

**National Assembly for Wales**  
Annual environmental report

2010–2011



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.

**Contact Information**

Further information about the content of this report and the environmental performance of the National Assembly for Wales can be obtained from:

**Neil Bradley**

Sustainability Co-ordinator  
National Assembly for Wales  
Cardiff Bay  
CF99 1NA  
T +44 (0)29 2089 8961

**Nerys Evans**

Head of Estates and Facilities Management  
National Assembly for Wales  
Cardiff Bay  
CF99 1NA  
T +44 (0)29 2089 8078

© National Assembly for Wales Commission Copyright 2011

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**  
Annual environmental report

2010–2011





## Contents

Our achievements at a glance	03	<b>Carbon footprint</b>	
Profile	05	Background	40
Our sustainability commitment	06	Reporting approach	41
Executive summary	06	Reporting boundary	42
		Overview of footprint	44
		Footprint sources	48
<b>Background</b>		Sustainability performance summary	49
Reporting boundary	07	Intensity ratios	51
Re-calculation policy	08		
Operational changes in the reporting period	09		
<b>Managing sustainability</b>			
Our approach	11		
Sustainability strategy	12		
Climate change	13		
Environmental policy	14		
Environmental management system	16		
Governance and regulation	18		
Management review	19		
Environmental impacts	20		
Objectives and targets	21		
Looking ahead	24		
Training and awareness	25		
Sustainable procurement	26		
<b>Performance review</b>			
Greenhouse gas emissions	28		
Energy efficiency	29		
Resource efficiency	31		
Paper	33		
Sustainable travel	36		
Water	38		

## Our achievements at a glance

**11.1%**

Reduction in energy emissions.

**18.7%**

Reduction in travel emissions.

**68%**

Quantity of waste re-used or recycled.

**6.6%**

Reduction in total carbon emissions.

**6%**

Reduction in water consumed.

**95%**

Volume of paper purchased from 100% recycled or FSC sources.

**8.6tonnes**

The volume of food collected for composting.

**19%**

Reduction in energy emissions in the last two years.



Retained Green Dragon Level 5 for the whole Cardiff Bay estate.



Most Sustainable Public Sector Organisation – Government Level.

## **Working towards a low carbon Assembly**

As one of Wales leading public institutions, we have a duty to work sustainably and responsibly across all our operations.

We believe in pushing the boundaries of sustainable development, taking actions that matter and actions that will genuinely help us work more efficiently.

## Profile

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.

The National Assembly for Wales Commission is responsible for ensuring that property, staff and services are provided for the efficient running of the National Assembly for Wales. The Commission comprises the public servants who undertake work on behalf of the Assembly Members. The Commission employs approximately 335 staff in addition to the 60 Assembly Members and their Support Staff.

The Assembly estate comprises three buildings in Cardiff Bay, Tŷ Hywel, the Senedd and the Pierhead building and a small office in Colwyn Bay, North Wales.

Our environmental impacts result primarily from energy use for heating and cooling, the emissions associated with waste production, the carbon footprint of our business travel and the consumption of resources such as paper and water.

## Our sustainability commitment

One of the five strategic objectives of the Third Assembly is to:

‘work sustainably’.

‘We will show leadership in how we manage our work and estate, and we aim to provide the highest achievable level of sustainability in both’.

The Assembly is committed to reducing its impact on the environment. As a key public institution in Wales, we have a key role to play in the promotion and practice of sustainable development.

To this end, we have set ourselves challenging targets to become a carbon neutral organisation by 2015 and we are undertaking a program of improvements to help reduce energy and water consumption, improve resource efficiency, save money, travel more sustainably and reduce pollution from our activities.

## Executive summary

This is the 4<sup>th</sup> Annual Environmental Report of the National Assembly for Wales building more extensively on previous years to illustrate our ongoing commitment to improve our performance and push the boundaries of our capabilities.

Over the year, we have seized opportunities to embrace technologies and innovative solutions to driving efficiencies forging collaborative partnerships and deploying systems to achieve our common goal of reducing energy consumption.

Our efforts towards driving sustainability throughout the entire business operation were recognised with an award for Most Sustainable Public Sector Organisation at Government Level by the Sustainable FM Awards 2010, a testament to our commitment to lead by example.

In 2009, we launched our Carbon Management Plan, a forward thinking, challenging strategy to cut our reliance on fossil fuels by 40% over 5 years. Two years in, we are optimistic about achieving this compelling vision as the results show that we are currently exceeding the targets.

### Headline achievements

- We have achieved a reduction in energy emissions of 11.1% over 2010/11 culminating in a cumulative reduction of 19% over the last two years; almost half of the total 40% reduction required as part of the Carbon Management Plan.
- We have reduced our business travel emissions by 18.7%, far exceeding our annual target.
- We have reduced net carbon emissions from our estate by a total of 6.6%.
- We have reduced water consumption by 6%.

## **Reporting accounting boundary**

Under the guidelines laid out in HM Treasury's Public Sector Annual Sustainability Reporting Guidance relating to reporting boundaries, unless otherwise stated any text or graphics relate to the operations of the Cardiff Bay Assembly estate only – over which we have direct budgetary control. Our office in Colwyn Bay is a shared facility without the infrastructure in place to segregate all operational data between occupants. Therefore, from 2012 onwards, where required estimates will be made on the performance of this office using a consistent method.

The data does not cover the 60 Assembly Member constituency offices or the impacts associated with homeworkers across Wales and those staff based in Welsh Assembly Government run offices.

It is not currently possible to collect data from these locations; however it is important to note that homeworkers constitute a tiny percentage of the Assembly's overall footprint.

Data is reported based on the financial year April – March. It is collected through a formal data collection and reporting protocol for energy, travel, water and waste and we have responsible teams in place to record data as required. Data is collated centrally within the Facilities Management team for review and progress against energy targets (our most significant environmental impact) is reported on a monthly basis to Management Board for consideration.

Comparability of data from year to year may be affected by changes in the operation of the Assembly's facilities, changes in the methodology for reporting certain data and continual improvement in our data collection and performance measurement systems.

Although largely manually generated, we are confident in the overall reliability of the data and for reassurance of our systems, headline emissions and financial data will be reported in the Assembly's Annual Report and Accounts and independently assured by the Welsh Audit Office from 2012 onwards. Internal controls and validation of data streams are carried out regularly to ensure data is representative of our actual operations.

## **Continual improvement**

Driving down our carbon footprint is closely allied with our business strategy and forging a culture that responds positively to carbon management can only reap benefits in the long term.

Our sustainability reporting systems have been enhanced by further improvements to data collection systems that allow us to track and actively manage issues and other projects as part of the standard management agenda. Improvements in conversion factors for the calculation of emissions have enabled us to report on carbon dioxide equivalent emissions for the first time this year allowing us to understand more comprehensively our total impact on the environment.

---

### **Re-calculation policy**

To maintain accuracy of comparisons in light of annual improvements to emissions conversion factors (DEFRA), firstly the previous year's organisational scope is used to represent 'percentage change' against the current year and the data is recalculated with the updated conversion factors to ensure fair comparisons of performance. Where data was not available in previous years but is now present due to improved data collection processes, an explanation will be provided in the text.

---

## Operational changes in the reporting period

Direct reporting boundaries remain identical to the two previous years to maintain consistency and accuracy of comparisons and reporting parameters are also retained.

Since the publication of the 2009/10 Environmental Report, the following principal changes have occurred to the Assembly's operating footprint:

- This year for the first time, we are reporting performance in carbon dioxide equivalent emissions for the current and two previous years.
- This year, we have incorporated environmental performance data for our off site server farm in this report.
- As this was an Election year, dissolution resulted in lower occupancy rates during March and less activity in our buildings.
- Changes to the number of Commission staff have occurred and are summarised in the table below.

Assembly Commission Staff (FTE)*		
2010/11	2009/10	2008/09
335	339	292

\*Provides the figure averaged over the year. References to FTE throughout the rest of the report unless otherwise stated accounts for all building users including all Commission staff, Assembly Members and their staff, onsite Welsh Government staff and contractors.

# Managing sustainability

- Our approach
- Sustainability strategy
- Climate change
- Environmental policy
- Environmental management system
- Governance and regulation
- Management review
- Environmental impacts
- Objectives and targets
- Looking ahead
- Training and awareness
- Sustainable procurement

## Our approach

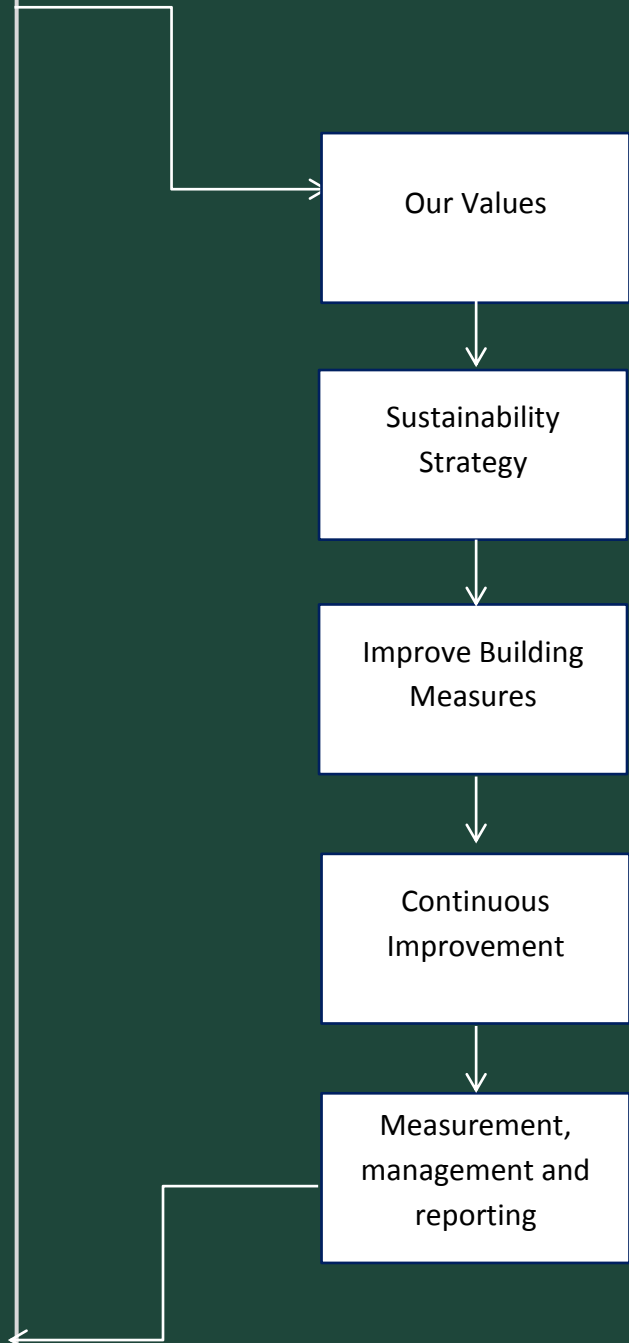
As one of Wales leading public institutions, we are ideally placed to develop and deliver innovative solutions to the challenges posed by the sustainability agenda.

We do not consider sustainability to be an add-on, but a core part of our business. We recognise that sustainability is a key element of our corporate responsibility and we work to deliver a first class service to our Members whilst embedding sustainability principles into our business decisions, projects and day to day operations.

We understand the importance of managing sustainably as an integral part of the Assembly's overall approach to risk management and also focussing on the specific areas that are at the core of our sustainability strategy.

We will continue to manage our key environmental impacts to ensure regulatory compliance, improve efficiency, embed sustainability at every level of the organisation and save money. We have high expectations which are reflected by the ambitious targets we have set ourselves for energy and business travel which go above and beyond the statutory One Wales 3% reduction per year to hit 2050 targets.

We understand a balanced approach is required to tackle the long term challenges posed by climate change and a shift in corporate culture, and we won't lose sight of the added value and opportunities that working sustainability will bring.



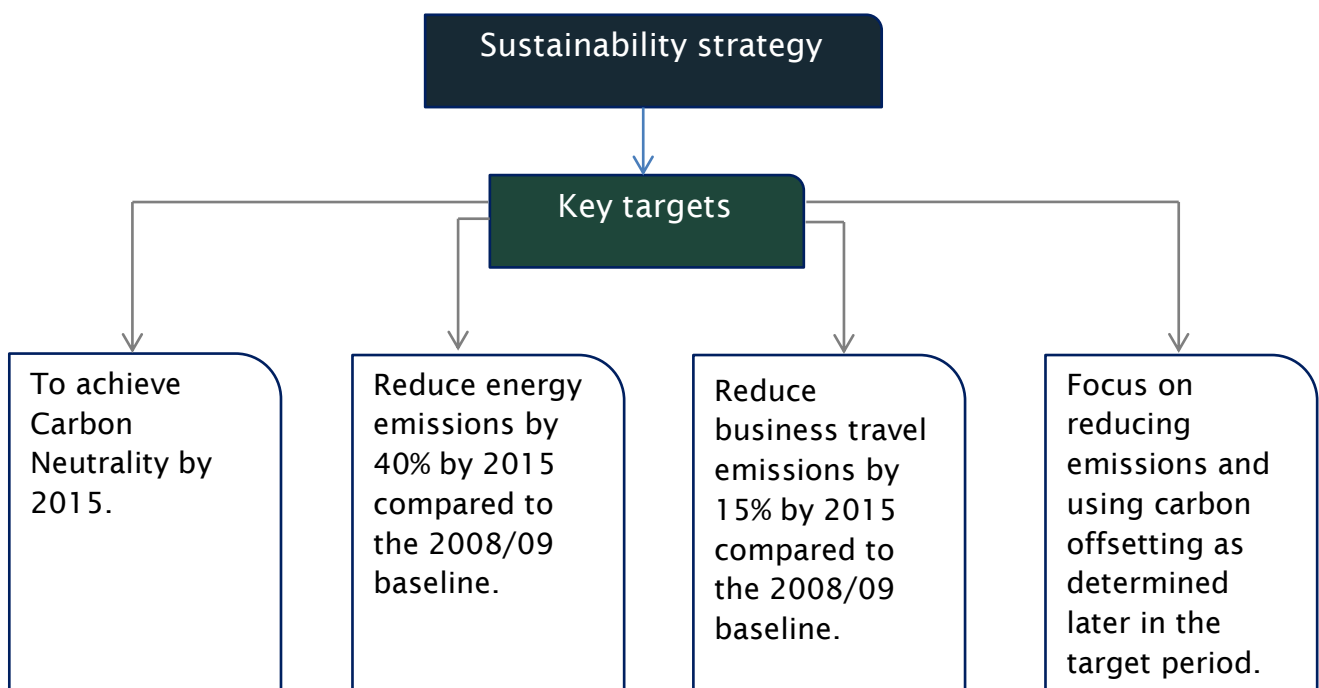
## Sustainability strategy

In November 2009, the Assembly Commission approved our five year Carbon Management Plan to become a carbon neutral estate by 2015. The strategy focuses on the reduction of emissions, primarily targeting energy and business travel, the two biggest impacts associated with the Assembly's activities.

The targets are key staging posts in our journey to carbon neutrality and collectively these priorities require us to tackle the significant impacts of our operations and commit us to long term improvement up to and beyond 2015.

Our strategy is aligned with the Assembly's core business aims. We hope to shape corporate culture, enhance efficiency and bring added value to the way in which we operate by integrating sustainability into core business decisions. We aim to make sustainability a business as usual aspect.

This will involve a stepped change in the way we work, a change in our behaviour and attitude towards the way in which we use energy and a collective responsibility to use natural resources sustainably so we can achieve this goal.



## **Climate change**

The Assembly recognises the impact of its operations and activities on the environment and how this scientifically links to climate change. Although the Assembly does not consume energy intensively in comparison to other organisations, we are still concerned about the negative consequences of climate change and the importance of leading by example as one of Wales premier public institutions. We will continue to take prudent, cost effective actions to reduce emissions to the atmosphere through concentrating our efforts in four main areas:

Reducing the intensity of GHG (greenhouse gas) emissions from our operations through:

- Continued energy reduction and efficiency measures from our operations through a planned facilities program;
- Educating and developing a responsible work ethic among all building users;
- Continuing to drive down business travel and unsustainable travel associated with our activities.
- Improving resource efficiency across our own operations and those of our supply chain.

## **Environmental policy statement**

Environmental sustainability is a key part of the Assembly's corporate responsibility profile and defines our aspirations to achieve sustainability excellence. The current policy was approved by the Chief Executive and Commissioner for Sustainability in September 2011 and covers fundamentals such as our approach to reducing reliance on non-renewable resources, continual environmental improvement, risk management, and our commitment to transparency.

**NATIONAL ASSEMBLY FOR WALES**

**ENVIRONMENTAL POLICY STATEMENT 2011-12**

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. We will give due regard to the principle of promoting sustainable development and aim to be an exemplary organisation in terms of sustainability and environmental stewardship.

Our day-to-day operations have an impact on the environment, arising mainly through the consumption of resources (energy, water and paper), and the generation of waste.

We will minimise our environmental impact by consuming fewer non-renewable resources, reducing waste, recycling, preventing pollution and complying with all environmental legislation and other requirements. In order to make continual year-on-year improvements we have set the following targets:

**Environmental Management System**

- We will maintain our certification to Green Dragon Level 5 through continual improvement of our performance and the development of our system.

**Building Management**

- We will continue to improve our Building Management Systems.

- We will give due consideration to environmental issues and energy performance in the refurbishment and improvement in the design of buildings.

**Energy**

- We will continue to measure and reduce the carbon footprint of our business activities and estate to meet our published targets.

- We will reduce our energy emissions by 8% per year and improve the efficiency of our operations.

**Waste**

- We will improve our resource efficiency and reduce the volume of waste sent to landfill from our estate.

**Water**

- We will manage and reduce water consumption across the Assembly's estate.

**Travel**

- We will develop our sustainable travel plan and promote sustainable forms of travel to all commuters.

**Paper**

-We will buy recycled or mixed source paper from certified managed forests.

**Procurement**

-We will integrate the principles of environmental sustainability within our policies and practices, specifically those relating to the procurement of goods and services.

This policy statement 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.



*Peter Black AC/AM*

**Comisiynydd y Cynulliad sy'n gyfrifol am  
Gynaladwyedd / Assembly Commissioner  
for the Sustainable Assembly**



*Claire Clancy*

**Prif Weithredwr a Chlerc y Cynulliad/  
Chief Executive & Clerk to the Assembly**

Signed:

A blue ink signature of Peter Black, consisting of stylized, overlapping loops.

Signed:

A blue ink signature of Claire Clancy, written in a cursive style.

Issue: August 2011

Review: September 2012

## Environmental management systems

The Assembly has a comprehensive internal environmental management system (EMS) which addresses all environment and sustainability issues associated with our operations and activities. The complete system is accessible to all building users via our intranet. The Assembly manages its Environmental Management System (EMS) through the Facilities Management team.

We have been successful in achieving certification to Level 5 of the Green Dragon Standard for the last three years, a Welsh standard equivalent to the recognised international standard - ISO14001. It is based on a stepped framework of five levels of certification building on improvement in processes and policies to enable businesses to gain recognition as they develop procedures to manage the environmental issues central to business operations.

Targets are set and reviewed on an annual basis including energy and business travel, the Assembly's two significant impacts which are mapped out, initially to 2015 in support of the sustainability strategy.

We use internal audit teams to assess the EMS for managing risks and impacts, legislative compliance and performance against the standard. Auditors also assess whether appropriate management procedures remain applicable, relevant and specific to the Assembly's operations.

The system is audited annually by third party auditors to ensure compliance with the standard, evidence of continual improvement and satisfactory performance to maintain continued certification.

Over the year, the Colwyn Bay office was internally assessed for inclusion in the Green Dragon Environmental Management System to create one overarching system for the Assembly, however shared occupancy, a lack of consistent, accurate data and limited scope for improving building fabric meant that it was not possible to successfully integrate the office into the EMS. In the future, efforts will be made to report on performance of the office through consistent interpretation of available data.



## External Recognition

In August 2010, the Assembly was awarded Most Sustainable Public Sector Organisation at Government level by the Sustainable Facilities Management Awards 2010 in recognition of our continued drive towards reducing carbon emissions and creating a sustainable workplace.



## **Governance**

Overall responsibility for sustainability and the environment rests with the Chief Executive Officer (CEO), Claire Clancy. The CEO together with the Commissioner for Sustainability take responsibility for approving the Assembly's environmental policy. The CEO and Senior Management Board are kept informed of progress in key areas via monthly Performance Review meetings which summarise progress against targets and highlight issues.

The Management Board is responsible for approving the Annual Environmental Report on the recommendations of the Environmental Steering Group which undertake the annual management review and approve the annual sustainability targets, plans and programmes.

The management review contains risk and compliance issues, performance reviews, internal audit and corporate responsibility commitments.

Progress against the Carbon Management Plan is also formally reviewed annually by the Management Board to check progress against the key targets, identify potential issues and prioritise funding of planned facilities projects.

## **Regulatory compliance**

Legislative compliance is managed through subscription to ELUS (Environmental Legislation Update Service), provided by Groundwork UK for businesses to use to keep abreast of changing and new legislation that may have implications for business operations. Compliance against applicable legislation is also checked within the internal audit programme and externally assessed by a third party auditor.

We will continue to meet our Duty of Care responsibilities with regard to the disposal of waste, WEEE and hazardous materials and ensure we use licensed carriers and contractors for our waste and receive the appropriate transfer notes.

There have been no breaches of environmental legislation within this reporting year.

## **Risks**

Our priorities have been set by applying the corporate risk management framework to the identified environmental aspects of our activities. In considering risks we took into account the potential impact and probability of an occurrence in normal circumstances. We then considered the actions that were being taken to mitigate the risk and determined a residual level of risk from this. The residual risk was used to set our priorities.

## **Management review**

A management review of the full EMS takes place on an annual basis to ensure continued effectiveness and relevance to the operations of the Assembly. The full review is undertaken by the members of the Environmental Steering Group who review the previous year's performance and endorse and agree the targets and objectives for the current year. The Annual Environmental Report is then sent up to Management Board for final approval. The members of the meeting group are supplied with the review for the year, the performance against the objectives and targets, the new objectives and targets for the coming year, reports on legal compliance and the environmental policy for consideration and approval.

The Review took place at management level and covered all areas of the estate. The revised environmental policy for 2011-12 was approved together with an additional Sustainable Paper Policy. The annual environmental report was endorsed by the group together with the new objectives and targets, in line with the expectations for the coming year.

## Environmental impacts

We identified the Assembly's significant impacts through a formal review of our operations and activities. Our environmental aspects and impacts are explained below. The significant impacts were determined after applying an individual risk assessment using the corporate risk matrix adopted throughout the Assembly. The resultant direct and indirect impacts of these were documented.

Impacts arising from our business activities are set out in a Register of Environmental Aspects and include the consumption of resources, air and water pollution including the production of greenhouse gases and the impact of landfill either as a result of our activity or those of our contractors.

	<b>Environmental aspect</b>	<b>Environmental impact</b>
<b>Energy</b>	The use of energy to heat and cool the buildings on the estate and to provide light.	Results in the depletion of natural resources, air emissions and increased greenhouse gas emissions.
<b>Waste and hazardous waste</b>	Disposal of office waste, electric and electronic equipment, fluorescent tubes, packaging etc	Direct depletion of natural resources, waste to landfill resulting in greenhouse gas emissions, air and noise pollution.
<b>Transport</b>	Home to office travel, parking facilities, business travel and deliveries of goods/services.	Noise and air pollution, greenhouse gas emissions, water and land pollution and congestion.
<b>Water</b>	Use of water in buildings, catering and dishwashing, toilets, heating and showers.	Results in depletion of natural resources.
<b>Office activities</b>	Use of printers, copying, paper used in publications, shredding and e-mails.	Results in resource depletion, potential water and air pollution.

## Objectives and targets

Progress against the 2009/10 objectives and targets that were set across the business are outlined below highlighting successes and failures.

This section also includes a table outlining the Assembly's headline objectives and targets for the period 2011/12 in accordance with our significant environmental impacts and our sustainability strategy.

Start	End	Target	Progress	Status
<b>Objective: Maintain and extend the Green Dragon scheme to Colwyn Bay.</b>				
April 2010	March 2011	Maintain Green Dragon certification for the whole estate.	Level 5 certification for the whole Cardiff Bay estate was retained for a further year.	Completed
April 2010	March 2011	Seek to extend certification to the Colwyn Bay office.	Following a feasibility study, complications with capturing utility data due to shared occupancy and the lease arrangements meant that the office could not be included in the Green Dragon system.	Not completed
<b>Objective: Reduce energy consumption across the estate.</b>				
2008/09	2015/16	Reduce energy consumption across the estate by 40% by 2015 on the 2008/09 baseline.	2011 - We have reduced our energy emissions across the whole estate by 19% from our 2008/09 base year.	On target.
April 2010	March 2011	Improve the DEC energy ratings of all the buildings on the estate by at least one grade by March 2011 in accordance with the assessment criteria.	Although progress has been very encouraging, we were unable to raise the performance of the buildings by one grade, however overall performance across the estate has improved on last year.	Not completed.
<b>Objective: Minimise the impact of business travel on the environment.</b>				
2008/09	2015/16	Reduce business travel by 15% by 2015 on the 2008-09 baseline.	2011 - We have reduced business travel emissions by 18.7% from our 2008/09 baseline.	On target
April 2010	March 2011	Offset business air travel through the Government Carbon Offsetting Fund (GCOF II).	As a result of the sharp drop in air travel, the need to offset emissions has not been required.	On target

Start	End	Target	Progress	Status
April 2010	March 2011	Explore the scope for introducing additional pool cars as sustainable options for business travel.	Demand for an additional pool car has not been sufficient enough to warrant a further vehicle due to a continued drop in business travel.	Completed
<b>Objective:</b> Minimise the amount of waste generated by the Assembly.				
April 2010	March 2011	Reduce the amount of waste sent to landfill by 5% on the 2009-10 baseline.	As this is the first full year we have managed to capture comprehensive waste data, we will use this as a baseline for comparison next year.	On target
<b>Objective:</b> Embed sustainable considerations into the project management process to align with our sustainable procurement values.				
April 2010	March 2011	Ensure sustainable assessment forms are completed for all projects exceeding £25k.	A Sustainability Assessment tool has been created and now forms part of the documentation project managers are required to complete as part of applications for new projects.	In progress
April 2010	March 2011	Hold a sustainable suppliers event for all Assembly contractors by March 2011	Due to a restructuring of the Procurement department, this has not yet taken place.	Not completed
<b>Objective:</b> Minimise water consumption across the estate.				
April 2010	March 2011	Reduce the consumption of water by 3% per year on the 2009/10 baseline	Total water consumption has been reduced by 6.4% on last year.	Completed
<b>Objective:</b> Improve accuracy and provide greater transparency of the Assembly's total carbon footprint.				
April 2010	March 2011	Improve accounting and reporting processes of our GHG emissions to include 'best practice' reporting methods.	Further improvements have been made to the emissions reporting process with the inclusion of equivalent emissions reporting and a more comprehensive overall footprint report based on Defra best practice and HM Treasury guidance.	Completed
April 2010	March 2011	Drive improvements and efficiencies through the collection, interpretation and management of all data with an emphasis on reducing private car usage for business	Data collection processes have been tightened and prioritised with representatives across the organisation and data is now processed and made available on a monthly basis.	Completed

Start	End	Target	Progress	Status
travel.				
<b>Objective: Enhance ownership of the environmental agenda and promote change through informed communication strategies.</b>				
April 2010	March 2011	Create a communication strategy for encouraging employees to 'work sustainably' and embed sustainability in work.	A communication strategy is being developed to improve ownership of the environmental programme and encourage sustainable working across the organisation.	In progress
April 2010	March 2011	Set up an inter-parliamentary forum with all UK Parliaments for improving cross working relationships.	Progress has been made into obtaining contacts for the UK legislatures and the development of a programme for the forum is underway.	In progress

## Looking ahead

We are dedicated to adopting and becoming fully involved in supporting the implementation of our Environmental Policy and Sustainability Strategy as a framework for guiding our activities and decision making. In accordance with our goal of ‘continuous improvement’ we will continue to challenge ourselves and question our existing work ethics through a programme of building improvements, behavioural change, improved reporting and feedback and transparency to enhance our sustainability performance.

The following table outlines the objectives and targets for the financial year 2011/12 in accordance with our aim for delivering a high quality service whilst minimising the impact of our work on the environment.

Environmental aspect	Objective	Target
Continual environmental improvement	Ensure continued environmental improvement across the estate	Maintain Green Dragon Level 5 for the Assembly estate.
Use of energy	Reduce energy consumption across the estate.	Reduce energy consumption across the estate by 40% by 2015 on the 2008/09 baseline.
Business travel	Minimise the impact of business travel on the environment.	Reduce business travel by 15% by 2015 on the 2008-09 baseline.
Disposal of office waste streams	Minimise the amount of waste generated by the Assembly.	Reduce the amount of waste sent to landfill by 5% per year on the 2009-10 baseline to achieve zero waste to landfill by 2018.
Use of water in buildings	Minimise water consumption across the estate.	Reduce the consumption of water by 10% by 2015 on the 2009/10 baseline.
Procurement of goods and services	Embed sustainability in procurement processes and supply chain management.	Review central procurement procedures relating to sustainability, identify priority areas for supplier engagement.
Raising awareness	Enhance internal awareness of the Assembly’s sustainability programme and achievements.	Design and create a ‘Sustainability Corridor’ on the first floor of Tŷ Hywel.

## **Training and awareness**

It is essential that our sustainability goals are understood and embraced by building users at all levels of the Assembly.

All new employees receive induction training on sustainability and Members and their staff are provided with a guide to working sustainably so that they understand the issues at the heart of our work and how best to respond. Key staff continue to undertake professional development training to improve expertise and competence.

## **Behaviour change**

We raise employee awareness of environmental sustainability predominantly through passive communication mediums such as publications on the intranet. We publish articles on sustainability and environmental issues and publish key findings from assessments relating directly to occupant behaviour.

We plan to improve on our communication through an interactive 'performance dashboard' including a league table highlighting energy consumption by floor in Tŷ Hywel and other key environmental data to further engage building users and make them accountable for their actions. We also aim to report our performance externally through our website, celebrating successes and improving the transparency of the Assembly's activities.

The Assembly's Green Team continues to be influential as the voice on 'ground' based issues and initiatives that affect building users on a day to day basis and it collectively represents the 'backbone' to the sustainability views and opinions of all departments across the Assembly.

We sign up to Earth hour annually to raise awareness of environmental issues and to provide support to combatting global climate change.

## Sustainable procurement

A self-assessment of the Value Wales Sustainable Procurement Assessment Framework (SPAF) was undertaken in March 2011 on the procurement processes of the Assembly and our organisational overall level under the framework remains at 'Level 4 - Enhancing Organisation'. Some aspects of our performance resulted in Level 5, most notably the Strategic and Management issues such as commitment to sustainability, communication, and a more structured approach to procurement policies.

The actions that arise from the Sustainable Procurement Assessment Framework remain the same as last year and have been incorporated into the Green Dragon action plan.

## Supply chain

In 2010 we developed a Sustainability Assessment Tool for project management teams to integrate sustainability considerations into project planning at the outset and over the lifecycle of the project.

We have made some progress into measuring the performance and operations of some of our key suppliers to identify areas for improvement and understand impacts of the operations undertaken to deliver our products and services. This has also led to collaborative working and improved supplier-customer relationships through shared business expectations.

We understand there is much more work required to assess the life cycle impacts of our products and services and will endeavour to source more information on the operations and resource use of our larger suppliers so we can garner a better understanding of our indirect impacts, risks and opportunities for sharing best practice in relation to procurement and sustainable sourcing.

We have set 4 key priority actions for improvement:

- Develop KPI's and supplier performance monitoring systems to include sustainability benchmarking.
- Identify scope for targeted staff refresher training on sustainability.
- Ensure sustainability assessments are completed for new or existing projects over £25k.
- Host a supplier event to communicate our strategy to suppliers.

## Performance review

- Greenhouse gas emissions
- Energy efficiency
- Resource efficiency
- Sustainable travel
- Water
- Paper
- Sustainable procurement

# Performance review

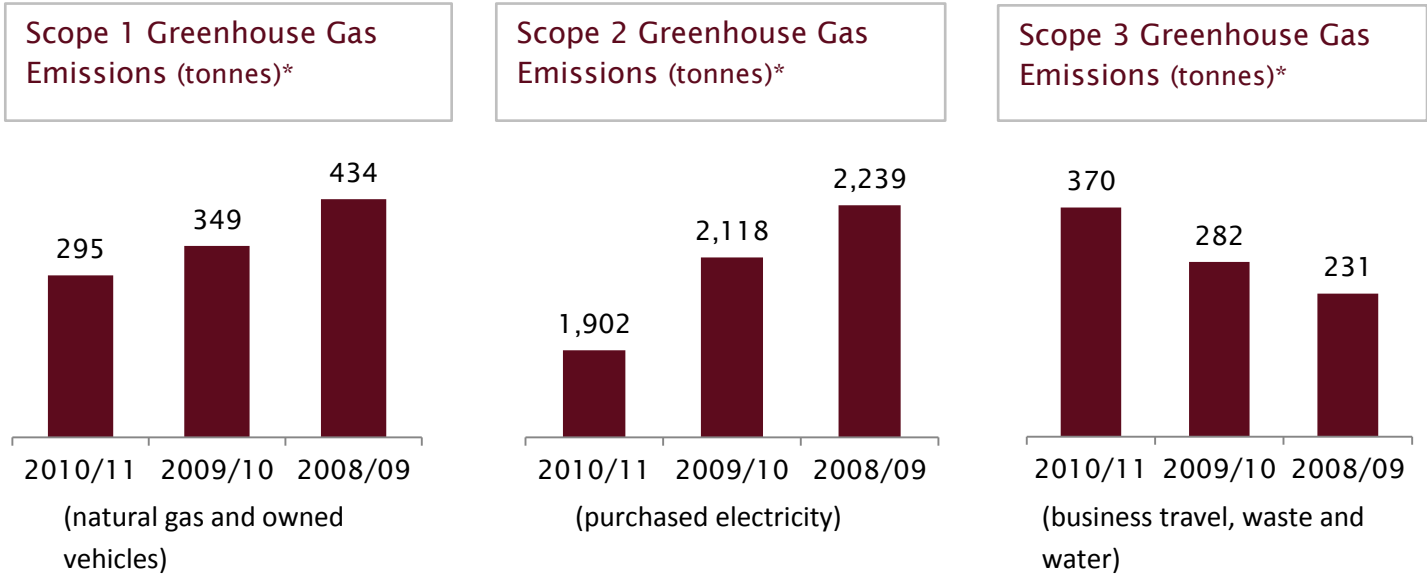
## Greenhouse gas emissions

Up until this year, our focus has been on measuring and reporting direct carbon dioxide emissions alone from our operations. This year for the first time, we are reporting carbon dioxide equivalent emissions in accordance with improvements in conversion factors from DEFRA and in line with the minimum reporting requirements included in the Treasury’s sustainability reporting guidance.

Consumption data for previous years has been recalculated in accordance with updated emissions factors to enable a fair comparison of performance and to ensure consistency in reporting with improvements in conversion methodologies.

We have achieved a reduction over the past two years in direct CO<sub>2</sub>e emissions by 154 tonnes and 185 tonnes in 2009/10 and 2010/11 respectively.

Since 2008/09, we have reduced direct CO<sub>2</sub>e emissions by over 11.6% on a net basis (2008/09 baseline year of 2,903 metric tonnes).



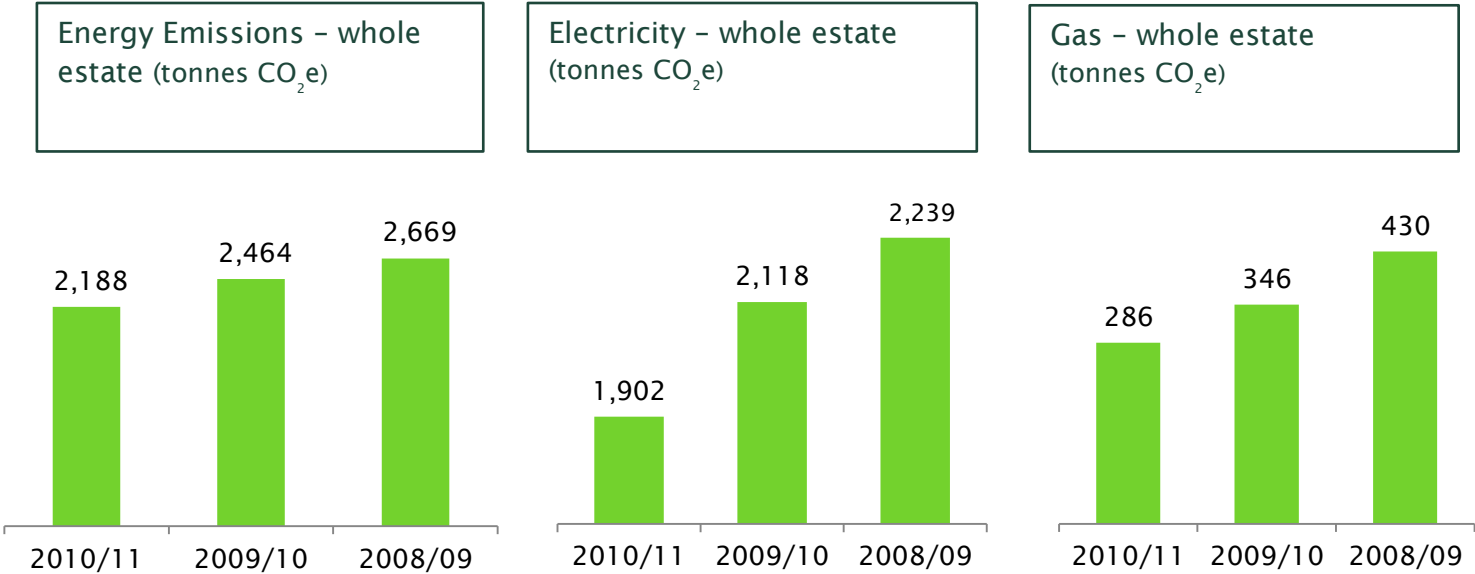
\*accounts for direct CO<sub>2</sub>e emissions from the operational activities of the Assembly estate only.

**11.6%**  
reduction in net CO<sub>2</sub>e emissions since 2008/09

### Energy efficiency

The use of energy is by far the Assembly’s most significant impact on the environment. In fact, it accounts for around 75% of our footprint (source – 2009/10 Environmental Report) and we appreciate that we need to continue to channel much of our resources into reducing our reliance on fossil fuels to bring out transitional change in the operation of our buildings and also to fulfil our commitment to work responsibly without adversely affecting the local environment.

We exceeded our 2010-11 target of 8% reduction in energy emissions by 3.1%. This achievement was due in part to investment in building infrastructure and replacement of inefficient equipment. We are currently exceeding our cumulative targets up to 2015 and the investments made in the early part of the five-year period and in particular over the course of this year are already starting to deliver benefits. Energy consumption and greenhouse gas emissions from operations have fallen by 19% respectively since 2008/09, exceeding the 16% target at this point in time.



**11.1%**  
reduction in energy emissions  
in 2010/11

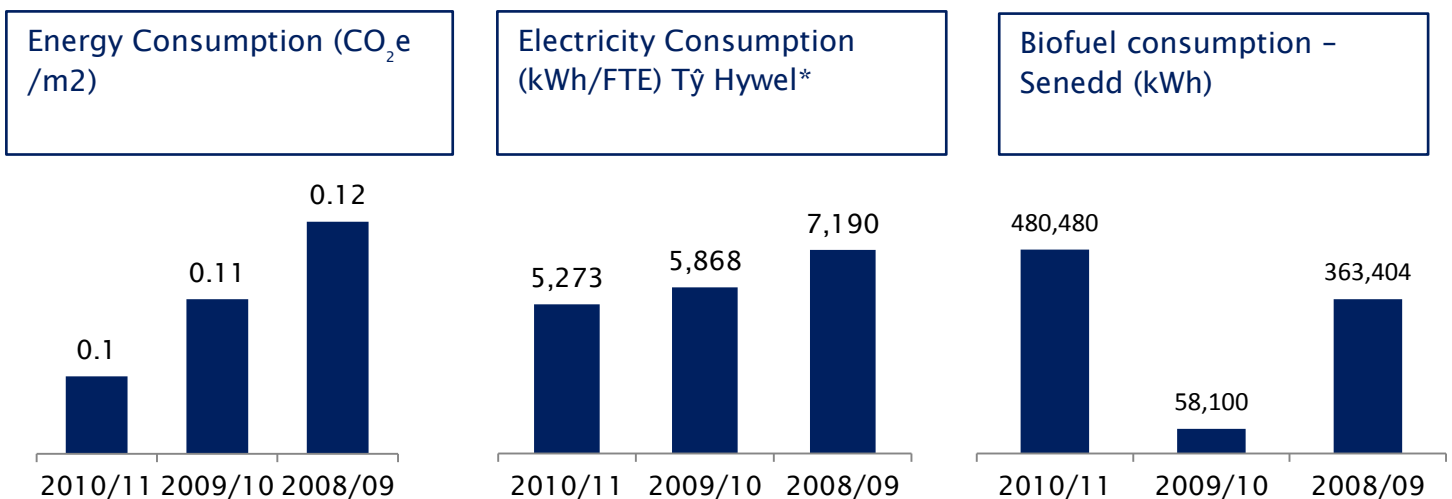
Overall, our energy consumption (both onsite and off) has shown an increase over the period exclusively attributable to improving data capture systems now being extended to include our offsite Server Farm. Previously, this information was not available as the Assembly was not accountable for the emissions until this year.

Furthermore, we have an additional carbon measure which measures 'carbon intensity' and illustrates our energy consumption per occupant (FTE) and consumption per m<sub>2</sub> of useful floor area.

The graphs illustrate that we are becoming more energy efficient across our operational floor area within the business and also in relation to energy intensity per occupant. Throughout the year, we have continued to encourage and promote energy efficiency practices across the estate.

We are continuing to roll out the refurbishment programme in Tŷ Hywel, including the installation of variable speed drives, PIR lighting and improved cooling equipment.

The building improvement programme will continue throughout 2011/12 as we appreciate it will get more difficult to maintain this level of reduction and targets become more challenging.



\*Consumption per FTE only represented for Ty Hŷwel as the Senedd and Pierhead are public buildings with very few staff permanently based there.

**19.1%**  
reduction in energy emissions  
in the last 2 years

## **Resource efficiency**

We are committed to reducing waste, improving our environmental impact and reducing costs associated with waste disposal.

The activities and operations of the Assembly all produce waste in one form or another. As a predominantly office based organisation, a significant proportion of our waste is paper and card together with food waste, plastics and non-routine waste such as obsolete equipment, office furniture and structural materials generated in refurbishments and ongoing improvements to our buildings.

We appreciate the impact that landfill has on the climate and also realise the increasing cost of waste disposal will be an unwanted financial burden on the organisation.

To make savings on our waste costs and reduce our impact on the environment, we apply the waste hierarchy to our waste management processes with the priority of eliminating waste where possible.

This is the first year that we have established an accurate waste footprint for the Assembly and with this waste profile we intend to make inroads into reducing our waste through a comprehensive waste audit.

Over the financial year 2010/11, the Assembly produced 134 tonnes of waste.

The table below illustrates how this figure is compiled. Of this overall figure, 2.5% of waste was reused, (cooking oil and toners) 65.58% was recycled and the remaining 32% was disposed of to landfill. The diagram below illustrates how our waste is segregated into different waste streams.

The average waste produced per person in 2010/11 was 0.18 tonnes (FTE – Ty Hywel only). This will be the benchmark for future comparisons.

Waste Stream	Outlet	Tonnage	Data Accuracy
Mixed recycling (includes paper and card, plastics, cans)	Recycled	72.64	Provided by contractor
Municipal Waste	Landfill	42.56	Provided by contractor
Food waste	Recycled	8.56	Provided by contractor
Ink toners	Reused	0.63	Provided by contractor
Cooking Oil	Reused	2.7	Provided by contractor
Florescent tubes	Recycled	0.05	Provided by contractor
Construction Waste	Recycled	6.08	Provided by contractor
Glass	Recycled	0	Provided by contractor
<b>Total waste generated (tonnes):</b>		<b>133.22</b>	

---

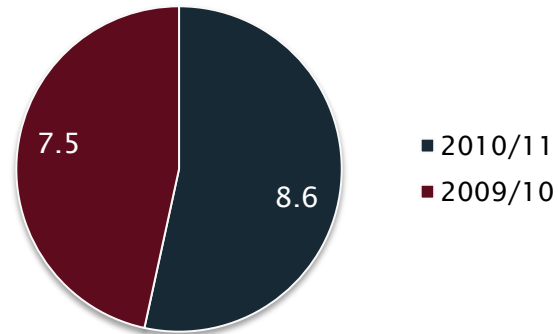
### Waste Ccmposition (%)

Waste Stream	Composition
Mixed recycling (includes paper and card, plastics, cans)	54.5%
Municipal Waste	31.9%
Food waste	6.43%
Construction Waste	4.6%
Cooking Oil	2.03%
Ink toners	0.5%
Hazardous Waste	0.05%

## Food waste

Collections of food waste continue to be successful. This year, we have increased the quantity of food sent for composting by 14% to 8.60 tonnes. Catering food waste and all food waste from tea-points in Ty Hywel are accounted for together with any waste food produced from the Senedd or Pierhead.

### Food waste (tonnes)



## Paper

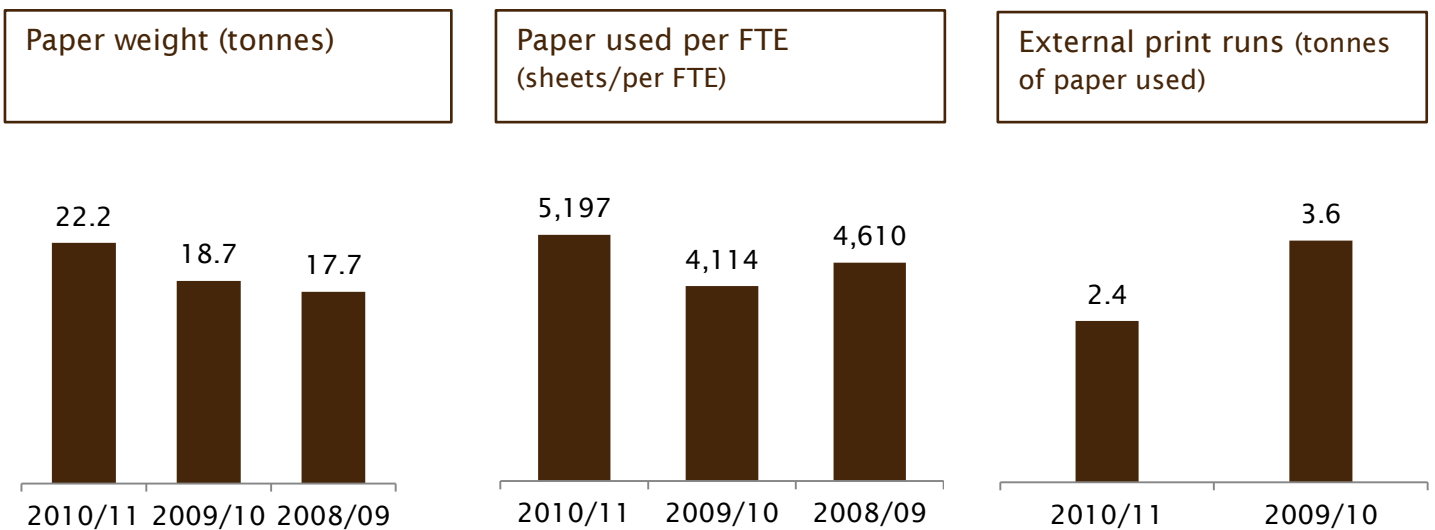
Paper is our biggest daily consumable and we purchased 22.2 tonnes in 2010/11, equivalent to 5,197 sheets/person/year, an increase of 26% on last year. This refers to paper consumed internally for office printing and also in-house publication printing and copying. An additional 441,000 sheets of paper were consumed for print runs carried out externally.

Over 95% of all printing is carried out through the Assembly's in-house print and copy unit. This not only enables more efficient, economical printing and provides greater flexibility but reduces the environmental impacts and costs associated with external printing jobs.

We seek to minimise the environmental impact of our use of paper and ensure that wherever possible our paper is sourced from sustainable, accredited sources. This year, we have sourced 95% of our paper from either FSC, PEFC or recycled sources. We encourage all building users to reduce their paper use and provide paper recycling facilities in our buildings to ensure all paper (including confidential paper waste) is recycled. All office printers are set to double-sided printing as default.

We also need to ensure that the paper we use is suitable for its purpose and are exploring new sources of 100% recyclable copier paper for corporate printing requirements ensuring that environmental considerations are a key part of any sourcing decision we make.

Over the last three years, there has been a steady increase in the weight of paper purchased through increased use of heavier paper stocks. There has also been an increase in the number of grades of paper we now stock to meet printing requirements.



### External printing

During the 2010/2011 financial year the Assembly commissioned external print companies to print six separate print jobs. Each job was printed using Think White, a paper stock that is FSC certified, 50% recycled and carbon neutral. This amounted to 30,000 copies of publications made up of 441,000 sheets of paper. This represents a 6.9% reduction in sheets printed on 2009/10 and a 44.4% reduction in the number of copies printed. Total weight of all external print jobs amounted to 2.4 tonnes, a reduction of 33% on last year.

‘Up until this year business travel represented the Assembly’s most significant environmental impact after energy consumption. In the last two years, we have reduced our business travel emissions by 34%’.

## **Sustainable travel**

We are committed to travelling more sustainably and reducing the environmental impacts and costs associated with business travel.

The Assembly's emissions from road, rail and air travel totalled 154t CO<sub>2</sub>e. This is a reduction of 18.7% on last year and represents the continued decline in business travel we have experienced over the last 2 years. All employees are encouraged to consider the 'hierarchy of travel' before they travel and we strongly discourage air travel which proves to be the largest source of travel emissions under our direct control.

Since 2008/09, we've cut our business travel emissions by 34%. An increasing number of employees now use the train for most destinations with reductions in private car use and car hire use across the board.

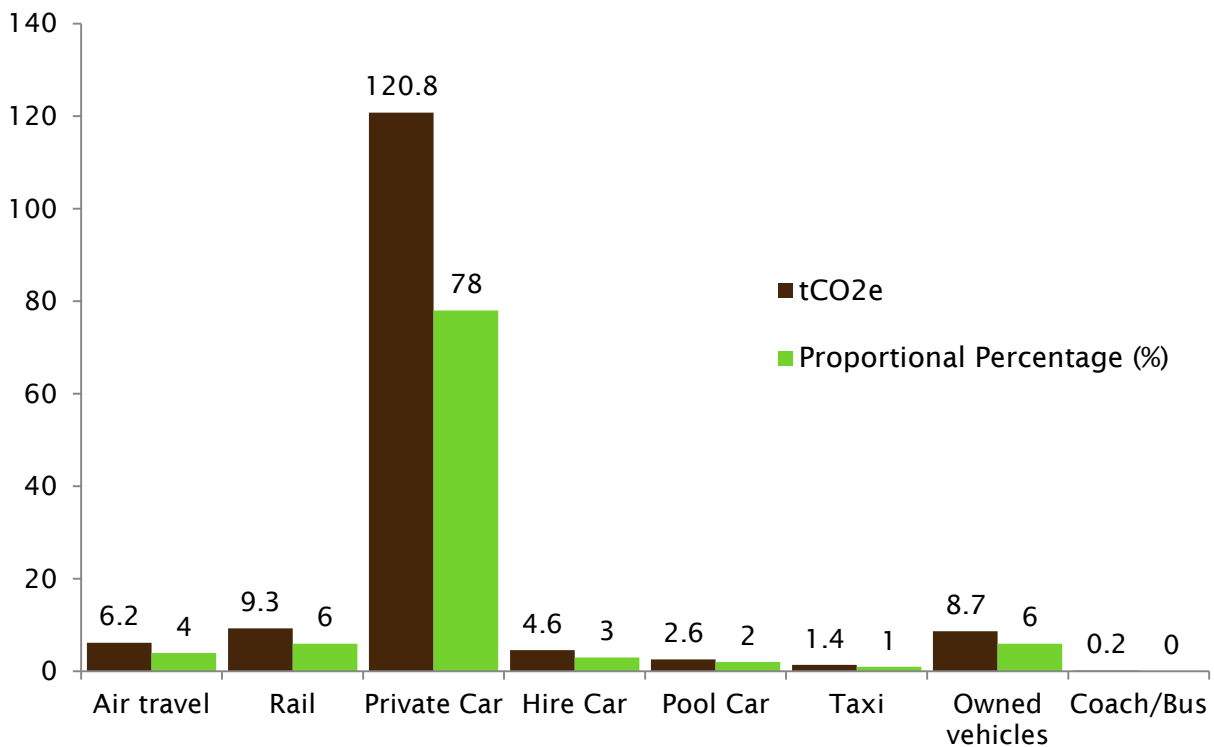
The Assembly appointed a new car hire company in 2009 and introduced policy on the size of cars required for business travel. Vehicles now offer greater fuel efficiency and lower emissions, reducing the average CO<sub>2</sub> emissions from 146g/km in 2009/10 to 132g/km and reducing the average engine size from 1.6l to 1.4l.

The low emission pool car has proved to be very successful displacing almost 11,000 miles from hire cars and grey fleet, resulting in a saving of 506kg/CO<sub>2</sub>e against the average hire car over the year.

Our Outreach Bus runs on (50% blend) bio-diesel resulting in emissions savings over conventional diesel fuel and we have experienced reductions in mileage on our fleet cars also. Due to an extensive promotional programme across Wales, the bus travelled 10,985 miles (63%) more than in 2009/10.

Travel	Unit	2010/11	2009/10	2008/09
Air travel (Domestic and International)	miles	36,336	34,690	228,588
Rail	miles	102,726	129,284	192,879
Private car	miles	360,509	452,498	452,177
Hire car	miles	16,698	45,772	75,066
Pool car	miles	10,787	1,300	n/a
Coach/Bus travel	miles	733	532	394
Ferry travel	miles	0	0	1160
Taxi	miles	5,663	6,624	7,275
Official car	miles	5,868	8,513	10,000
Outreach Bus	miles	17,310	6,325	n/a
Cleaning Bus	miles	10,276	4,175	n/a
<b>Total Mileage</b>		<b>566,906</b>	<b>689,713</b>	<b>967,539</b>

### Proportional contribution to total travel footprint 2010/11



## Water use

Every organisation depends and impacts on water resources in one form or another. We are committed to improving resource efficiency through sustainable use of natural water supplies and adopting strategies for conserving water across our estate.

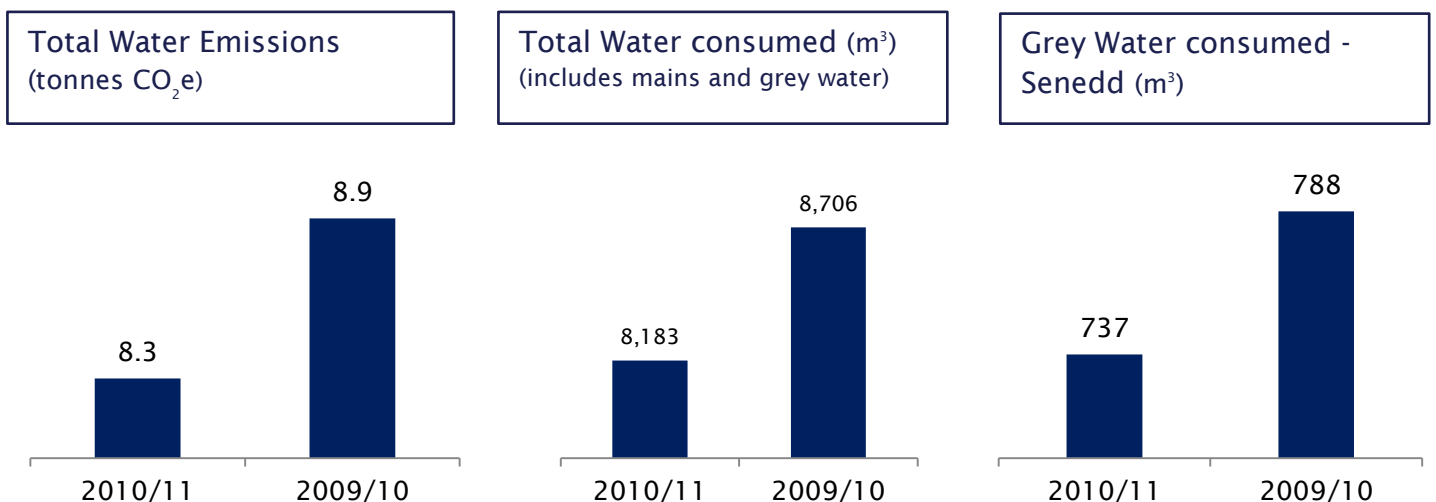
Our water use is relatively small in comparison to the consumption of other resources and is typically limited to sanitary, cooling, cleaning and general catering purposes in our buildings.

Our target is to reduce our water consumption by 3% per year based on the 2009/10 baseline. The total mains water consumed by our buildings in 2010/11 was 7,446 cubic metres. Total treated water equated to 8,183 cubic meters, a 6.4% reduction on last year which accounts for the grey water consumed in the Senedd building for toilet flushing and exterior cleaning purposes.

This represents a reduction of 6.3% in absolute terms, and we have reduced net greenhouse gas (GHG) emissions (inclusive of supply and treatment emissions) from our operations by 6% compared with 2009/10. Water consumed per person has dropped by 13.5% to 7,520 litres/person in Ty Hywel only.

Water consumption has dropped in Tŷ Hywel by 14%, however both the Senedd and Pierhead buildings experienced increases in water consumption of 41% and 15.3% respectively.

We are committed to maximising our use of harvested rainwater from the Senedd building, however this year mains water use has increased by 41% to 506 cubic meters and harvested rainwater use has dropped by 6.5% to 737 cubic meters based on the 2009/10 baseline. We therefore aim to increase the amount of water harvested and reused in 2011/12.



# Carbon footprint report

- Background
- Reporting approach
- Reporting boundary
- Annual greenhouse gas emissions
- Overview of footprint
- Sustainability performance summary
- Intensity ratios
- Contact information

## Background

This Carbon Footprint report sets out the total CO<sub>2</sub> emissions (and additional greenhouse gases Methane and Nitrous Oxide emissions where applicable), for the activities and operations over which the Assembly has **direct operational control**. Any exclusions from the reporting boundary are explained accordingly. This is the first carbon footprint report to contain CO<sub>2</sub>e emissions and the first time that we have included a carbon intensity measurement.

### Reducing our greenhouse gas emissions

We recognise the need to reduce the greenhouse gas (GHG) emissions from our operations. Through our Carbon Management Plan and Sustainability Strategy, we believe we can be exemplar in delivering a low carbon, sustainable operation whilst continuing to deliver a first class service to both our Members and the people of Wales.

Our main approach to reducing our GHG emissions focuses largely on our significant impacts:

- Reducing energy consumption across the estate;
- Reducing travel and travelling more sustainably
- Improving our operations and making our buildings more efficient
- Improving resource efficiency across our own operations and those of our supply chain.

We have been publicly reporting our GHG emissions since 2007/08, to ensure transparency of our operations and to uphold our requirements under certification to Level 5 of the Green Dragon Environmental Management Standard.

### Calculation approach

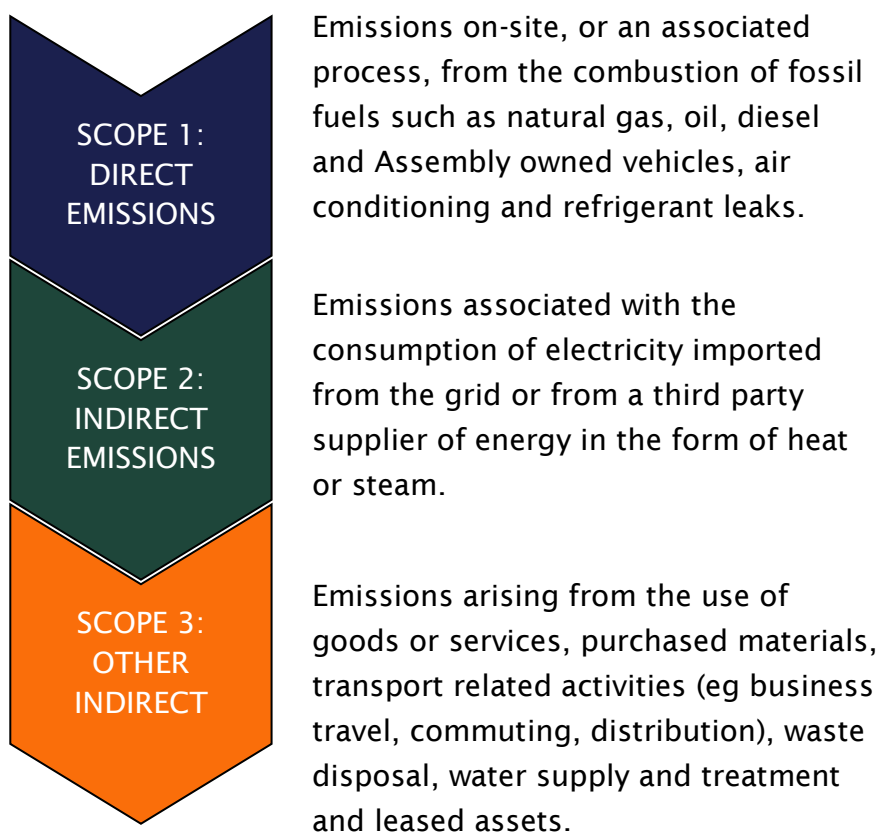
In 2007/08 and 2008/09, we used Green Dragon's conversion factors to calculate CO<sub>2</sub> emissions.

In accordance with our goal of continual improvement, in 2009/10 we adopted the widely recognised conversion factors published by the Department for Environment, Food and Rural Affairs (DEFRA) supported by published guidance on how to measure and report GHG emissions accurately. These are developed from the Greenhouse Gas Protocol.

This year, for the first time we will report on CO<sub>2</sub> equivalent emissions from all relevant sources and recalculate previous years emissions in line with Defra's recommendations included in the guidance to make fair and accurate comparisons. For the purposes of the Annual Environmental Report, this will also include the baseline year 2008/09 as a result of improvements in the accuracy of emissions factors and to enable consistent monitoring of progress against targets. This new approach will result in increased emissions reporting overall due to the inclusion of additional gases from the Kyoto Protocol.

## Reporting approach

The most widely accepted approach for reporting emissions data is to identify and categorise emissions-releasing activities into three groups (known as scopes). These are as follows:



The methodology applied to gather the data required to understand and form our Carbon Footprint is as follows:

- Data is collated from meters and billing data to calculate carbon emissions from electricity, gas consumption, water consumption and any waste collected from our sites;
- Refrigerant/air conditioning data for both chillers and split units are obtained from Integral (FM contractor);
- Emissions from the Assembly's owned vehicles and other business travel modes have been calculated based on employee expense claim data, relevant responsible officer logs and contractors;
- Food waste data is sourced from the contractor;

- Useful floor area figures are determined from internal floor plans and also the DEC's for the buildings;
- Offsite data centre emissions are derived from relevant offsite personnel;
- Fuel consumption data for the Outreach Bus and Cleaning Bus has been derived from the contractors.

### **Reporting boundary**

With each carbon footprint we calculate, we strive to improve our data quality and the accuracy of our reports.

We report our emissions based on a 'control approach', accounting for the GHG emissions from operations over which we have control and in which sufficient data is available. Currently, we do not account for GHG emissions from operations in which we do not have control such as the supply chain and constituency offices.

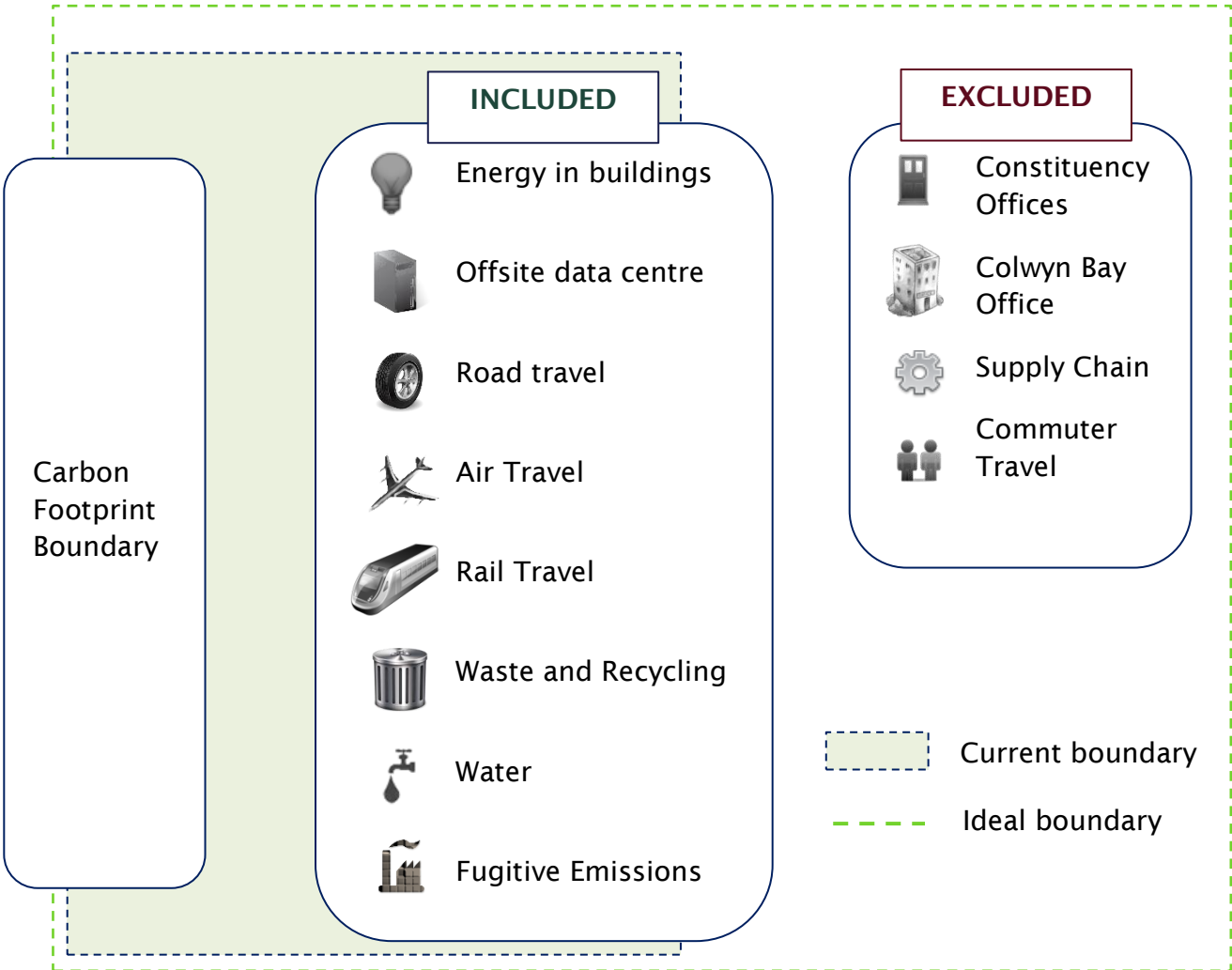
The illustration below indicates the reporting boundaries as they currently stand. It is sometimes difficult to draw accurate conclusions from any changes in the carbon footprint from one year to the next because data collection processes are evolving year on year. We appreciate that presently we are not accounting for all indirect emissions associated with the operations of the Assembly and have tasked ourselves with addressing shortfalls in data coverage over the next couple of years. This will not only help to stabilise the baseline but will provide more direction for improvement and identifying trends.

### Carbon footprint reporting boundary

Presently, we account for all emissions that fall within Scope 1 and 2 and some from Scope 3, however to fully understand our 'total' emissions, our future focus will be on capturing data from indirect elements contained in Scope 3. There will however be limits to the amount of Scope 3 data (supply chain, raw materials, procurement of goods and services) we can report on due to the embodied carbon involved in the supply chain being outside our direct operational control. We will develop a whole life costing tool to include carbon through engagement with our key suppliers to form a profile of where we are positioned in the supply chain and understand the carbon impact of our investments and use of goods and services.

Those aspects excluded from the reporting scope are due to inefficient data at the present time and efforts will be made to address these in the near future.

### Reporting boundary



## **Overview of footprint**

As with previous years, emissions are reported for the core administrative estate only. Core targets are based on absolute values which compare the total GHG emissions in the target year with the previous year and baseline year. All relative (intensity) values are included this year as additional measures of performance for comparison.

The Assembly's environmental footprint is generated from operational emissions associated with the activities on our Cardiff Bay estate.

Annual Greenhouse Gas Emissions			
Accounting Period	2010/11	2009/10	2008/09
	t/ CO <sub>2</sub> e	t/ CO <sub>2</sub> e	t/ CO <sub>2</sub> e
<b>SCOPE 1 - DIRECT EMISSIONS</b>			
Total purchased gas consumption <sup>1</sup>	286	346	430
Fuel combustion (boilers, furnaces, CHP, turbines)	0	0	0
Transport - owned or leased vehicles <sup>2</sup>	8.7	5.14	3.49
<i>Process and Fugitive emissions (leaks)<sup>3</sup></i>			
Air conditioning	0	0	0
Refrigeration	0	0	0
<b>TOTAL SCOPE 1 GROSS EMISSIONS</b>	<b>294.7</b>	<b>349.1</b>	<b>433.5</b>
<b>SCOPE 2 - INDIRECT EMISSIONS</b>			
Total purchased grid electricity <sup>4</sup>	1,902	2,118	2,239
<b>TOTAL SCOPE 2 GROSS EMISSIONS</b>	<b>1,902</b>	<b>2,118</b>	<b>2,239</b>
<b>SCOPE 3 - INDIRECT EMISSIONS</b>			
<i>Business travel</i>			
Private vehicle use	120.83	151.7	151.5
Hire vehicles	4.58	12.55	20.6
Pool car <sup>5</sup>	2.55	0.31	n/a
Taxis	1.40	1.64	1.80
Bus/Coach	0.16	0.03	0.09
Rail	9.34	11.76	17.5
Air	6.24	5.96	39.3
Ferry	0	0	0.04
<i>Waste and Recycling<sup>6</sup></i>			
Municipal waste	122	45.6	n/a
Recycled waste	44.04	12.5	n/a
Hazardous waste (fluorescent tubes)	0.42	0.42	n/a
Food waste	34.5	30.2	n/a
Aggregates	15.8		0
Cement	0	0	0
<i>Water</i>			
Water supply	2.23	2.37	n/a
Water treatment <sup>7</sup>	6.14	6.53	n/a
<b>TOTAL SCOPE 3 GROSS EMISSIONS</b>	<b>370.2</b>	<b>281.6</b>	<b>230.8</b>
<b>EMISSIONS OUTSIDE SCOPES 1-3</b>			
Renewable energy generation - biomass <sup>8</sup>	170.1	57.3	128.7
<b>TOTAL GROSS EMISSIONS</b>	<b>2,737</b>	<b>2,806</b>	<b>3,032</b>
<i>Reducing Factors</i>			
Permitted reduction from purchase of Renewable energy <sup>9</sup>	0	0	0
Purchased offsets for air travel through GCOF	0	0	0
<b>NET EMISSIONS<sup>10</sup></b>	<b>2,567</b>	<b>2,749</b>	<b>2,903</b>

### Footnotes

- <sup>1</sup> Gas consumption figure accounts for direct CO<sub>2</sub>e emissions only.
- <sup>2</sup> Contains direct emissions for the Outreach Bus, Official Car and Cleaning Bus. Emissions for the outreach and cleaning buses are calculated based on litres of diesel used rather than mileage. The Outreach bus runs on bio-diesel (50% blend). Figure for 2008/09 is inclusive of Official Car only.
- <sup>3</sup> No leaks from air conditioning or refrigerants have occurred.
- <sup>4</sup> Accounts for direct CO<sub>2</sub>e emissions only. Figure is calculated at grid average conversion factor.
- <sup>5</sup> Pool car mileage is not directly comparable with the previous year as it was introduced in February 2010.
- <sup>6</sup> Due to insufficient data in 2009/10, the figures only represent five months of data and are therefore not directly comparable. Insufficient data was available for waste and recycling in 2008/09.
- <sup>7</sup> Contains treatment of standard water supply from all buildings and grey water from the Senedd. Insufficient, accurate data was available for water supply and treatment in 2008/09.
- <sup>8</sup> Figure accounts for emissions at point of combustion only which are outside scopes 1-3. Actual direct emissions of biomass are '0' as the CO<sub>2</sub> produced in the burning of biomass are re-absorbed during the growth phase of the cycle.
- Biomass figure for 2010/11 is based on CO<sub>2</sub>e emissions for wood chips.
- Biomass figure for 2008/09 and 2009/10 is based on CO<sub>2</sub>e emissions for wood pellets (before the source fuel was switched to wood chips).
- <sup>9</sup> The Pierhead's Green Electricity tariff cannot be verified by the supplier in line with OFGEM Green Supply Guidelines so is not afforded an emissions reduction.
- <sup>10</sup> Total net emissions account for all emissions generated with the exception of biomass emissions which are outside the scopes for reporting purposes.

The Assembly continues to reduce its operational carbon footprint year on year. We have continued to make investments and improvements to our buildings and educate our building users in responsible and sustainable working behaviour.

Total gross greenhouse gas emissions for 2010/11 amount to 2,737 tCO<sub>2</sub>e. This represents a 2.5% reduction since 2009/10 with a cumulative reduction of 9.7% since 2008/09, the baseline year. Net greenhouse gas emissions amount to 2,567 tCO<sub>2</sub>e, which equate to a 6.6% reduction on 2009/10 and a cumulative reduction of 11.6% since 2008/09.

Emissions for waste are not directly comparable given that this is the first year that we have captured comprehensive data for this utility.

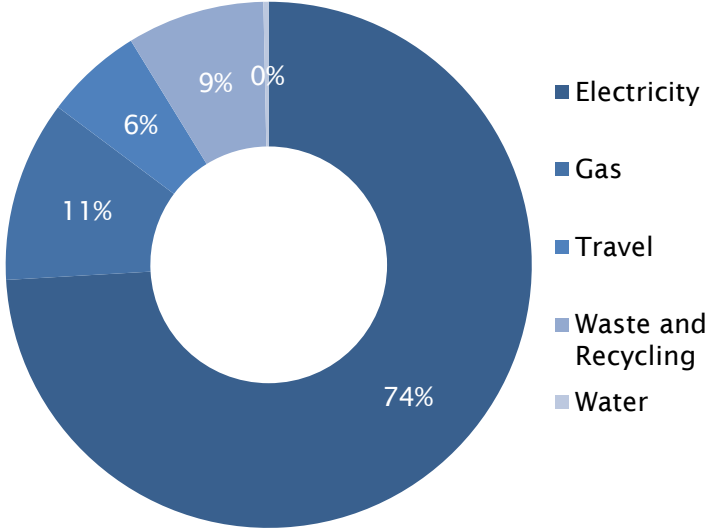
‘Through a continued commitment to improve environmental performance, we have not only reduced carbon emissions and saved significant amounts of money, but also raised the expectations of what we can achieve up to 2015 and beyond’.

### Footprint sources

Grid electricity continues to be the Assembly’s biggest source of GHG emissions accounting for around 74% of our total footprint. This is followed by gas consumption at 11% which has been greatly reduced in recent years through continued improvements to heating and cooling systems reaping benefits over the course of the year including during the coldest seasons.

As a result of significant reductions in business travel, for the first time this year, waste emissions represent the Assembly’s third largest environmental impact with 9% of the total footprint followed by business travel at 6%.

Proportional contribution to total GHG emissions by source



## Sustainability performance summary

The table below outlines the Assembly's performance against our key sustainability issues.

Performance measure	Units	2010/11	2009/10	2008/09
<b>Energy Consumption</b>				
<i>Electricity consumption per building</i>				
Tŷ Hywel	kWh	2,518,831	2,899,827	3,071,940
Senedd	kWh	825,997	858,844	917,896
Pierhead	kWh	143,563	126,269	116,476
<b>Total electricity consumption (all buildings)</b>	<b>kWh</b>	<b>3,488,391</b>	<b>3,884,940</b>	<b>4,106,312</b>
<i>Gas consumption per building</i>				
Tŷ Hywel	kWh	1,356,711	1,436,384	1,903,850
Senedd	kWh	99,073	344,696	300,419
Pierhead	kWh	89,609	89,081	116,672
Total gas consumption (all buildings)	kWh	1,545,393	1,870,161	2,320,941
Renewable energy sources purchased - biomass	kWh	480,480	164,220	368,640
Offsite data centre electricity consumption	kWh	104,383	NA	NA
<b>Total energy use, all buildings (excl. data centre)</b>	<b>kWh</b>	<b>5,514,264</b>	<b>5,919,321</b>	<b>6,795,893</b>
<b>Travel<sup>1</sup></b>				
Air travel (Domestic and International)	miles	36,336	34,690	228,588
Rail	miles	102,726	129,284	192,879
Private car	miles	360,509	452,498	452,177
Hire car	miles	16,698	45,772	75,066
Pool car	miles	10,787	1,300	NA
Coach/Bus travel	miles	733	532	394
Ferry travel	miles	0	0	1160
Taxi	miles	5,663	6,624	7,275
Official car	miles	5,868	8,513	10,000
Outreach Bus	miles	17,310	6,325	n/a
Cleaning Bus	miles	10,276	4,175	n/a
<b>Total travel - all modes</b>	<b>miles</b>	<b>566,906</b>	<b>689,713</b>	<b>967,539</b>
<b>Waste and Recycling</b>				
Mixed recycling	tonnes	72.64	20.69*	NA
Municipal waste	tonnes	42.56	15.88*	NA

Construction waste	tonnes	6.08	0	NA
Food composting	tonnes	8.56	7.50	NA
Hazardous waste	tonnes	0.05	0.05	NA
Cooking oil (recycled) <sup>2</sup>	tonnes	2.7	2.7	NA
Ink toners <sup>3</sup>	tonnes	0.63	0.35	NA
<b>Total waste generated</b>	<b>tonnes</b>	<b>133.22</b>	<b>47.17</b>	<b>NA</b>
<b>Water and Waste water</b>				
Total mains water consumed (all buildings)	m <sup>3</sup>	7,446	7,918	NA
Total water treated (all buildings)	m <sup>3</sup>	8,183	8,706	NA
Grey water consumed - Senedd	m <sup>3</sup>	737	788	NA
<b>Paper</b>				
<i>Internal</i>				
Paper purchased - sheets	p/million	3.82	3.04	3.19
Paper purchased - weight	tonnes	22.2	18.7	17.7
Recycled, FSC or PEFC certified	%	95%	95%	95%
<i>External</i>				
Paper consumed - sheets	thousand	441	473.5	NA
Paper consumed - weight	tonnes	2.35	3.6	NA

<sup>1</sup> Travel data and FTE figures do not include Assembly Member Support Staff due to data accessibility restrictions.

<sup>2</sup> A total of 3000 litres of cooking oil was consumed across the estate (60 litres a week for a 50 week period). The weight in tonnes is calculated from converting the relative density of cooking oil which is 900kg/m<sup>3</sup> by the total volume consumed (1m<sup>3</sup> = 1000l = 900kg, 900x3 = 2,700kg = 2.7 tonnes).

<sup>3</sup> Toners are recorded on the number recycled and the total weight is calculated based on the weight of one empty toner (this stands at 0.737kg) multiplied by the total. This figure is then converted into tonnes.

<sup>4</sup> Pool car FTE is based on staff occupancy rates only.

## **Intensity ratios**

Intensity emissions reduction targets are defined as goals to “reduce the ratio of emissions relative to a business metric over time” Carbon Disclosure Project. This is the first year that we are reporting intensity ratios for environmental performance and the table below illustrates the improvements we have made.

Total carbon intensity ratios have dropped by 5.4% to 3.5tCO<sub>2</sub>e per occupant (FTE) compared to 2009/10 accounting for a small reduction in FTE Commission staff.

Despite an overall reduction in the Assembly’s carbon footprint, CO<sub>2</sub>e emissions per m<sup>2</sup> have only dropped marginally which could be reflected by improved and increasing data collection for waste.

Energy consumption per m<sup>2</sup> has dropped by 7% in line with total consumption representing higher efficiency levels across the useful floor area within our buildings and also reduced energy consumption per FTE.

	2010/11	2009/10	2008/09
<b>Performance measure</b>			
<i>Full time equivalent (FTE) count<sup>1</sup></i>	735	739	692
<i>Commission Staff count</i>	335	339	292
<i>Total useful floor area m<sup>2</sup> (Tŷ Hywel, Senedd and Pierhead)</i>	22,208	22,208	22,208
Tonnes CO2e/occupant (FTE)	3.5	3.7	4.2
Tonnes CO2e/m <sup>2</sup>	0.12	0.12	0.13
Energy CO2e emissions/m <sup>2</sup> (tonnes)	0.10	0.11	0.12
Energy consumption Kwh/occupant (FTE) - Tŷ Hywel only	5,273	5,868	7,190
Energy consumption per m <sup>2</sup> (kWh)	248	267	306
<b>Travel (miles)<sup>2</sup></b>			
Private car travel per FTE	912.7	1,134.1	1,284.6
Hire car travel per FTE	42.3	114.7	213.3
Pool car travel per FTE	27.3	3.3	-
Taxi travel per FTE	14.3	16.6	20.7
Rail travel per FTE	260.1	324.0	548.0
Bus/Coach travel per FTE	1.9	1.3	1.1
Air travel per FTE	92	86.9	649.4
<b>Paper</b>			
Paper (tonnes)/employee (FTE)	0.03	0.025	0.025
No.of sheets/FTE	5,197	4,114	4,610
<b>Waste</b>			
Waste generated/occupant FTE - tonnes	0.18	0.06	NA
<b>Water<sup>3</sup></b>			
Water consumed m <sup>3</sup> /occupant (FTE) - Tŷ Hywel only	7.5	8.7	NA

#### Footnotes

<sup>1</sup> Includes AMs, AMSS, Commission staff, onsite WAG staff, broadcasters, onsite contractors and other staff. Figures provided are averaged across the financial year.

<sup>2</sup> Applies to Commission staff and AMs only. AMSS travel currently excluded. For the purposes of calculating carbon intensity from transport, total mileage is divided by total Commission Staff and Assembly Members only. The remaining occupants of the building are not currently covered by our reporting boundary.

<sup>3</sup> Applies to Tŷ Hywel occupants only due to the Senedd and Pierhead being uncontrolled public buildings.