	1,880	1,712	1,800
<b>Waste to landfill in tonnes</b>	42.6	39.1	17.2	6	4.7
<b>Recycle and reuse rate, percentage of total</b>	68%	73%	83%	94%	95%
<b>Total water consumption, m<sup>3</sup></b>	8,183	8,457	10,069	7,315	6,177
<b>Total business travel emissions, tCO<sub>2</sub>e</b>	129	204	222	231	252

*Notes- decrease in energy use 2013/14 – 2014/15 offset by increase of 11% in conversion factor for UK grid electricity. Increase in travel emissions due to slight increase in air travel. Waste now relatively constant at 95% recycling/recovery. Savings in water evident due to significant improvements in washroom facilities, such as automatic taps.*

As can be seen above, despite a further reduction in the use of electricity across the estate between 2013/14 and 2014/15, a rise of 11% in the carbon conversion factor has left us with an emissions total slightly higher than last year. It is, however, still a significant saving on our baseline year; comparable greenhouse gas emissions are down by 30% over the last 6 years.

Commensurate with the reporting period shown in previous reports, the following table highlights how like-for-like savings have been 35% for energy emissions:

<b>tCO2e</b>	<b>Reduction target (%)</b>	<b>Baseline December 2008</b>	<b>Performance December 2014</b>	<b>Savings</b>
<b>Energy emissions (tCO2e)</b>	40%	1951	1261	-35.1%
<b>Business travel emissions (tCO2e)</b>	1951	237 <sup>1</sup>	229 <sup>1</sup>	-4%
<b>Total emissions (tCO2e)</b>	-	2188	1490	-32%

<sup>1</sup>Does not include Members and AMSS business travel data for October – December as data is reported three months in arrears to coincide with the deadline for claims.

In support of our original target of reducing energy emissions by 40%, we have made significant improvements since its inception with the 35% reduction shown above. As identified above, this reduction would have been higher if the carbon conversion factor had not been increased, but our ambitious target has certainly driven us to achieve significant change over the past five years.



## Improvements

It seems pertinent at this time to review not only the achievements made over the last year, but those implemented over the whole period of this last Carbon Reduction Strategy. The table below shows what has changed over the last five years:

### Energy

Comprehensive rollout of motion sensors on over 3000 lights across Tŷ Hywel.

Installation of variable speed drives on boiler pumps reducing fan speeds by 75%.

Replacement of perimeter and parking lighting with LEDs.

The replacement of inefficient radiator valves with new centrally controlled alternatives.

Replacement of existing PCs with 750 Energy Star rated PCs that automatically hibernate after 15 minutes of inactivity.

Building management system optimisation and controls.

Modification to chiller operations to run on demand rather than time schedules.

Daylight linked lighting in areas of Tŷ Hywel that receive sufficient natural light to light the space.

Installation of high performance solar film on windows in Tŷ Hywel subject to excessive glare and solar heating.

Installation of four buffer vessels in the Senedd biomass boiler to improve efficiency of operation and minimise the need to use natural gas.

Night flushing of Tŷ Hywel in the summer to cool the building reducing the demand for air conditioning in the daytime.

Installation of a comprehensive sub-metering network enabling us to proactively identify and manage energy 'hot spots' across the estate.

Replacement of obsolete R22 refrigerant gas equipment with new more efficient units (approximately 50% efficiency gains).

Optimisation of heating systems using dedicated set points in all areas and switching off unnecessary radiators in transition areas.

Refurbishment of the Tŷ Hywel entrance to improve occupant comfort and reduce the need for excessive heating as a result of draughts.

Removal of redundant NHS server room and reconfiguration into office accommodation reducing energy loads.

Changed time schedules on air handling units in the Senedd to reduce electricity consumption resulting in immediate savings.

Installation of a glycol free cooling system in our main server room that draws cold air from the undercroft of the building reducing the air conditioning load.

### Travel

Introduction of a low emission pool car replacing the need to use private cars and hire cars.

Low carbon hire car contract that specifies small cars as standard and limits fleet car emissions ratings to a maximum of 140g/km.

A fleet 'outreach' bus that runs on bio-fuel.

Cycle to work scheme with over 50 participants.

Improved availability and reliability of video and tele-conferencing facilities.

### Water

Started rolling programme of washroom facilities; providing water-saving measures, including waterless urinals and automatic taps.

## Management Review

As in previous years, a team of senior management representatives met to discuss progress over the last year and approve targets for the forthcoming period. Topics covered include progress against targets, the findings of environmental audits (both internal and external), changes to operating procedures, the approval of objectives for the next year and communications relating to environmental issues (from staff, AMs and members of the public). This annual process also involves initial approval of this Environmental Report.

The team approved the draft copy of the Environmental Report and agreed on the more succinct format for this year. The physical improvements that have been made to the buildings were discussed, along with the planned improvements over the forthcoming year. The new objectives running until 2020/21 were approved, although those attending had already been involved in their initial compilation. The need to continue to be as transparent as possible was stressed; with auditable figures and as much information as possible to be publicised on the internet pages.

## The Year Ahead

As mentioned above, we have made significant progress in achieving the relatively ambitious reduction targets for our environmental impacts over the last 6 years. This next period will see again some flux as an organisation; going through another election period in 2016 may mean an increase in some of our environmental impacts around that period. As such we are again setting longer-term targets; looking to achieve further savings by 2020/21 financial year.

Achieving the progress we have so far has meant all of the 'quick wins' and easily accessible improvements have now been implemented. We have listed previously the improvements made over the past few years- such as installing PIR sensors on the lighting systems and solar film on the windows. These improvements will certainly make it more challenging to again realise the savings we have made in the preceding years, but we are keen to set ambitious goals for further development. To this end, we are setting the following targets:

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)