

# TECHNICAL ANNEX TO THE 2015 WALES EMISSIONS REPORT

Welsh Government

*Emissions  
reduction  
performance  
indicators  
2015*

## **Acknowledgements**

This technical annex has been produced by the Strategic Evidence and Assessment Branch of the Welsh Government's Land, Nature and Forestry Department.

If you have any comments on the report, please contact the Welsh Government Climate change team: [climate-change@wales.gsi.gov.uk](mailto:climate-change@wales.gsi.gov.uk)

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## 1. Introduction

The Welsh Government has put in place a comprehensive performance monitoring framework to track progress towards meeting the emission reduction targets set in the Programme for Government and the ambitions of the Delivery Plan for Emission Reduction in the 2010 Climate Change Strategy for Wales.

This technical annex reports progress against the performance indicators developed for each of the policies listed in the Delivery Plan for Emission Reduction and enables a more detailed look at how policies have impacted on overall 2013 emissions reporting.

The technical annex sets out the indicators for each of the following sectors:

- Transport
- Residential
- Business
- Agriculture and land use
- Public Service





The indicator framework that we have adopted contains three tiers:

Tier	Description
<b>Tier 1:</b>	CO <sub>2</sub> equivalent emissions estimates which are consistent with the 3% target definition for each sector.
<b>Tier 2:</b>	Activity data or emissions factors which are generally linked to Tier 1 and often come directly from the Greenhouse Gas Inventory for Wales.
<b>Tier 3:</b>	Policy tier indicators that aim to monitor trends in areas which Government policies are actively aiming to influence and which are likely to reduce GHG emissions. This Tier can not be linked directly to Tier 1 or Tier 2.

For each sector there are indicators for both Welsh Government policies and UK Government policies. This is because national policies implemented at the UK level will contribute significantly to achieving emissions reductions in Wales. To keep things as simple as possible the coding used in this report for each of the policies and indicators will be consistent with the coding used in the Delivery Plan for Emission Reduction, ensuring that readers can clearly relate the indicator to the Climate Change Strategy for Wales published in October 2010. Within this report, Welsh Government policy and indicator codes are prefixed by a 'W' and UK policy and indicator codes by 'UK'. For example, within the business sector WB (1, 2 etc.) is used to represent Welsh Government business *policies* and WBI (1,2 etc.) is used to represent Welsh business sector *Indicators*. Similarly UK business sector policies are prefixed by UKB and the corresponding UK level indicators by UKBI.

## Defining performance against a baseline

For each indicator, an assessment of performance against a baseline has been made, with each being assigned to one of four categories: clear improvement; stable or no clear trend; clear deterioration; and baseline or insufficient data.

 Clear improvement	 Stable or no clear trend	 Clear deterioration	 Baseline or insufficient data
<p><b>Clear improvement</b> – An increase or decrease of any amount in the measured variable in 2013 against the 2012 in a favourable direction.</p> <p><b>Stable or no clear trend</b> – there is no change in the measured variable in 2013 against the 2012 or there are too many variables to determine overall indicator trend.</p> <p><b>Clear deterioration</b> - An increase or decrease of any amount in the measured variable in 2013 against the 2012 in an unfavourable direction.</p> <p><b>Baseline or insufficient data</b> – There is insufficient data to determine performance or the latest data is still within the baseline period.</p>			

To be consistent with the methodology used to report progress against the 3% target, an indicator baseline is defined as a 2006-2010 average of a measured variable where data is available. Where there is not data available for this averaging period, the most recent (or average of the most recent) data is used (up to and including 2010 data). Please note that some data is not based on a calendar year (i.e. January to December) and in these cases the data year is considered as the calendar year data collection starts. For example data running from April 2006 to March 2007 is viewed as 2006 data.

Within this report, performance is assessed for 2013 against the previous year even if an indicator has more recent data available. This allows us to assess performance in a single year and is consistent with reporting on the 3% target. However, the most up-to-date data can be found in the Emission Reduction Indicator spreadsheets (see 'Further Information' below).

### Important note on performance

The express purpose of the Emissions Reduction Indicators is to demonstrate progress towards meeting the targets outlined in Climate Change Strategy and to track the progress of policies identified in the Emissions Reduction Delivery Plan. It should be noted that the proxy data used to assess performance does not directly measure implementation of specific policy intervention measures but provides only an indication of 'direction of travel' regarding emission reductions. In addition, the performance category awarded is based solely on the likely impact on GHG emissions based on available data. It does not necessarily reflect on either the performance of a particular policy with regards to its primary purpose, or the policy goals of a particular sector to deliver wider outcomes for the people of Wales.

### Future development and addressing the UK CCC recommendations

There are a number of policies for which we have not been able to develop indicators at this stage. This has largely been due to data absence or restriction. The gaps will be highlighted in this annex.





### Format of this document

For each of the six sectors identified in section above, this document provides:

1. A summary table of key policies identified in the Emission Reduction Delivery Plan and where quantifiable, their estimated emissions reduction contribution in 2020. Where possible, each policy measure has been identified.
2. A summary table of indicators developed to measure progress against the identified policy measure and an assessment of progress in 2013 against 2012.
3. A breakdown of the data for each indicator, providing a graph depicting the recent trend and table providing figures on 2013 against 2012
4. A summary of the data trend for each indicator.
5. A link to the full indicator data tables and source data used in their compilation.

### Summary of performance

The table below provides a summary of the number of indicators within each performance category per sector. The table also presents the percentage of indicators which are classed as 'clear improvement' or 'stable/no clear trend'. Overall, 53% of emission reduction indicators show an improving or stable trend.

Sector					Percentage Stable or Improved
Transport	8	0	3	4	73%
Residential	1	0	2	5	33%
Business	2	0	1	0	67%
Agriculture and land use	8	1	1	3	90%
Resource Efficiency and Waste	5	0	0	2	100%
Public Service	4	1	1	1	83%
<b>Total</b>	<b>28</b>	<b>2</b>	<b>8</b>	<b>13</b>	<b>79%</b>

**Note: percentages are calculated excluding the 'insufficient or baseline' category as performance is currently unknown.**

### Further information

The information presented within this technical annex comprises the headline statistics within the Emission Reduction Indicator spreadsheets. These spreadsheets provide more information on the indicators and present a full breakdown of the data used in their compilation.

## 2. Transport Sector

This section contains the indicators for the transport sector. The transport sector is responsible for approximately a fifth (19%) of emissions covered by our 3% reduction target, with the baseline average emission level of 6.28 Mt CO<sub>2</sub>e. Welsh Government action in the transport sector is expected to deliver 0.29 Mt CO<sub>2</sub>e savings in 2020, whilst UK action in the transport sector will deliver 1.07 Mt CO<sub>2</sub>e savings in Wales in 2020.

Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WT1 and WT2, as shown below. Indicators are typically cross-cutting and linked to more than one policy, with these links shown in Table 2. There are some policy indicators for which there are currently no underlying indicators because of data gaps. This includes promotion of eco-driving (WT5), improving traffic management on the strategic road network (WT9) and alternative fuels infrastructure (WT11) - the latter is at an early stage in the planning and implementation process.












Table 1 - Transport sector Climate Change Strategy policies





Policy Number	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WT1	Sustainable Travel Centres.	0.22
WT2	Smarter Choices.	
WT3	Travel planning and provision of personalised travel information.	No additional savings for these policies to avoid double counting
WT4	Developing a series of strategic modal interchanges.	
WT5	Promotion of eco-driving.	0.03
WT6	Promotion and support for walking and cycling.	0.0005
WT7	Investment in rail services.	0.004
WT8	Investment in buses.	0.001
WT9	Improving traffic management on the strategic road network.	0.02
WT10	Supporting the freight industry to reduce emissions.	0.01
WT11	Alternative fuels infrastructure.	No direct reduction expected yet







UKT1	The Carbon Reduction Strategy for Transport Low Carbon Transport: A Greener Future.	0.96
UKT2	Fuel Duty increases	0.11

Table 2 - Transport sector indicators (TI)

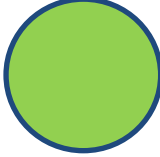
Policy Number	Indicator	Indicator number	Tier	Status
WT1-11	Transport sector GHG emissions	<a href="#">TI1</a>	1	
WT1-3, WT8	Total distance travelled - Vehicle kms	<a href="#">TI2</a>	2	
WT7	Fuel Consumption – Rail	<a href="#">TI3</a>	2	
WT10	Fuel Consumption - Rail Freight	<a href="#">TI4</a>	2	
WT1-3, WT6	Percentage of people travelling to work whose main mode of travel to work is cycling or walking	<a href="#">TI5</a>	3	
WT1-3, WT7	Rail passenger journeys	<a href="#">TI6</a>	3	
WT1-3, WT7	Train user satisfaction	<a href="#">TI7</a>	3	
WT1-3, WT8	Number of bus passenger journeys	<a href="#">TI8</a>	3	
WT1-3, WT8	Bus Travel Satisfaction	<a href="#">TI9</a>	3	
WT8	Average loading of buses in Wales	<a href="#">TI10</a>	3	
WT10	Traffic volumes of HGVs versus freight lifted in Wales	<a href="#">TI11</a>	3	

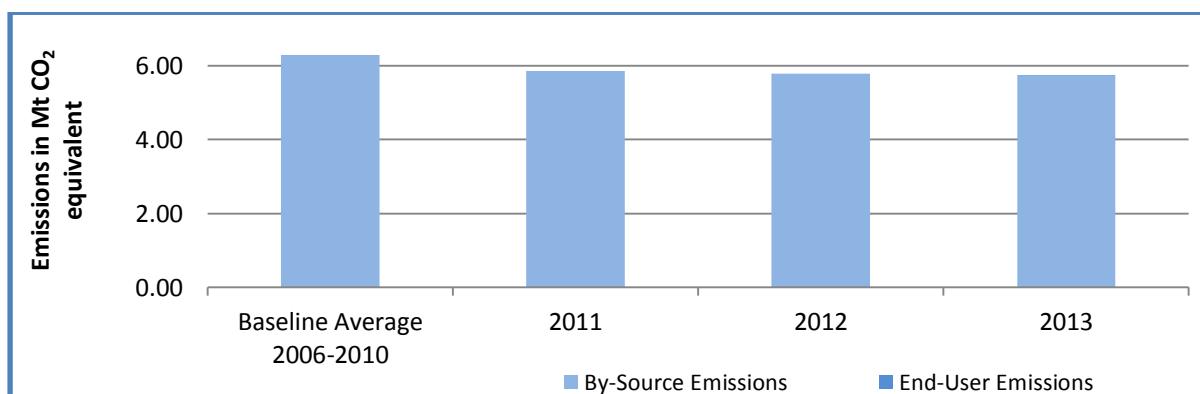
WT7	Proportion of passenger rail network in Wales electrified	<a href="#">TI12</a>	3	
UK1	Average new car CO <sub>2</sub> emissions	<a href="#">UKT1a</a>	3	
UK1	Ultra-low emission vehicles (ULEV) registered for the first time, United Kingdom	<a href="#">UKT1b</a>	3	
UK2	Total UK Road Transport Fuel Sales	<a href="#">UKT2</a>	3	

	Clear improvement		Stable or no clear trend		Clear deterioration		Baseline or insufficient data
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### Welsh Transport Sector Indicator 1: Transport sector GHG emissions

	<b>Indicator:</b>	Transport sector GHG emissions
	<b>Tier:</b>	1
	<b>Status:</b>	Clear improvement
	<b>Policy indicator:</b>	WT11-11

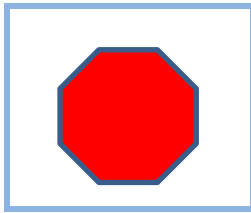


Transport sector GHG emissions	Baseline average 2006-10	2011	2012	2013
Mt CO <sub>2</sub> Equivalent	6.27	5.84	5.76	5.72

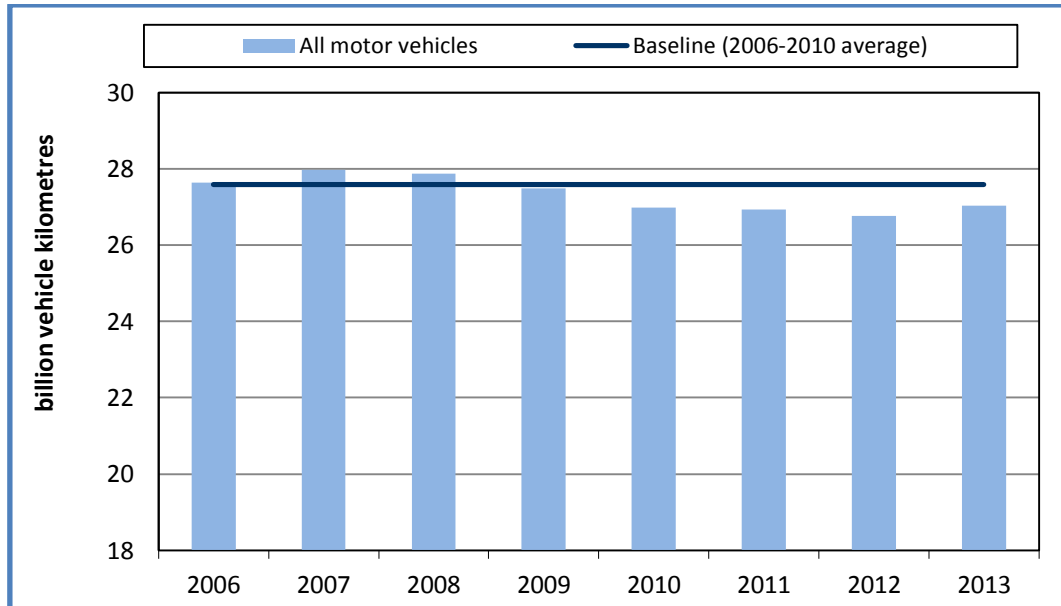
**Trend:** Transport emissions in Wales in 2013 are lower than in 2012. Following a small increase between 2006 and 2007, emissions have declined steadily between 2008 and 2012.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT11

### Welsh Transport Sector Indicator 2 - Total distance travelled - Vehicle kms



**Indicator:** Total distance travelled - Vehicle kms  
**Tier:** 2  
**Status:** Clear deterioration  
**Policy indicator:** WT11-3, WT8

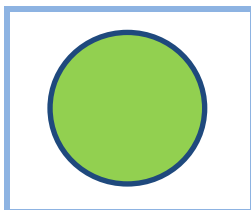


Total distance travelled (all motor vehicles)	Baseline (2006-2010 average)	2011	2012	2013
Billion vehicle kilometres	27.59	26.93	26.76	27.03

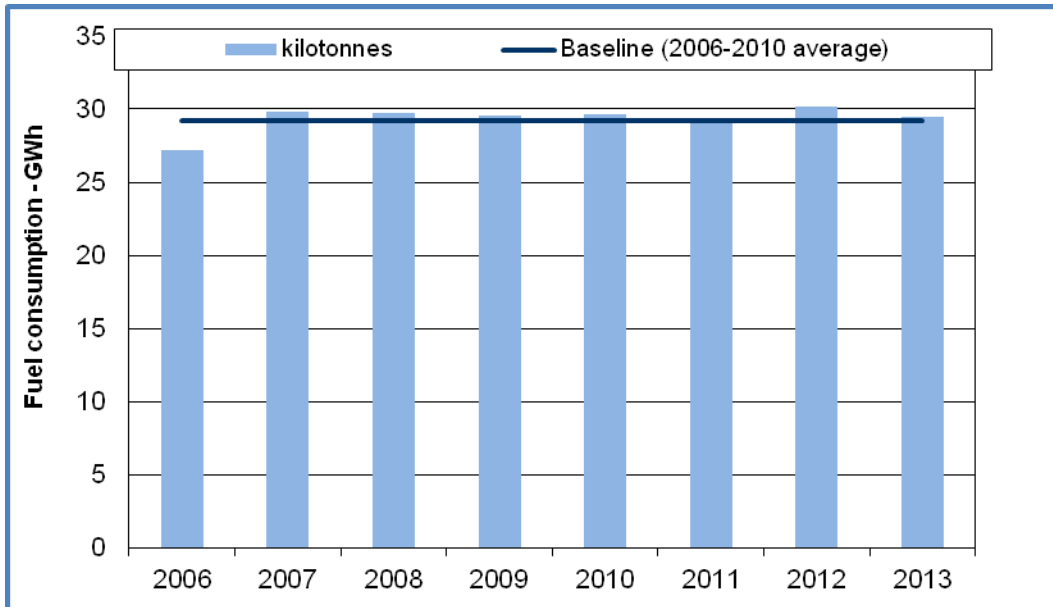
**Trend:** Total vehicle kilometres in Wales increased in 2012. Following an increase between 2006 and 2007 vehicle kilometres travelled declined steadily but now appear to be increasing.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT12

### Welsh Transport Sector Indicator 3 - Fuel Consumption – Rail



**Indicator:** Fuel Consumption – Rail  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WT17

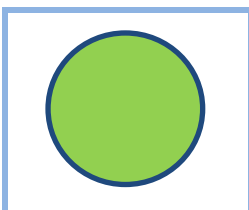


Fuel Consumption	Baseline (2006-2010 average)	2011	2012	2013
kilotonnes	29.19	29.20	30.15	29.50

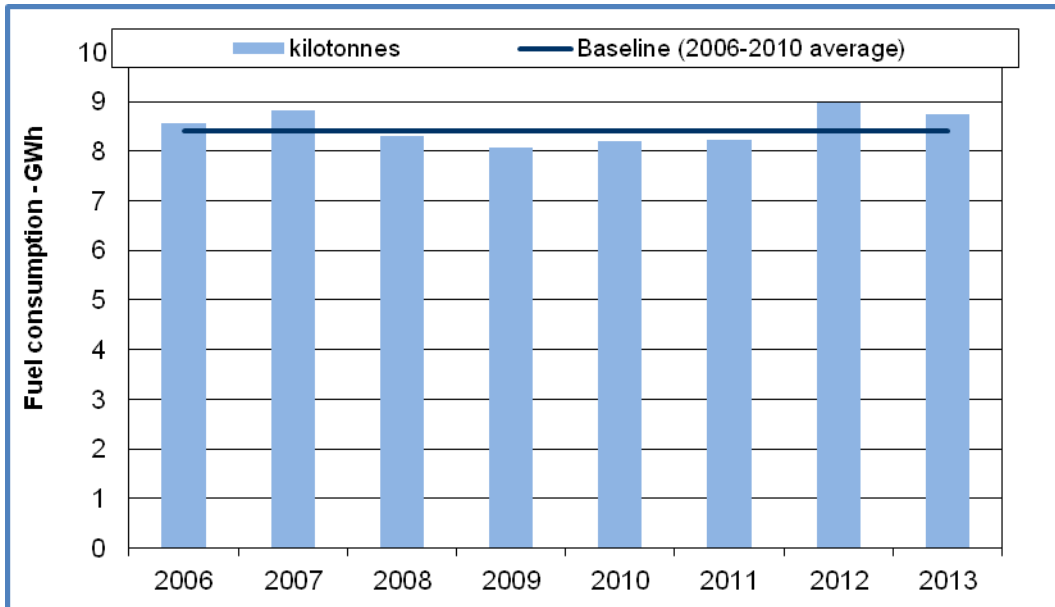
**Trend:** Rail fuel consumption in Wales decreased in 2013. Although this indicator is marked as clear improvement, fuel consumption remains above the baseline. An increase in rail fuel use is considered positive if it results in a reduction in road transport.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2014 WT13

**Welsh Transport Sector Indicator 4- Fuel Consumption - Rail Freight**



**Indicator:** Fuel Consumption - Rail Freight  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WT110

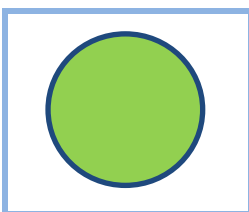


Fuel consumption	Baseline (2006-2010 average)	2011	2012	2013
kilotons	8.40	8.22	8.98	8.75

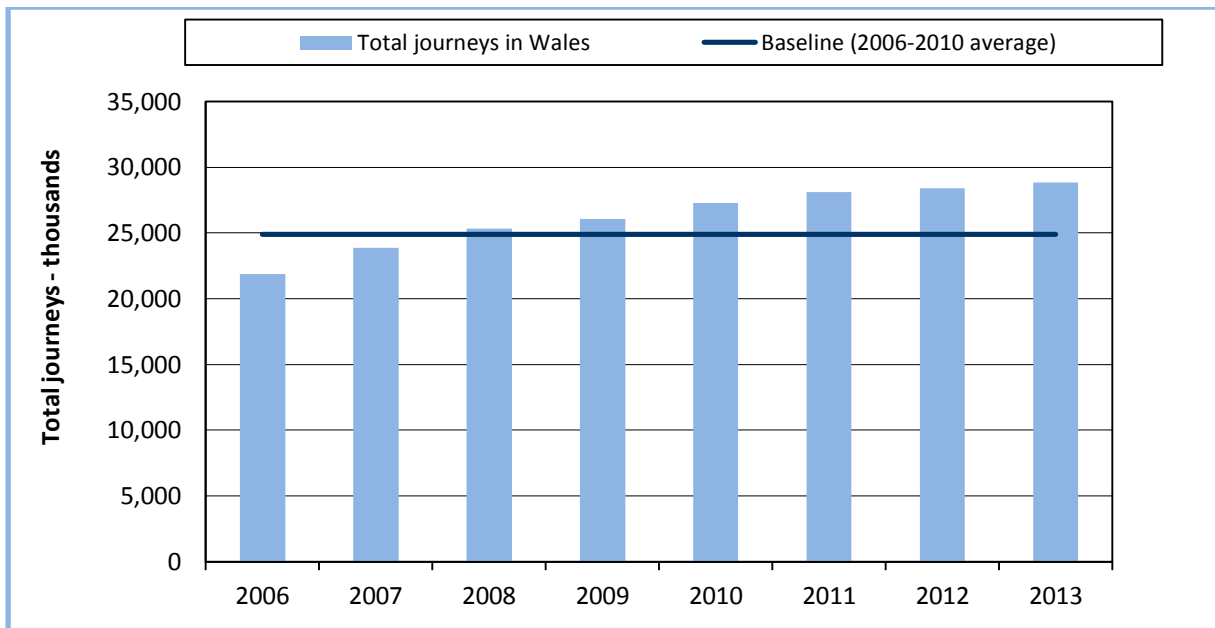
**Trend:** Rail freight fuel consumption in Wales increased in 2013. Although this indicator is marked as clear improvement, an increase in rail is considered preferable where it results in a decrease in road transport fuel use.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT14

**Welsh Transport Sector Indicator 6 - Rail passenger journeys**



**Indicator:** Rail passenger journeys  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WT11-3, WT17

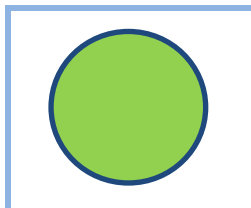


Total journeys in Wales	Baseline (2006-2010 average)	2011	2012	2013
Thousands of journeys	24,880	28,098	28,393	28,846

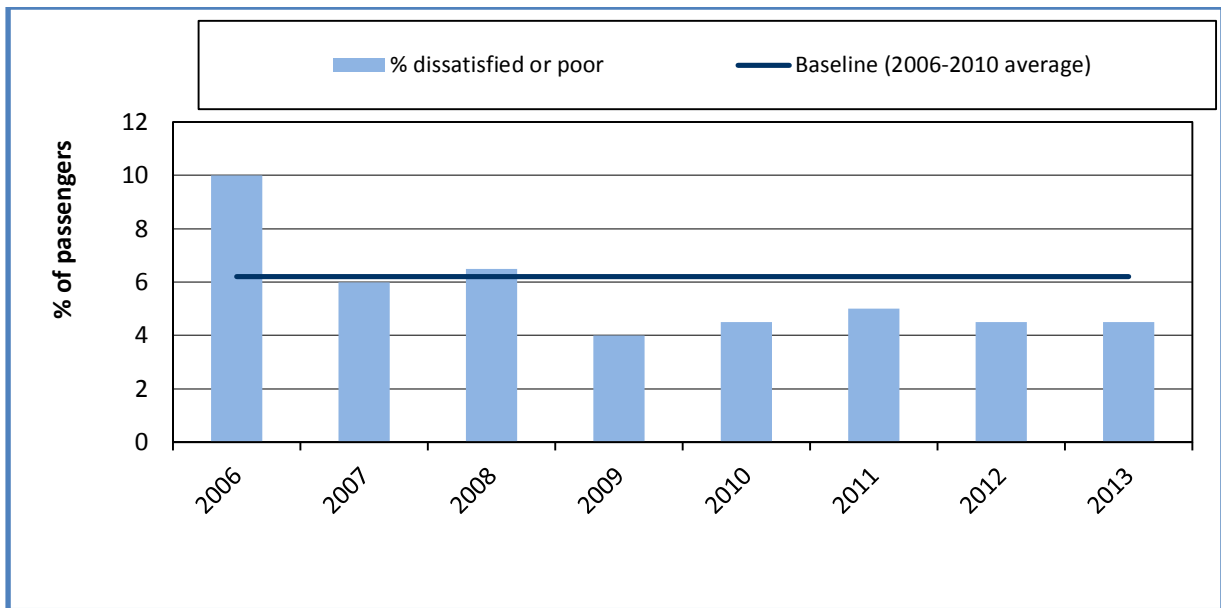
**Trend:** Rail passenger journeys in Wales have continued to increase in 2013. Passenger journeys have increased steadily since 2006.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT16

#### Welsh Transport Sector Indicator 7 - Train user satisfaction



**Indicator:** Train user satisfaction  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WT11-3, WT17

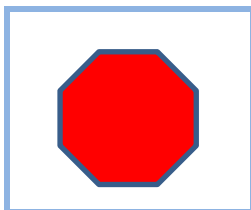


	Baseline (2006-2010 average)	2011	2012	2013
% dissatisfied	6.2	5	4.5	5

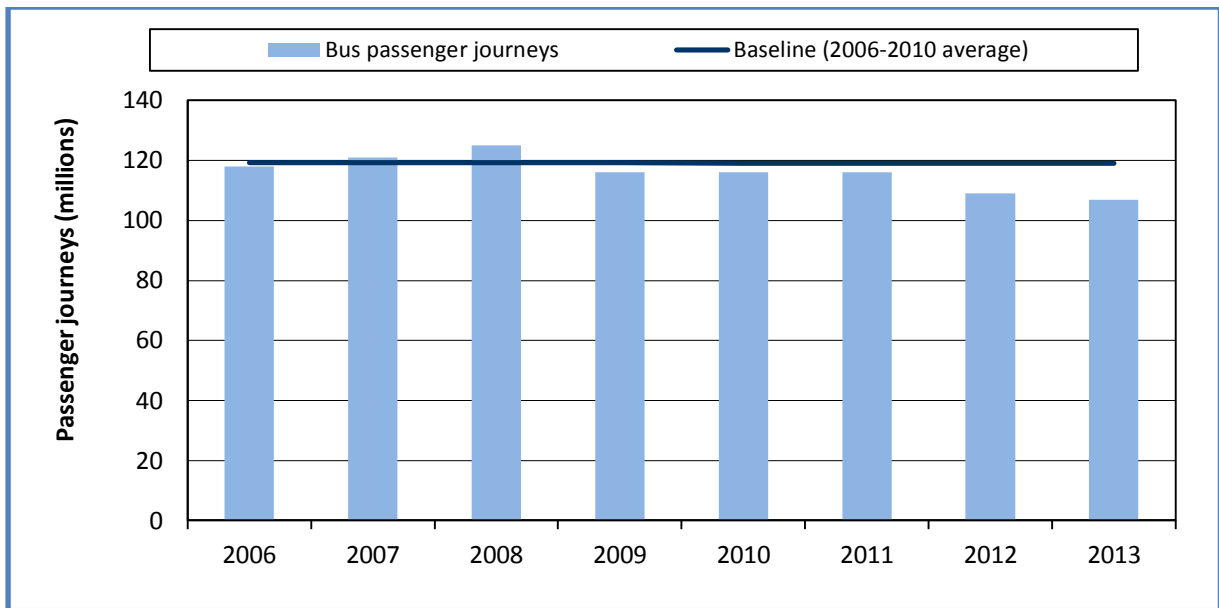
**Trend:** The percentage of rail passengers that were dissatisfied with the service reduce in 2013 compared to 2012. Satisfaction rate has been variable but has improved overall since 2006 – stagnating in recent years.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT17

#### Welsh Transport Sector Indicator 8 - Number of bus passenger journeys



**Indicator:** Number of bus passenger journeys  
**Tier:** 3  
**Status:** Clear deterioration  
**Policy indicator:** WT11-3, WT18

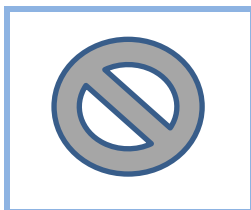


Bus passenger journeys	Baseline (2006-2010 average)	2011	2012	2013
Millions	119	116	109	107

**Trend:** Number of bus passenger journeys has decreased in 2012 against 2012 and is currently at lower levels than the baseline period.

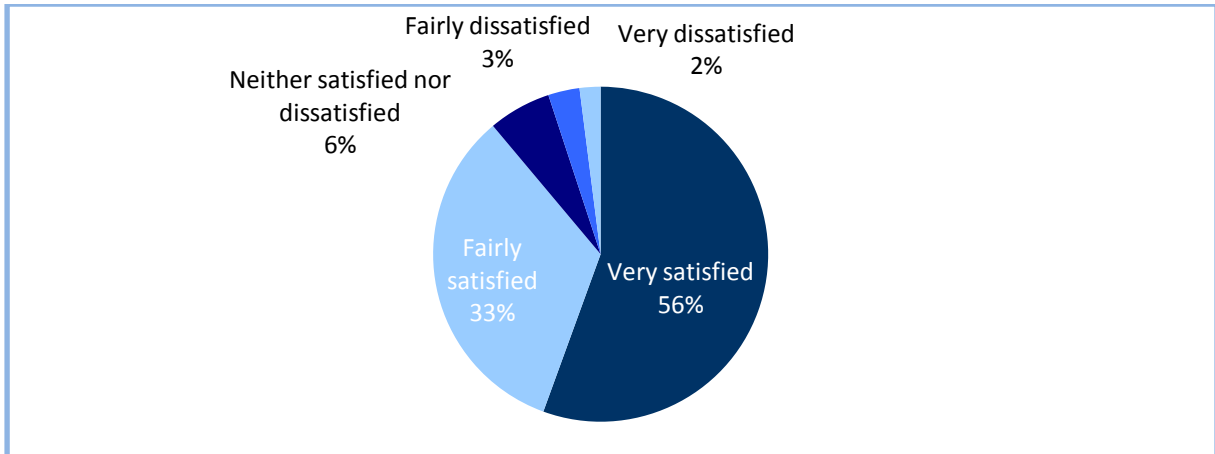
**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2014 WT18

**Welsh Transport Sector Indicator 9 - Bus Travel Satisfaction**



**Indicator:** Bus Travel Satisfaction  
**Tier:** 3  
**Status:** Baseline or insufficient data  
**Policy indicator:** WT11-3, WT18



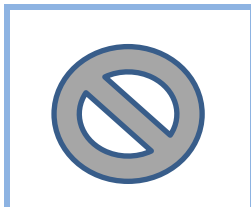


Bus passenger survey results for Wales - National Level 2010	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied
% of responses	55	33	6	3	2

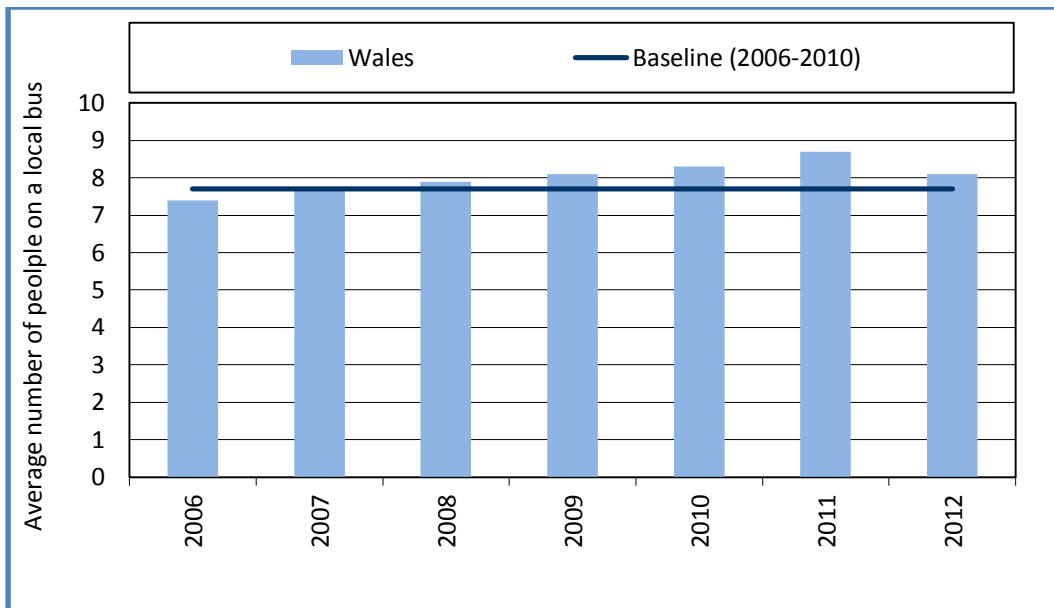
**Trend:** No historical data available since questionnaire has only taken place once in 2010.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2014 WT19

**Welsh Transport Sector Indicator 10 - Average loading of buses in Wales**



**Indicator:** Average loading of buses in Wales  
**Tier:** 3  
**Status:** Baseline or insufficient data  
**Policy indicator:** WT118

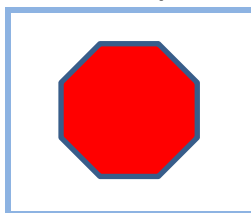


Average number of people on a local bus	Baseline (2006-2010)	2011	2012
Number	7.70	8.7	8.1

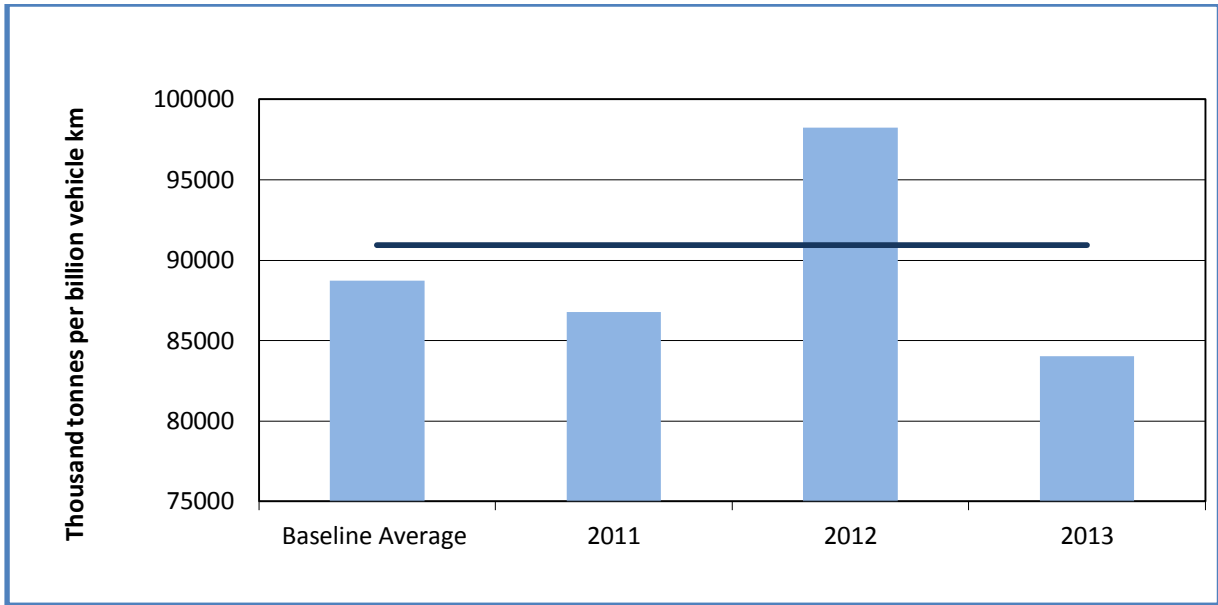
**Trend:** The average number of people on a local bus in Wales increased in 2011 against the baseline period. However, the average number decreased slightly in 2012. Compared to England and Scotland the average number of people on a local bus is lowest in Wales but the average distance travelled is greater in Wales. No data currently available for 2013

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2014 WT110

#### Welsh Transport Sector Indicator 11 - Traffic volumes of HGVs versus freight lifted in Wales



**Indicator:** Traffic volumes of HGVs versus freight lifted in Wales  
**Tier:** 3  
**Status:** Clear deterioration  
**Policy indicator:** WT110

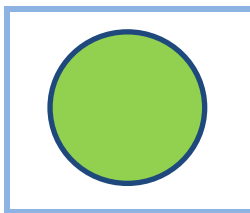


<i>Thousand tonnes per billion vehicle kms</i>	Baseline Average			
	2006-10	2011	2012	2013
Freight lifted per km travelled by goods vehicles	88,727	86,791	98,256	84,023

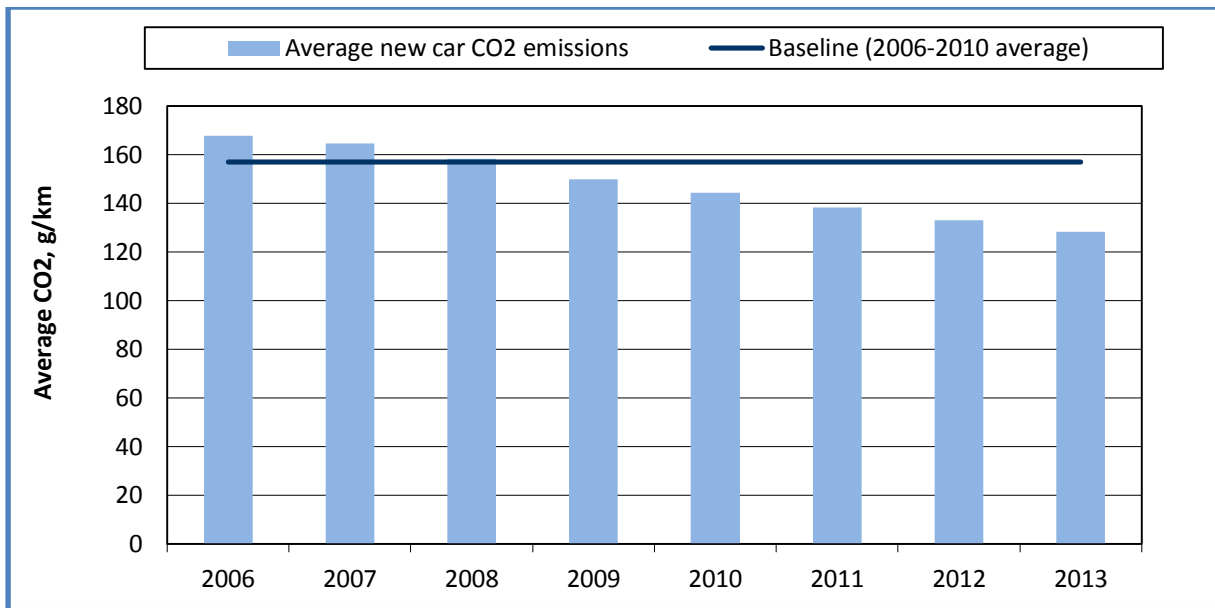
**Trend:** Freight lifted per km decreased in 2013 compared to 2012. Figures are now at their lowest level since 2009.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 WT111

**UK Transport Sector Indicator 1a - Average new car CO<sub>2</sub> emissions**



**Indicator:** Average new car CO<sub>2</sub> emissions  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** UKTI1a

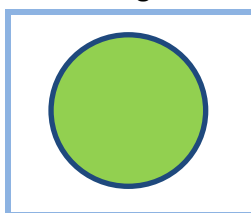


Cars registered for the first time by CO <sub>2</sub> emission band	Baseline (2006-2010 average)	2011	2012	2013
Average CO <sub>2</sub> emissions	156.9	138.2	133.0	128.4

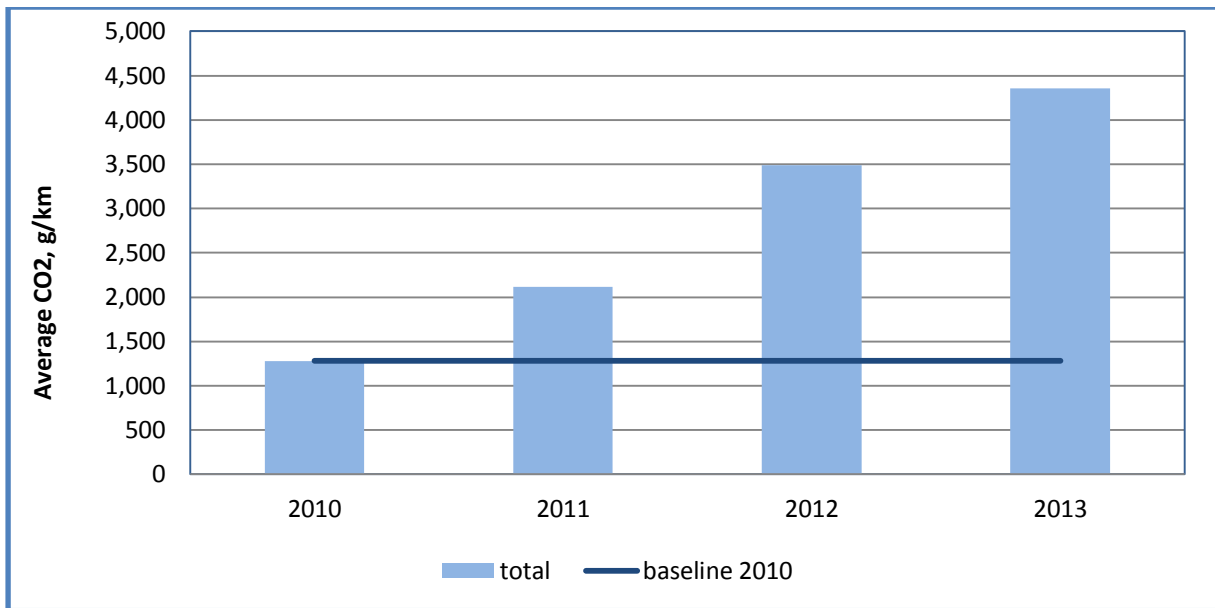
**Trend:** average new car CO<sub>2</sub> emissions have declined steadily year on year since 2006.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 UKI1a

**UK Transport Sector Indicator 1b - Ultra-low emission vehicles (ULEV) registered for the first time, United Kingdom**



**Indicator:** Ultra-low emission vehicles  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** UKT1

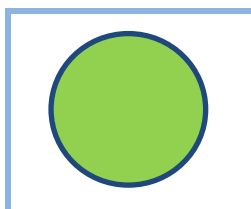


Number of ULEV registered	2010	2011	2012	2013
total	1,279	2,114	3,491	4,359

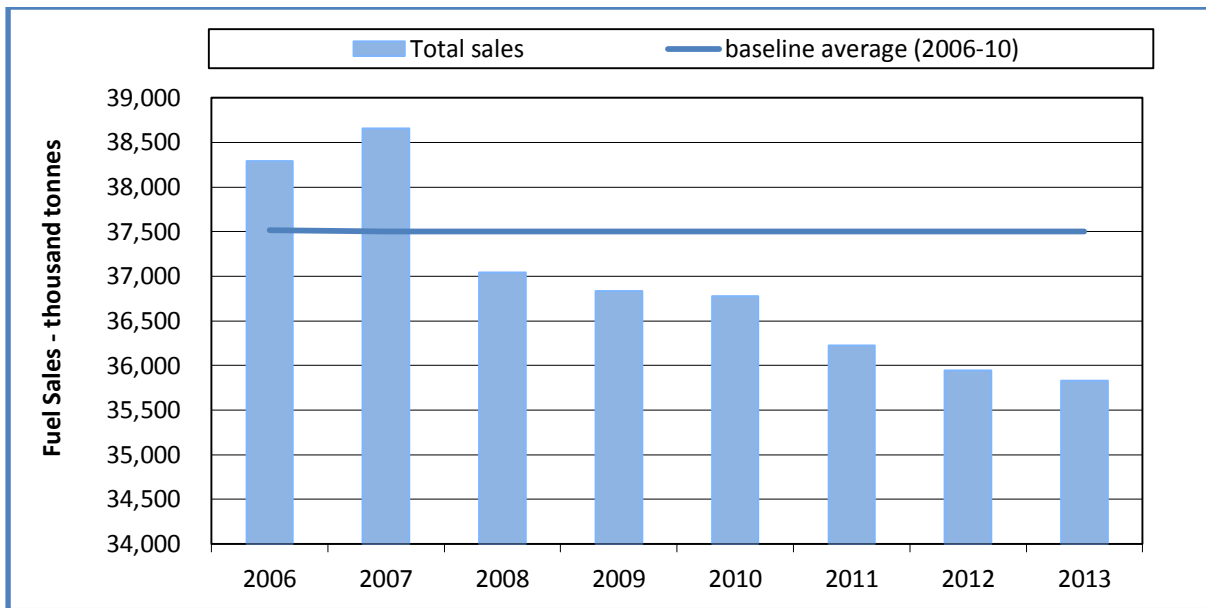
**Trend:** The number of Ultra-low emission vehicles (ULEV) registered for the first time in the United Kingdom rose continued to rise between 2012 and 2013.

**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2014 UKI1b

#### UK Transport Sector Indicator 2 – Total UK Road Transport Fuel Sales



**Indicator:** Total UK Road Transport Fuel Sales  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** UKT2



Total UK Road Transport Fuel Sales	Baseline (2006-2010)	2011	2012	2013
Thousand tonnes	37,012	36,142	35,868	35,831

**Trend:** Total UK road transport fuel sales continued to decrease significantly in 2013. Following an increase between 2006 -2007, sales have decreased yearly.



**Indicator spread sheet reference:** Welsh Transport Sector Indicators 2015 UKI2







### 3. Residential Sector

This spreadsheet contains the indicators for the residential sector. The residential sector is responsible for 24% of emissions covered by the 3% target. The baseline average emissions in the sector are 7.69 Mt CO<sub>2</sub>e and the latest data shows emissions of 7.11MtCO<sub>2</sub>e. It is estimated that Welsh Government action in the residential sector will deliver 0.56 MtCO<sub>2</sub>e savings in 2020, whilst UK action in the residential sector will deliver 1.20 MtCO<sub>2</sub>e savings in Wales in 2020.





Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WR1 and WR2, as shown below. Indicators are typically cross-cutting and linked to more than one policy. Please note that due to changes in the way in which many residential sector policies are implemented and classified in Wales we need to revise the way we track progress over time. As a result many of the indicators in this sector are listed as *Baseline or insufficient data*.

Policy Number	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WR1	Area based domestic energy efficiency programmes. (Arbed)	0.03
WR2	Demand-led energy efficiency programmes focused on those at risk of fuel poverty.	0.19
WR3	Supporting community scale energy generation.	0.03
WR4	Improving the energy performance of social housing.	Not Quantified yet
WR5	Behaviour change at home.	0.31
WR6	Low carbon new build Wales.	Not Quantified yet
UKR1	Green Deal and Green Investment Bank	1.2
UKR2	Energy Saving Trust	Assumed to be part of other actions

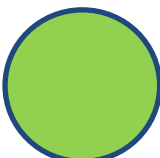
Policy number	Indicator	Indicator number	Tier	Status
WR1-6	Residential sector GHG emissions	<a href="#">R11</a>	1	
WR1-6	Residential fuel consumption	<a href="#">R12</a>	2	

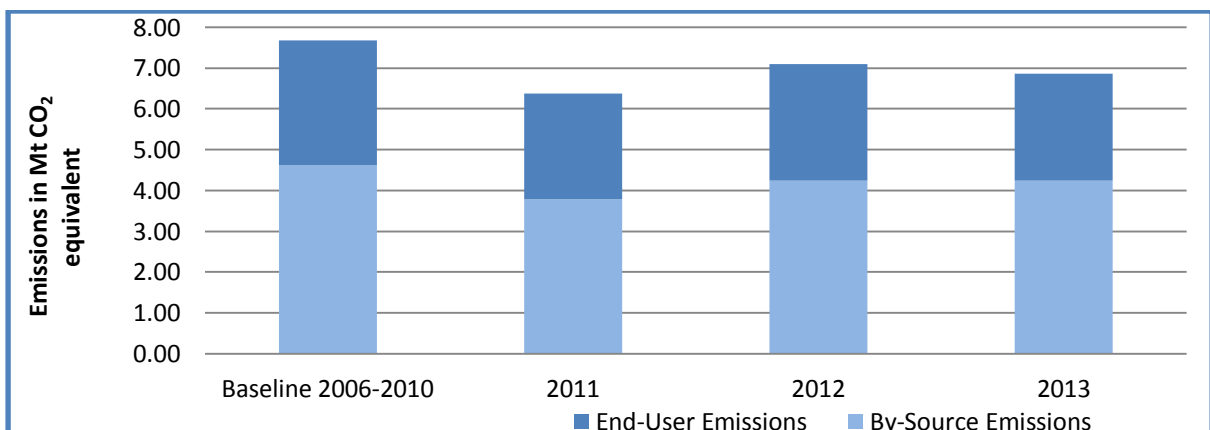
WR4	Energy efficiency improvements - Households (inc social housing)	<a href="#">R13</a>	3	
WR1-2	Energy Efficiency improvements - Measures	<a href="#">R14</a>	3	
WR3	Microrenewables	<a href="#">R15</a>	3	
WR5	Behaviour change in the home	<a href="#">R16</a>	3	
WR6	Improving standards in new build in Wales	<a href="#">R17</a>	3	
UKR1	Domestic Green Deal	<a href="#">UKR1</a>	3	

	Clear improvement		Stable or no clear trend		Clear deterioration		Baseline or insufficient data
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### Residential Sector Indicator 1 - Residential sector GHG emissions

	<b>Indicator:</b>	Residential Sector GHG emissions
	<b>Tier:</b>	3
	<b>Status:</b>	Clear improvement
	<b>Policy indicator:</b>	WR1-6



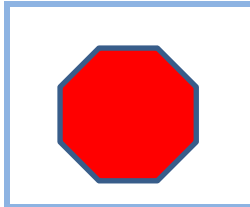
Residential sector GHG emissions	Baseline (2006-2009 average)	2011	2012	2013
Emissions in Mt CO <sub>2</sub> equivalent	7.67	6.37	7.10	6.87



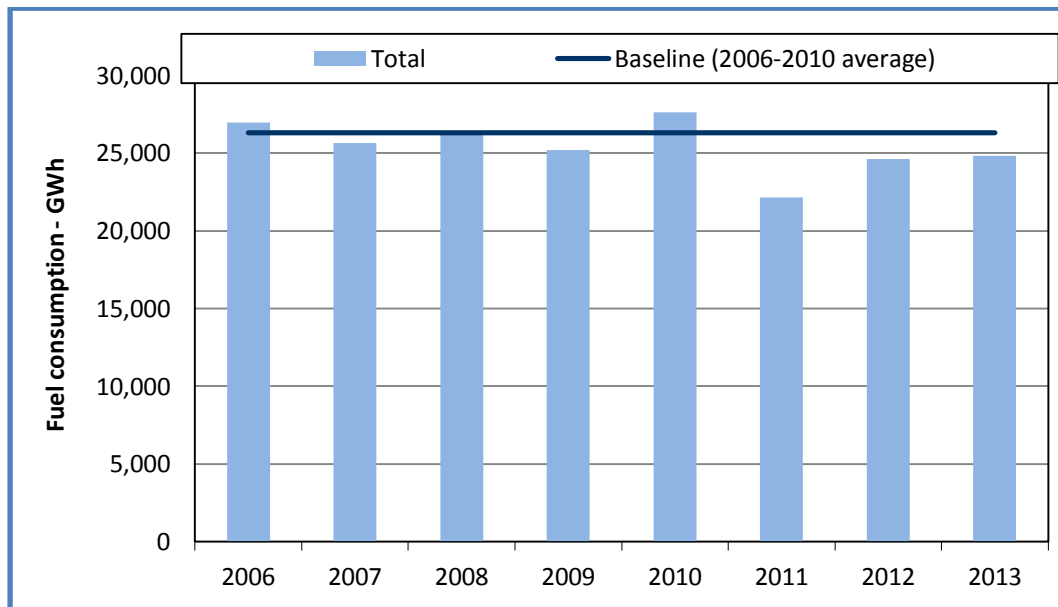
**Trend:** Residential sector GHG emissions reduced in 2013 against the 2012 emissions. Emissions from the residential sector are sporadic over the time series being driven by contextual factors such as average winter temperatures. However, emissions are currently below the baseline average emissions from 2006 to 2010.

**Indicator spread sheet reference:** Residential Sector Indicators 2015 RI1

**Residential Sector Indicator 2 - Residential fuel consumption**



**Indicator:** Residential fuel consumption  
**Tier:** 3  
**Status:** Clear deterioration  
**Policy indicator:** WR1-6



Fuel Consumption	Baseline (2006-2009 average)	2011	2012	2013
GWh	26,318	22,140	24,608	24,806

**Trend:** Fuel consumption in the Residential sector increased in 2013 compared to 2012. Residential fuel consumption has fluctuated since 2006, driven by contextual factors such as fuel price and average temperatures. However, fuel consumption was lower in the 2013 than the baseline.

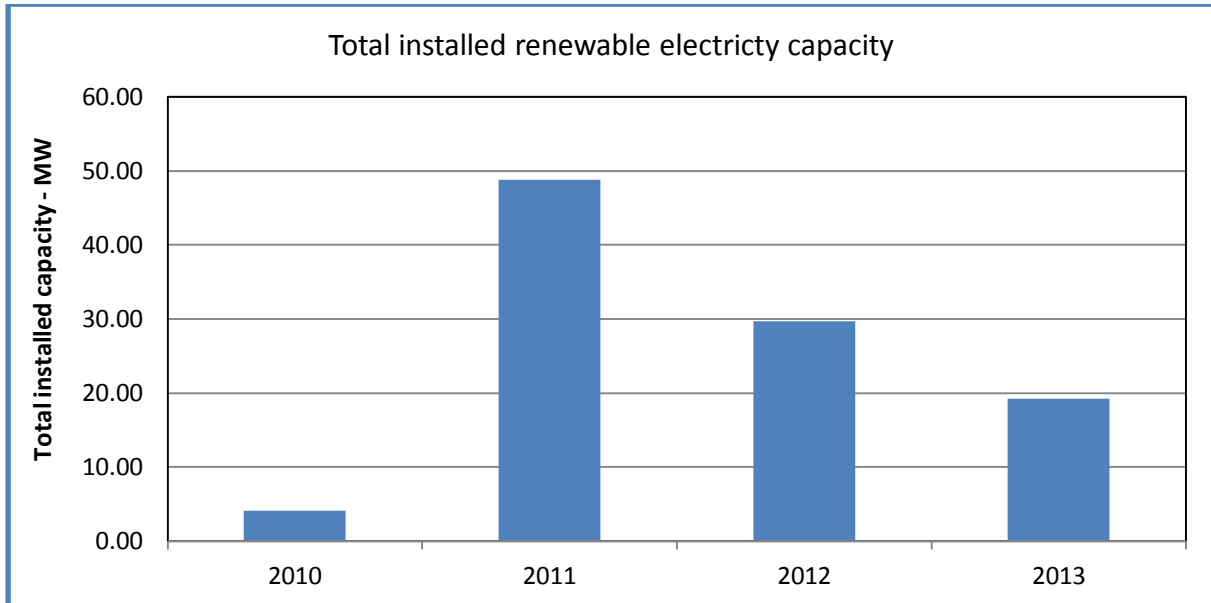
**Indicator spread sheet reference:** Residential Sector Indicators 2014 RI1

**Residential Sector Indicator 5 - Residential sector GHG emissions – Micro-renewables**



**Indicator:** Micro-renewables

**Tier:** 3  
**Status:** Clear deterioration  
**Policy indicator:** WR3

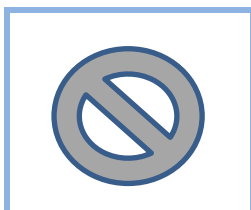


Total installed renewable electricity capacity	2010	2011	2012	2013
Capacity (MW)	4.068	48.838	29.662	19.247

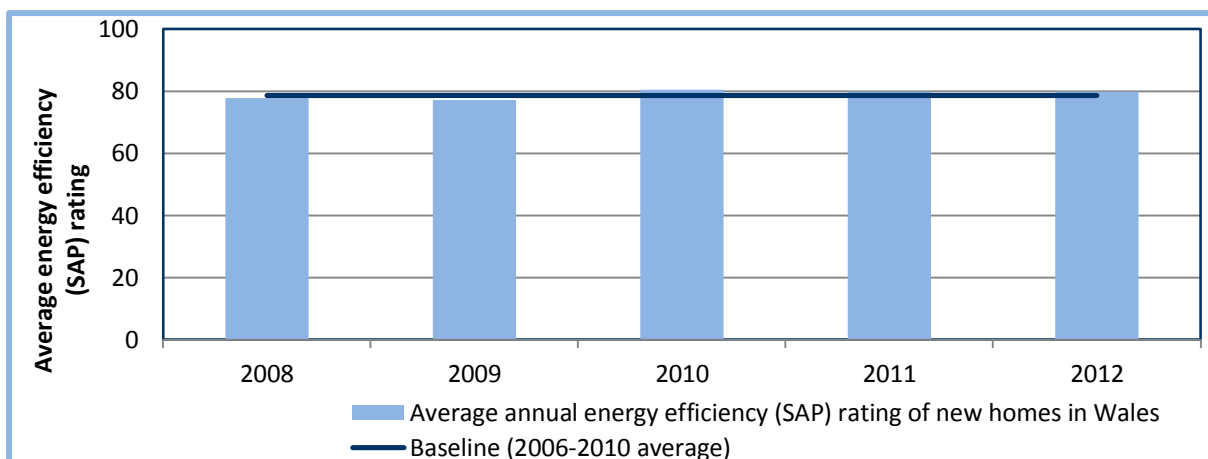
**Trend:** Total installed renewable electricity capacity decreased in 2013 against versus 2012. However, total installed renewable electricity capacity remains significantly higher than the 2010 baseline.

**Indicator spread sheet reference:** Residential Sector Indicators 2015 RI5

#### Residential Sector Indicator 7 - Improving standards in new build in Wales



**Indicator:** Improving standards in new build in Wales  
**Tier:** 3  
**Status:** Stable or no clear trend  
**Policy indicator:** WR6

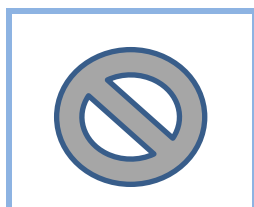


Average annual energy efficiency (SAP) rating of new homes in Wales	Baseline (2008-2010 average)	2011	2012
SAP rating	78.53	79.87	79.79

**Trend:** Average annual energy efficiency (SAP) rating of new homes in Wales in 2012 remains relatively stable. However, the average SAP ratings of new homes in Wales remain above the baseline. No new 2013 data.

**Indicator spread sheet reference:** Residential Sector Indicators 2015 RI7

#### UK Residential Sector Indicator 1 - Domestic Green Deal



**Indicator:** Projected savings from domestic green deal  
**Tier:** 3  
**Status:** Baseline or insufficient data  
**Policy indicator:** UKR1

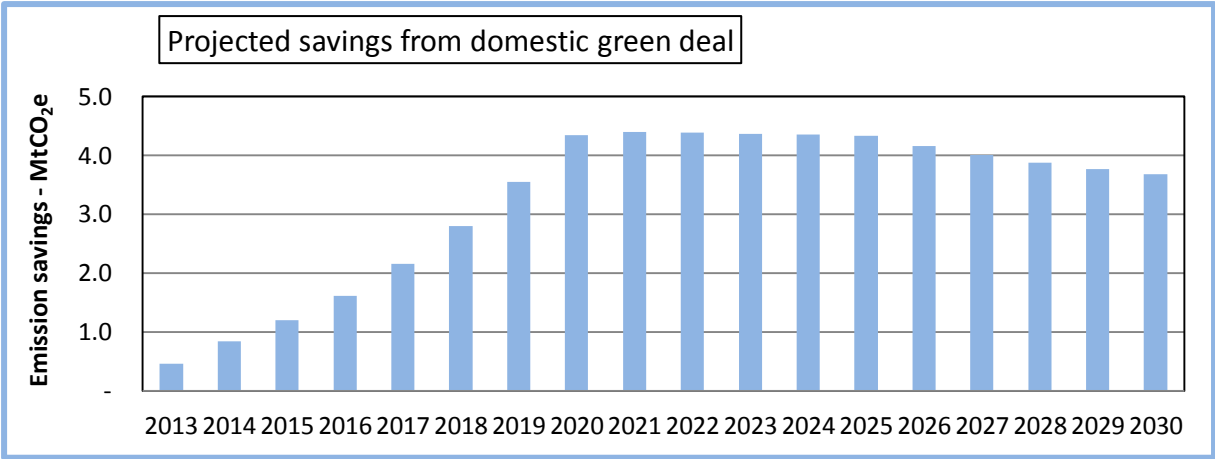


Figure 1 - Projected savings from domestic green deal

**Trend:** These are projection estimates. Data is currently unavailable on progress




**Indicator spread sheet reference:** Residential Sector Indicators 2015 UKR1

## 4. Business Sector





This section contains the indicators for the business sector. The business sector accounts for 31% of emissions covered by the 3% emission reduction target (excluding direct emissions from heavy industry and energy generation) with a baseline emission level of 11.27 MtCO<sub>2</sub>e. It is estimated that Welsh Government action in the business sector will deliver 0.62 MtCO<sub>2</sub>e savings in 2020, whilst UK action in the business sector will deliver 0.50 MtCO<sub>2</sub>e savings in Wales in 2020.

Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WB1 and WB2, as shown below. Indicators are typically cross-cutting and linked to more than one policy.

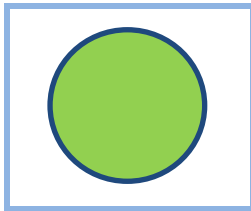
Policy No.	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WB1	Economic Renewal: a new direction	Not Quantified yet
WB2	Carbon Trust	0.31
WB3	Enabling more resource efficient business	0.17
WB4	Skills for a low carbon economy	Not Quantified yet
WB5	More efficient use of, and regulation of, waste heat and energy	0.14
WB6	Low carbon energy	Targets set on end user rather than by source
UKB1	Energy intensive business package	0.2
UKB2	Carbon Reduction Commitment Energy Efficiency Scheme.	0.04
UKB3	Enhanced capital allowances.	0.01
UKB4	Feed in Tariffs	0.25

Policy code	Indicator	Indicator number	Tier	Status
WB1-6	Business sector GHG emissions	<a href="#">B11</a>	1	
WB1-6	Business sector fuel consumption	<a href="#">B12</a>	2	
UKB2	Business sector CRC emissions	<a href="#">UKB1</a>	3	

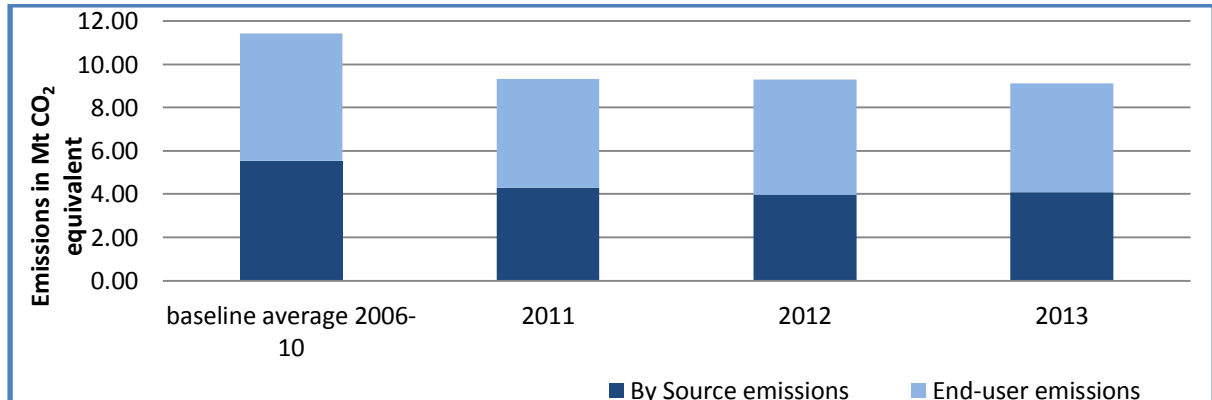
  

 Clear improvement	 Stable or no clear trend	 Clear deterioration	 Baseline or insufficient data
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### Welsh Business Indicator 1 - Business sector GHG emissions



**Indicator:** Business sector GHG emissions  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WB1-6

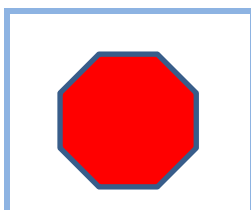


Emissions in Mt CO <sub>2</sub> e	Baseline Average 2006-2010	2011	2012	2013
Business sector GHG emissions	11.41	9.31	9.29	9.12

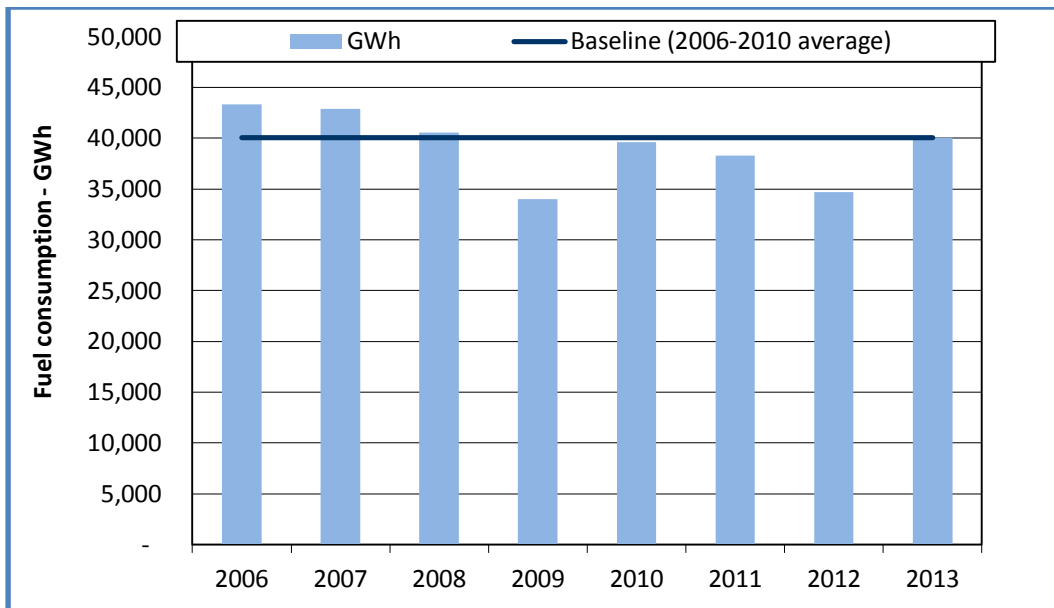
**Trend:** Business sector emissions decreased in 2013 compared to 2012. Emissions in the sector remain below the baseline average period. Note that the recession has led to a larger drop in emissions between 2008 and 2009 in many sectors.

**Indicator spread sheet reference:** Business Sector Indicators 2014 WB11

### Welsh Business Indicator 2: Business sector fuel consumption



**Indicator:** Business sector fuel consumption  
**Tier:** 2  
**Status:** Clear deterioration  
**Policy indicator:** WB1-6

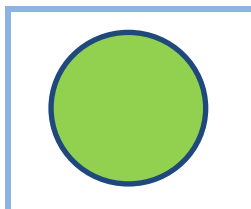


Fuel Consumption	Baseline Average 2006-2010	2011	2012	2013
Total GWh	40,072	38,288	34,683	40,042

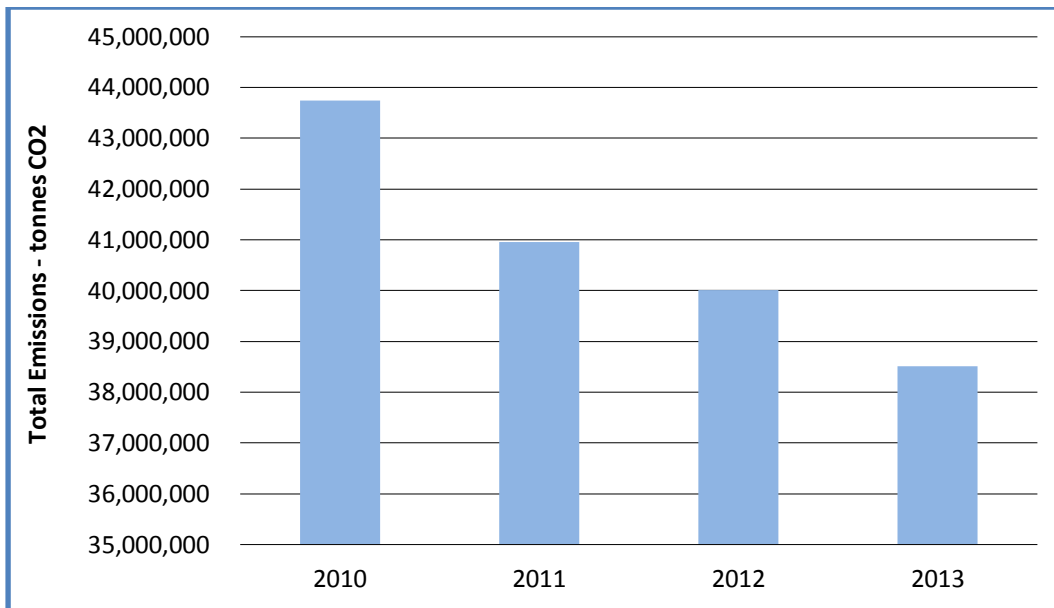
**Trends:** Business sector fuel consumption increased in 2013 against 2012.

**Indicator spread sheet reference:** Business Sector Indicators 2015 WB12

**UK Business Indicator 3: Business sector CRC emissions**



**Indicator:** Business sector CRC emissions  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WB1-6



Business Sector CRC emissions	2010	2011	2012	2013
Total	43,736,252	40,960,963	40,005,131	38,514,201

**Trends:** Carbon Reduction Commitment relevant emissions reduced in 2013 against 2012.

**Indicator spread sheet reference:** Business Sector Indicators 2015 UKBI1
















## 5. Agriculture and land use sector

This section contains the indicators for the agriculture and land use land use change and forestry (LULUCF) sector. The Agriculture and Land Use sector accounts for 20% of emissions covered by the 3% target and has a baseline emission level of 6.00 Mt CO<sub>2</sub>e. It is estimated that the sector will deliver 0.60 MtCO<sub>2</sub>e savings in 2020.





Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WA1 and WA2, as shown below. Indicators are typically cross-cutting and linked to more than one policy.

Policy number	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WA1	Woodland creation.	Not Quantified yet
WA2	Optimal management of current woodland sink.	Not Quantified yet
WA3	Glastir	Not Quantified yet
WA4	Supporting behaviour change in farming practice.	Not Quantified yet
WA5	Dairy and Red Meat Road Maps.	Not Quantified yet

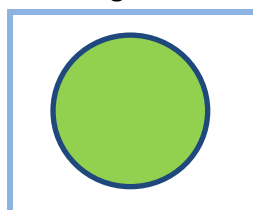
Policy number	Indicator	Indicator number	Tier	Status
WA1, WA3, WA4 and WA5	Agriculture and land-use sector GHG Emissions	ALI1	1	
WA2	LULUCF sector GHG Emissions	ALI2	1	
WA1	Woodland Area	<a href="#">ALI3</a>	2	
WA1	Land Converted to Forest Land (GHG Inventory)	<a href="#">ALI4</a>	2	
WA2	Management of existing forestland (GHG Inventory)	<a href="#">ALI5</a>	2	
WA4	Crop production and yield	<a href="#">ALI6</a>	2	
WA4	Average fertiliser application rates for England and Wales	<a href="#">ALI7</a>	2	

WA4	Livestock numbers	<a href="#">ALI8</a>	2	
WA4	Fuel Consumption by agricultural mobile machinery	<a href="#">ALI9</a>	2	
WA1	Annual planting rate - new planting and restocking	<a href="#">ALI10</a>	3	
WA1	Woodland Area	<a href="#">ALI11</a>	3	
WA3	Glastir and Farm Connect Scheme	<a href="#">ALI12</a>	3	
WA4	Menter a Busnes	<a href="#">ALI13</a>	3	

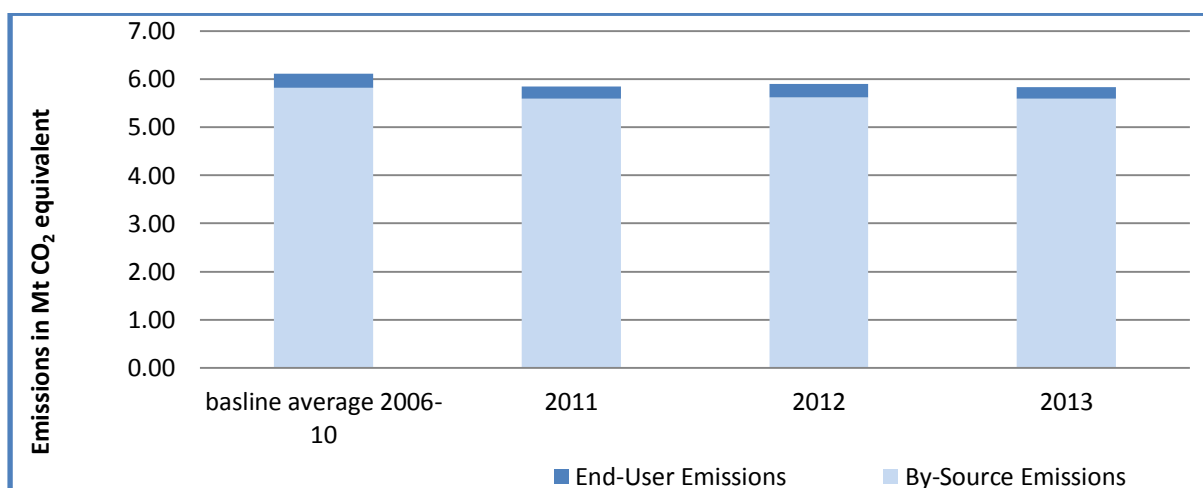
  

	Clear improvement		Stable or no clear trend		Clear deterioration		Baseline or insufficient data
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### Welsh Agriculture and Land Use Indicator 1 - Agriculture and land-use sector GHG Emissions



**Indicator:** Agriculture and land-use sector GHG Emissions  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WA1, WA3, WA4 and WA5

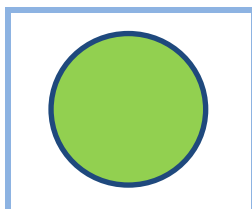


Agriculture and land-use sector GHG emissions	Baseline (2006-2010 average)	2011	2012	2013
Total (Mt CO <sub>2</sub> equivalent)	6.12	5.85	5.90	5.84

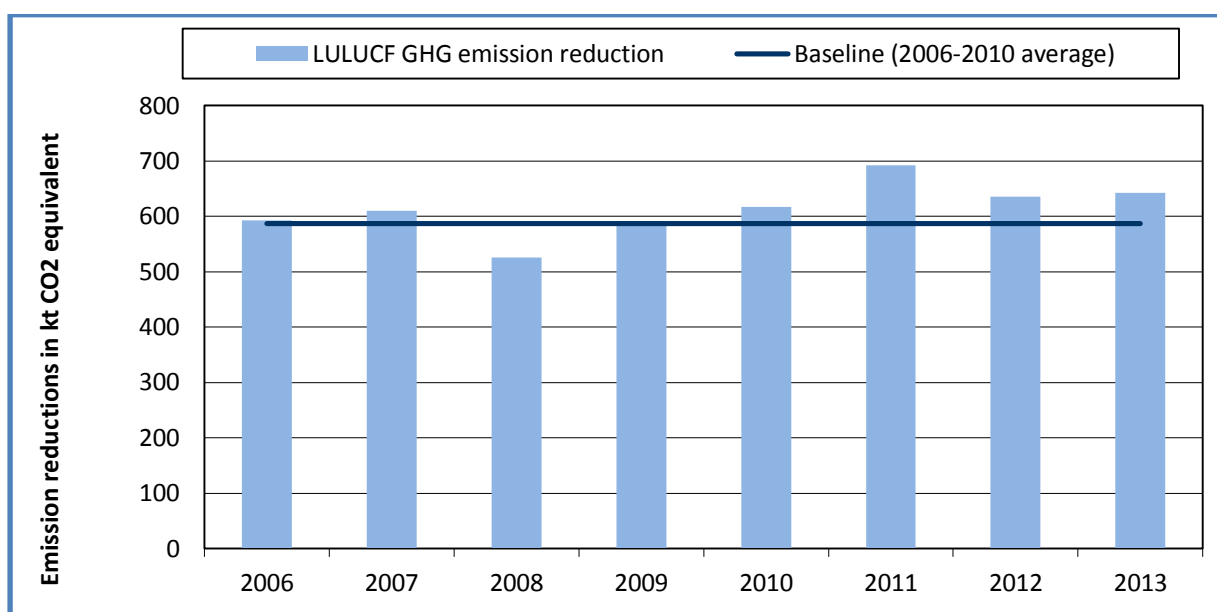
**Trend:** Agriculture and land-use sector GHG emissions decreased in 2013. Emissions remain below the 2006-2010 baseline in 2012.

**Indicator spread sheet reference:** Welsh Agriculture and Land Use Indicators 2015 WAI1

**Welsh Agriculture and Land Use Indicator 2 - LULUCF sector GHG Emissions**



**Indicator:** LULUCF sector GHG Emissions  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WA2

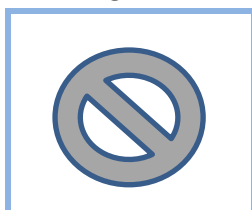


LULUCF GHG emission reductions	Baseline (2006-2010 average)	2011	2012	2013
Emissions in KtCO <sub>2</sub> equivalent	587.49	691.93	635.66	642.31

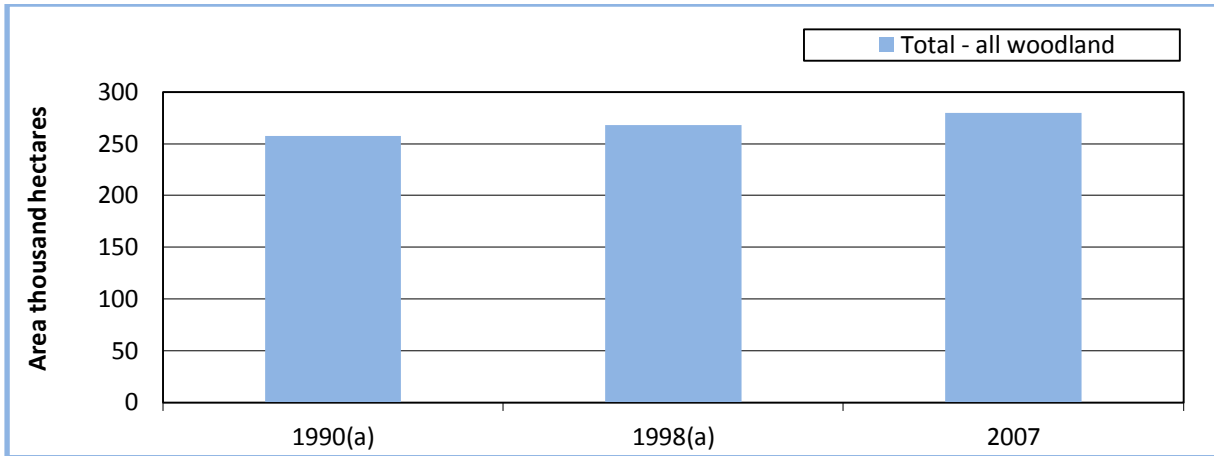
**Trend:** LULUCF sector GHG emissions reductions increased in 2013 against 2012.

**Indicator spread sheet reference:** Welsh Agriculture and Land Use Indicators 2015 WAI2

**Welsh Agriculture and Land Use Indicator 3 - Woodland Area**



**Indicator:** Woodland Area - Countryside Survey Data  
**Tier:** 2  
**Status:** Baseline or insufficient data  
**Policy indicator:** WA1

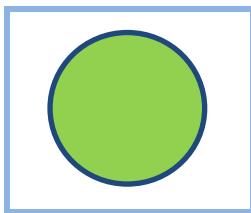


All woodland	1990	1998	2007
Thousand hectares	257	267	279

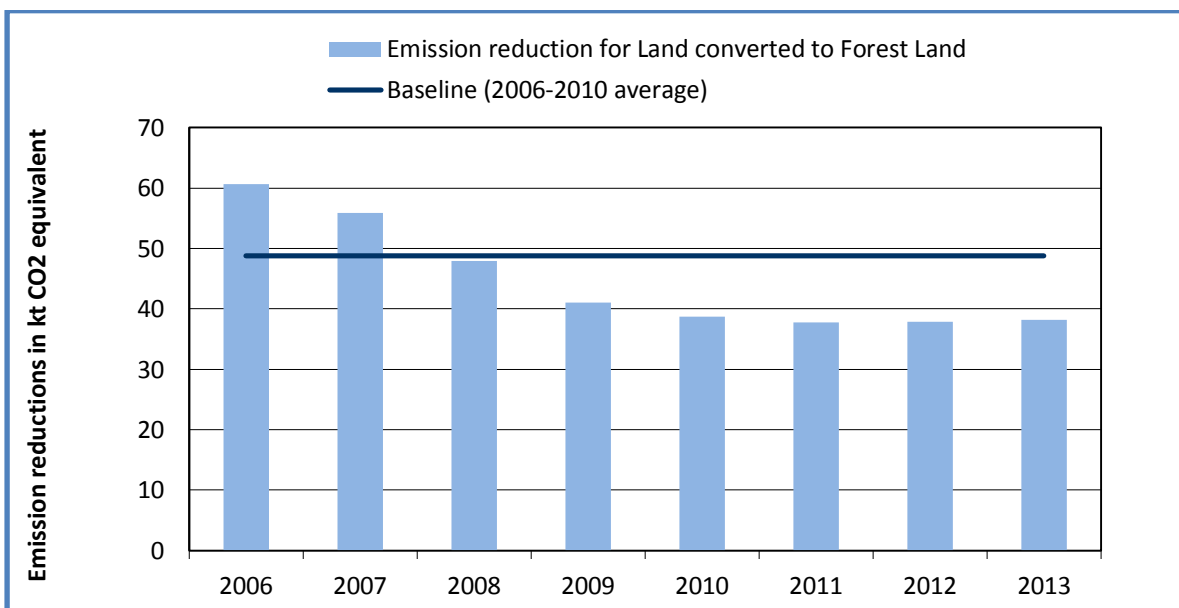
**Trends:** Woodland significantly increased between 1990 and 2007. However, there is no available data to assess the current trend and measure progress.

**Indicator spreadsheet reference:** Welsh Agriculture and Land Use Indicators 2015 WAI3

**Welsh Agriculture and land use Indicator 4 -Land Converted to Forest Land (GHG Inventory)**



**Indicator:** Land Converted to Forest Land (GHG Inventory)  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WA1

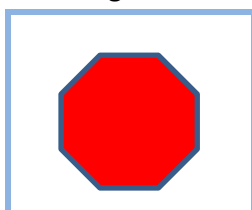


Land Converted to Forest Land	Baseline (2006-2010 average)	2011	2012	2013
Emissions in Kt CO <sub>2</sub> equivalent	48.83	37.75	37.87	38.19

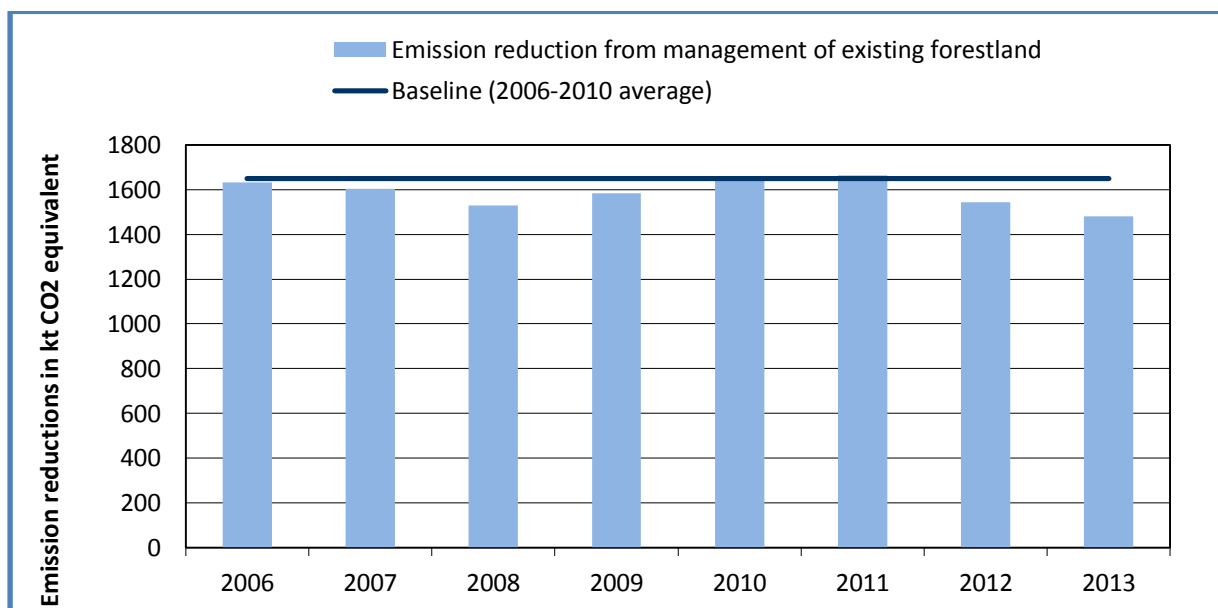
**Trend:** The emissions sink from Land Converted to forest land continued to increase in 2013. However, from 2006 to 2010 the sink declined year on year and remains below the average baseline period.

**Indicator spread sheet reference:** Welsh Agriculture and Land Use Indicators 2015 WAI4

**Welsh Agriculture and Land Use Indicator 5 -Management of existing forestland (GHG Inventory)**



**Indicator:** Management of existing forestland (GHG Inventory)  
**Tier:** 2  
**Status:** Clear deterioration  
**Policy indicator:** WA1

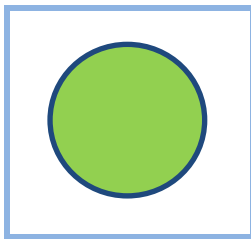


Emission reduction from management of existing forestland	Baseline (2006-2010 average)	2011	2012	2013
Emissions in Kt CO <sub>2</sub> equivalent	1648	1664	1544	1479

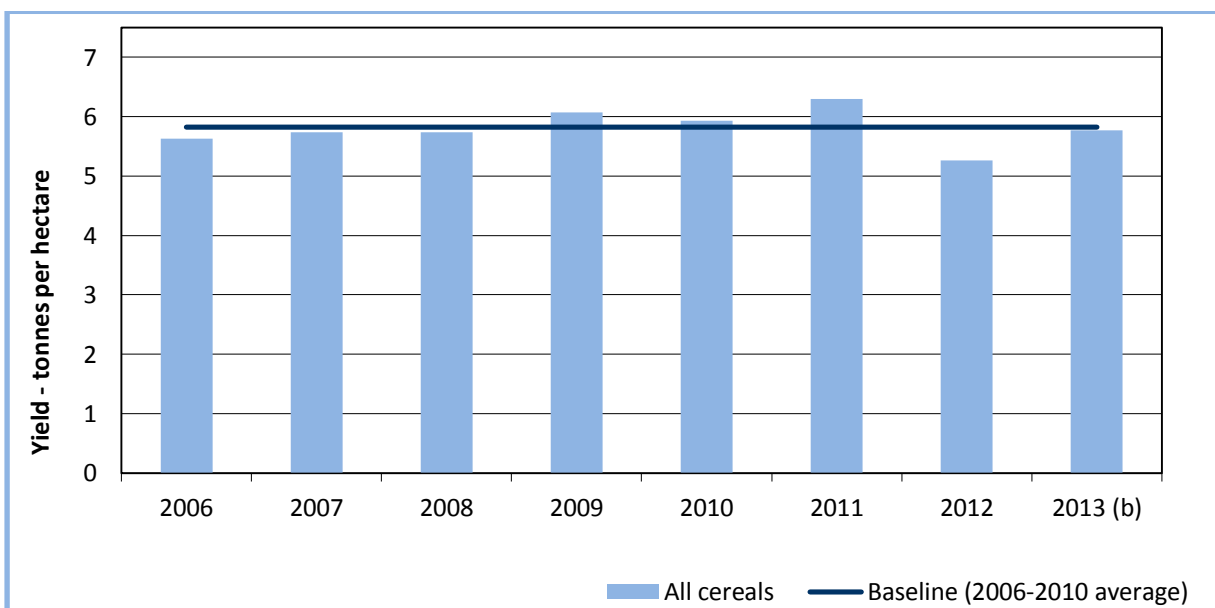
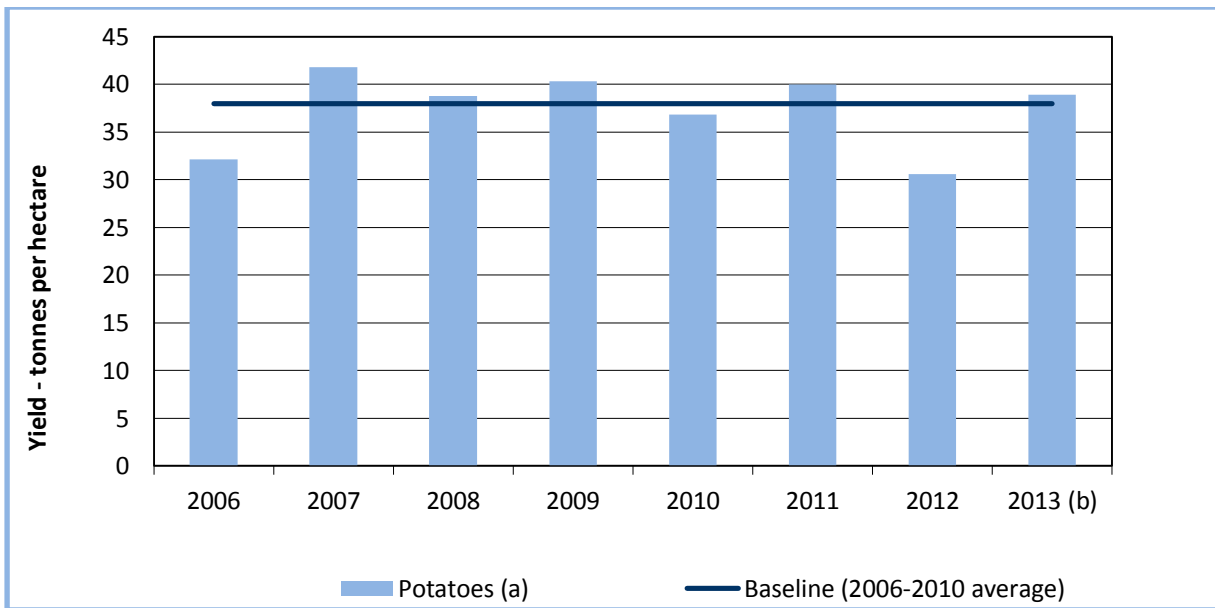
**Trend:** Emission reduction from management of existing forestland reduced in 2013 against 2012 and remains below the baseline period. .

Indicator spread sheet reference: Welsh Agriculture and Land Use Indicators 2015WAI5

**Welsh Agriculture and Land Use Indicator 6 - Crop production of wheat, barley, oats and potatoes - Yield**



**Indicator:** Crop production of wheat, barley, oats and potatoes - Yield  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WA3



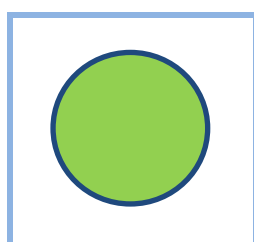
Yield (tonnes per hectare)	Baseline (2006-2010 average)	2011	2012	2013
30	38.5	40	30	39
5.2	5.8	6.3	5.2	5.8

Potatoes	38	40	30.6	38.9
All cereals	5.8	6.3	5.3	5.8

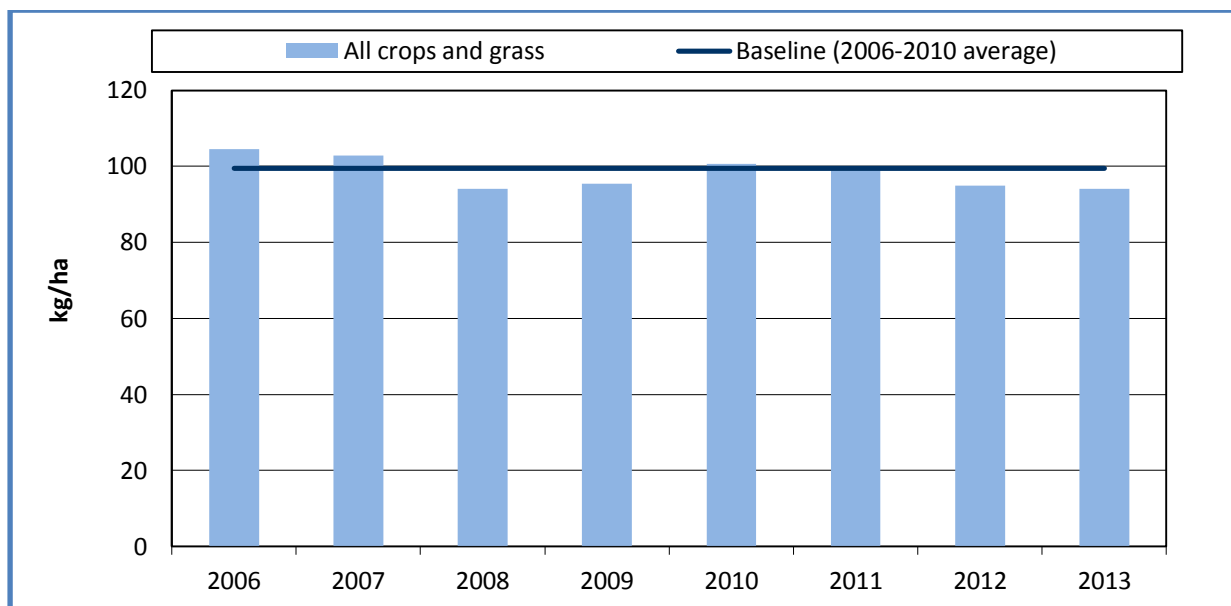
**Trends:** Crop production yield of wheat, barley, oats and potatoes increased in 2013. Increases in crop yield (tonnes per hectare) might correspond to increases in farming efficiency if Fertiliser Use (ALI9) is also declining for the same crops. Wheat and Barley are the major crops in terms of highest production and land area.

**Indicator spread sheet reference:** Welsh Agriculture and Land Use Indicators 2015 WAI6

**Welsh Agriculture and Land Use Indicator 7 - Average fertiliser application rates for England and Wales**



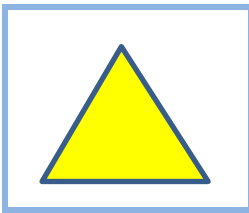
**Indicator:** Average fertiliser application rates for certain crops and grass (England and Wales)  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WA4



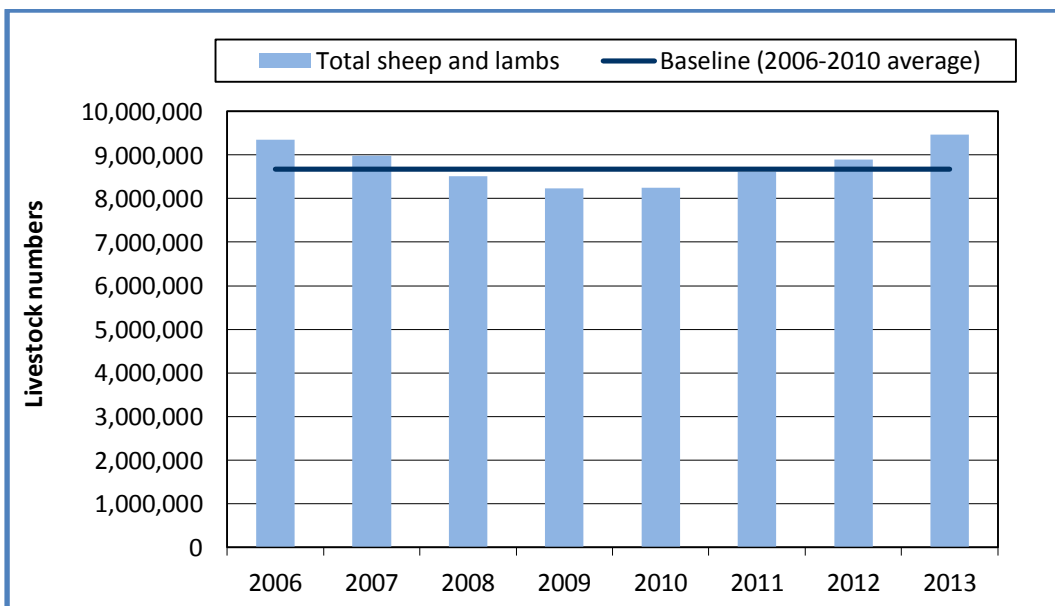
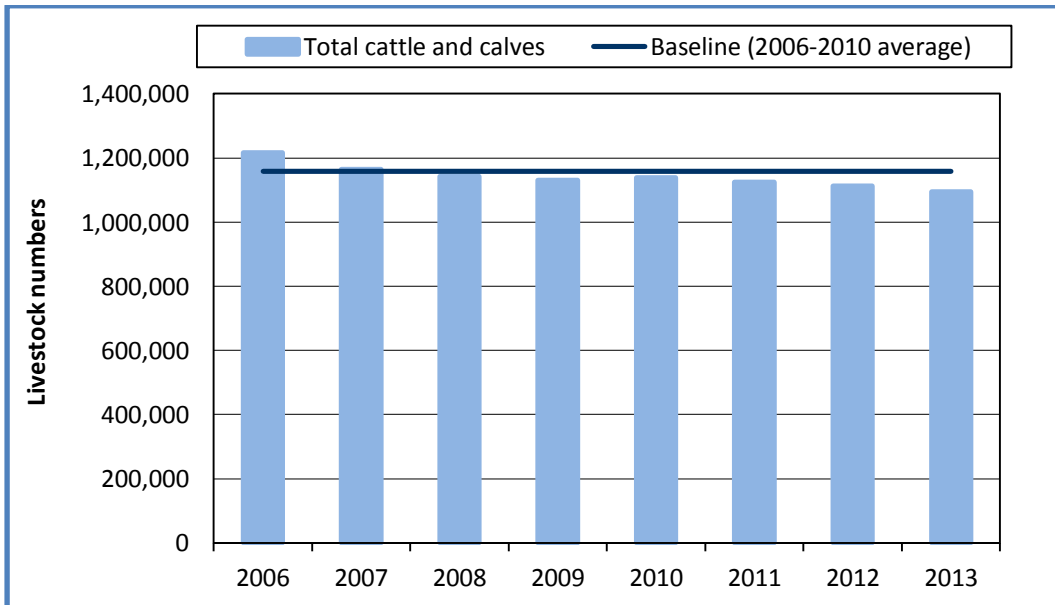
All crops and grass	Baseline (2006-2010 average)	2011	2012	2013
kg/ha	100	99	95	94

**Trend:** Average fertiliser application rates for certain crops and grass (England and Wales) have declined in 2013 against 2012. Average fertiliser application is currently lower than the baseline average.

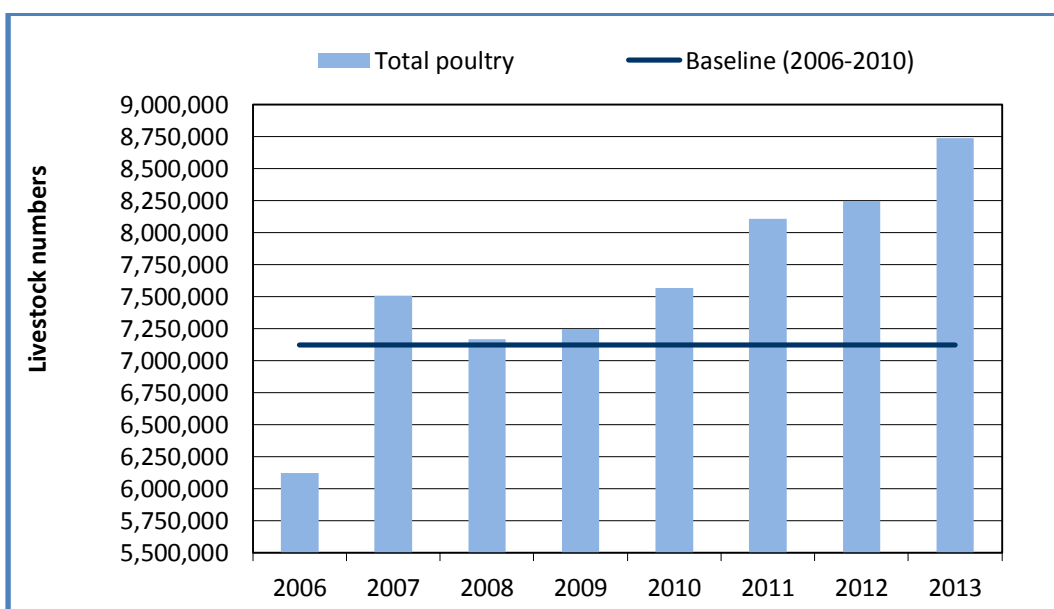
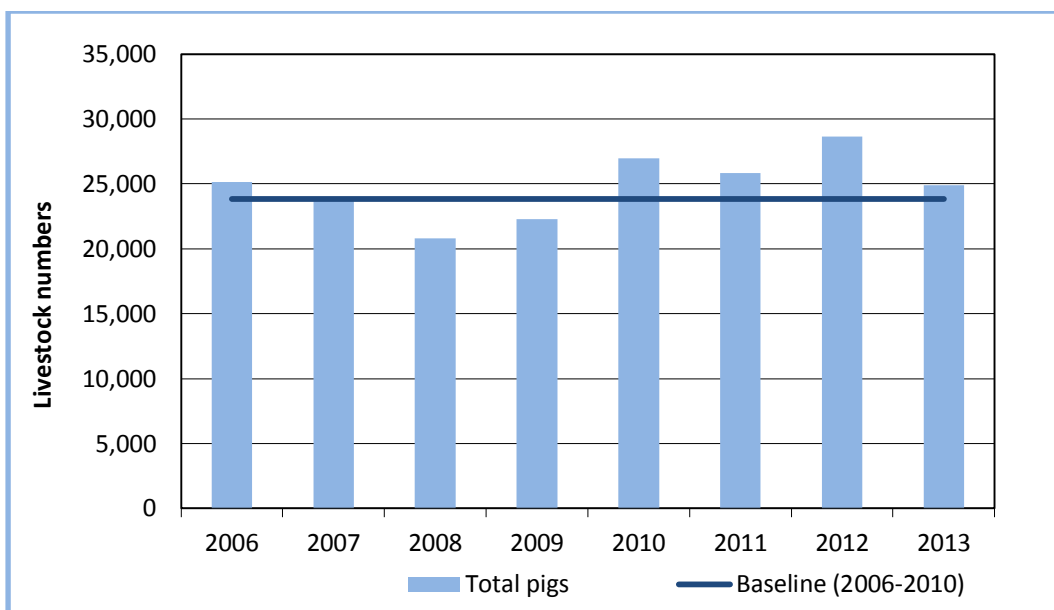
Welsh Agriculture and Land Use Indicator 8 - Livestock numbers



**Indicator:** Livestock numbers  
**Tier:** 2  
**Status:** Stable or no clear trend  
**Policy indicator:** WA4





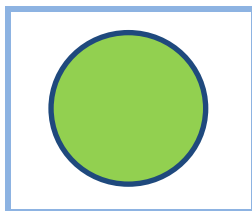


Livestock numbers	Baseline (2006-2010 average)	2011	2012	2013
Cattle and calves	1,158,447	1,123,449	1,113,141	1,094,644
Sheep and lambs	8,667,446	8,619,414	8,898,183	9,460,692
Pigs	23,813	25,809	28,665	24,890
Poultry	7,330,312	8,110,979	8,248,225	8,736,547

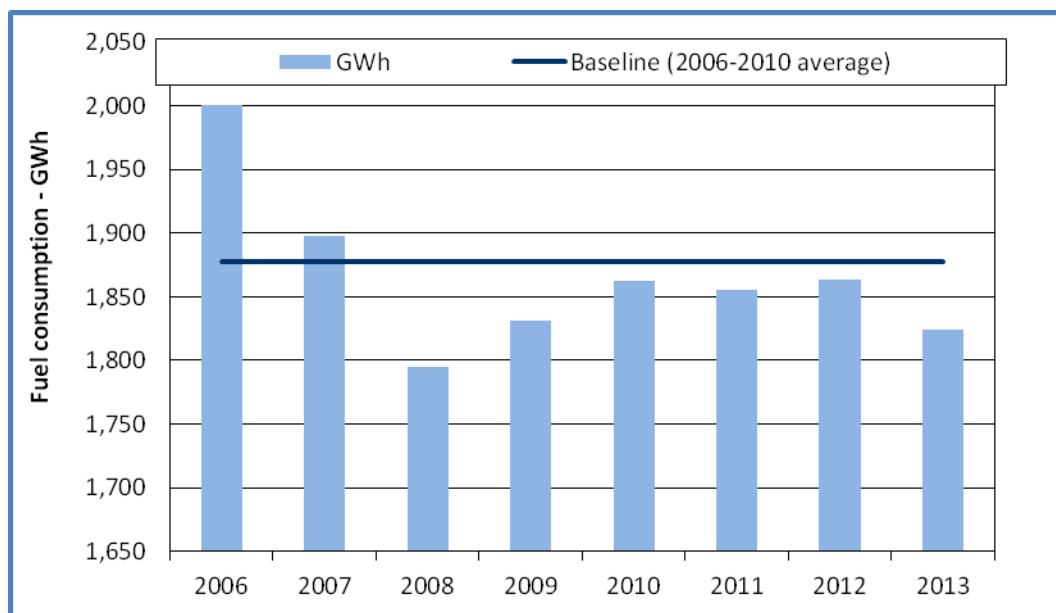
**Trend:** The trend in livestock numbers is relatively stable, while there has been a slight decrease in cattle and pigs, there has been an increase in sheep and poultry numbers. It is not possible to determine an overall status for this indicator

Indicator spread sheet reference: Welsh Agriculture and Land Use Indicators 2014 WA18

**Welsh Agriculture and Land Use Indicator 9 - Fuel Consumption by agricultural mobile machinery**



**Indicator:** Fuel Consumption by agricultural mobile machinery  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WA4

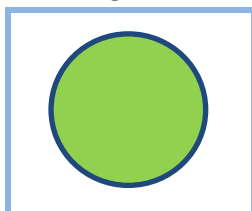


Fuel Consumption by agricultural mobile machinery	Baseline (2006-2010 average)	2011	2012
GWh	1877	1855	1863

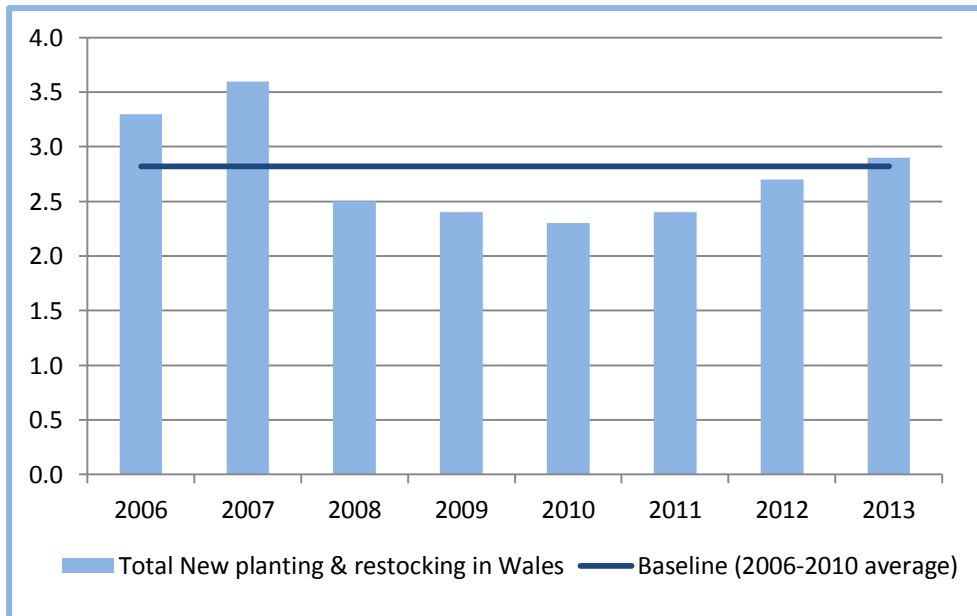
**Trend:** Fuel Consumption by agricultural machinery increased decreased in 2013 against 2012. Fuel Consumption by agricultural machinery reduced substantially in 2008 but has since begun to level out.

Indicator spread sheet reference: Welsh Agriculture and Land Use Indicators 2015 WA19

**Welsh Agriculture and Land Use Indicator 10 - Annual planting rate - new planting and restocking**



**Indicator:** Annual planting rate - new planting and restocking  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WA1

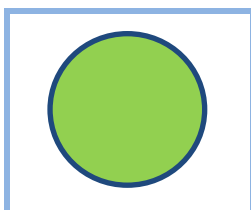


New planting in wales	Baseline (2006-2010 average)	2011	2012	2013
Thousand hectares	2.6	2.4	2.7	2.9

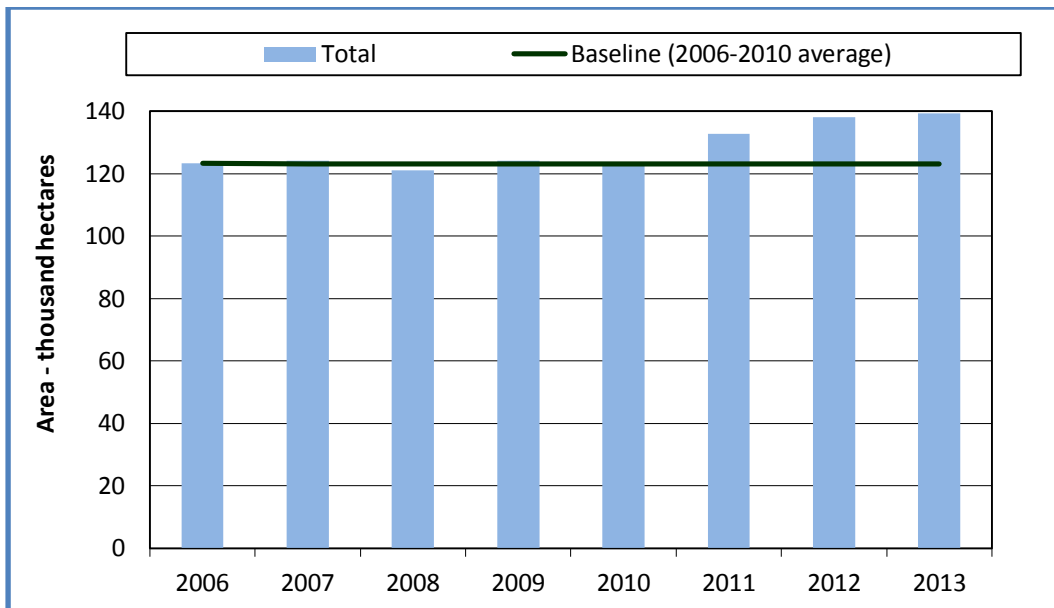
**Trend:** Total new planting and restocking in Wales continued to increase in 2013. . Whilst there has been an increase in new planting this has been offset by a substantial decline in restocking since 2006. Total new planting and restocking in Wales is now above the baseline period for the first time.

**Indicator spread sheet reference:** Agriculture and Land Use Indicators 2015 WAI10

#### Welsh Agriculture and Land Use Indicator 11 - Certified Woodland Area



**Indicator:** Certified woodland Area - National Forest Inventory  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WA1



Certified woodland area	Baseline (2006-2010 average)	2011	2012	2013
thousand of hectares	123.17	132.8	138.0	139.4

**Trend:** Certified woodland area in Wales increased in 2013. Certified woodland area in Wales was relatively static between 2006-2010, this was followed by a substantial increase in 2011, 2012 and 2013.








**Indicator spread sheet reference:** Agriculture and Land Use Indicators 2015 WA11

## 6. Resource Efficiency and Waste Sector





This spreadsheet contains the indicators for the waste and resource efficiency sector. The resource efficiency and waste sector emissions account for 4% of the total 3% target emissions and baseline emissions for the sector are 1.43 MtCO<sub>2</sub>e. The waste and resource efficiency sector is responsible for a very small proportion of the emissions covered by the 3% target. However, the waste and resource efficiency sector contributes a high proportion of emissions for sectors where the Welsh Government can take action directly. The waste and resource efficiency sector will deliver 0.66 Mt CO<sub>2</sub>e savings in 2020.

Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WW1 and WW2, as shown below. Indicators are typically cross-cutting and linked to more than one policy.

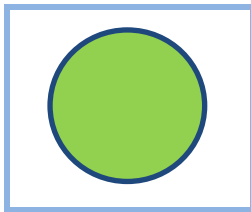
Policy Number	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WW1	Diversion of biodegradable waste from landfill to recycling, composting and anaerobic digestion	0.66
WW2	Programme of work to reduce further existing greenhouse gas emissions at landfills	Not Quantified yet

Policy number	Indicator	Indicator number	Tier	Status
WW1-2	Waste and resource efficiency sector GHG emissions	<a href="#">WI1</a>	1	
WW1	Volume of MSW to landfill	<a href="#">WI2</a>	2	
WW2	Landfill methane capture rate	<a href="#">WI3</a>	2	
WW2	GHG emissions from operational and closed landfill sites	<a href="#">WI4</a>	2	
WW1	Volume of biodegradable MSW to landfill	<a href="#">WI5</a>	2	
WW1	Volume of total waste to landfill	<a href="#">WI6</a>	2	
WW2	Landfill audits and best practice	<a href="#">WI7</a>	3	

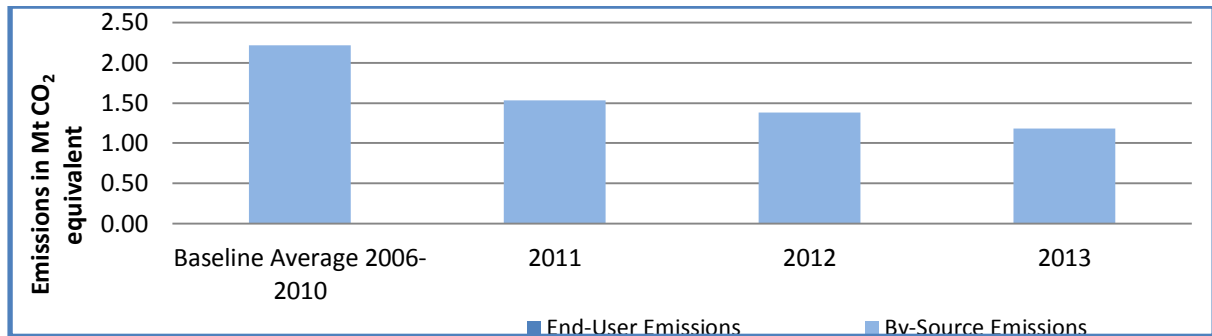
  

 Clear improvement	 Stable or no clear trend	 Clear deterioration	 Baseline or insufficient data
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**Waste and resource efficiency sector Indicator 1 - Waste and resource efficiency sector GHG emissions**



**Indicator:** Waste and resource efficiency sector GHG emissions  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WW1 and WW2

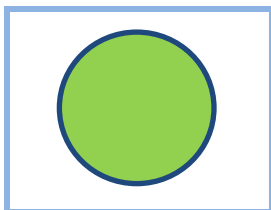


GHG emissions	Baseline Average	2011	2012	2013
MtCO <sub>2</sub> equivalent	2.22	1.53	1.38	1.18

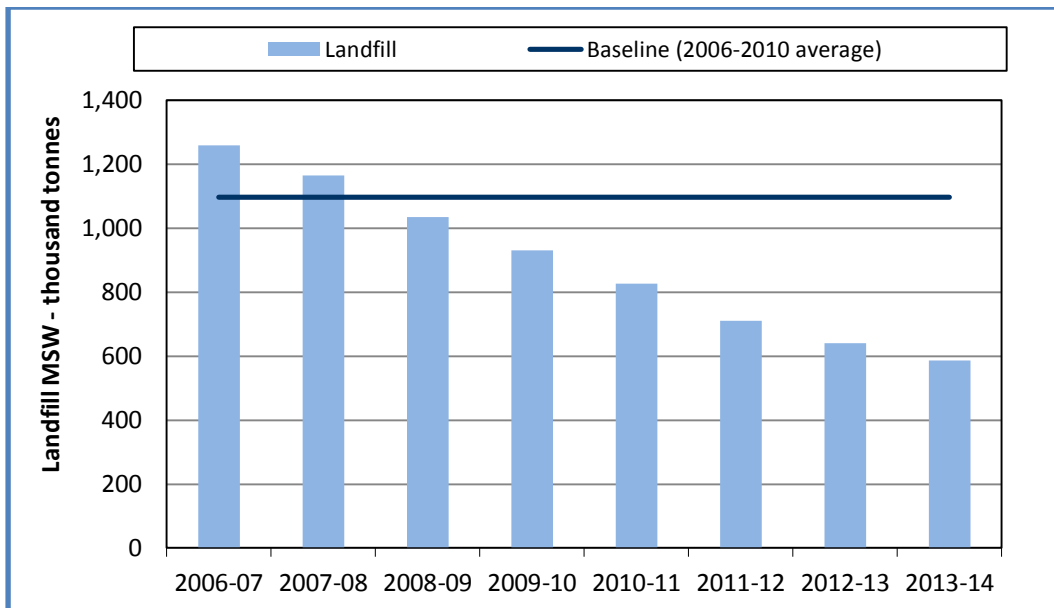
**Trend:** Waste and resource efficiency sector GHG emissions continued to reduce in 2013.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2015 WW11

**Waste and resource efficiency sector Indicator 2 - Volume of MSW to landfill**



**Indicator:** Volume of MSW to landfill (approx.)  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WW1 and WW2

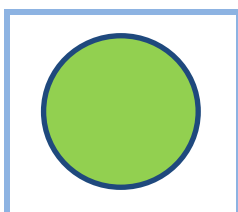


GHG emissions	Baseline Average	2011	2012	2013
thousand tonnes	1098	7108	641	587

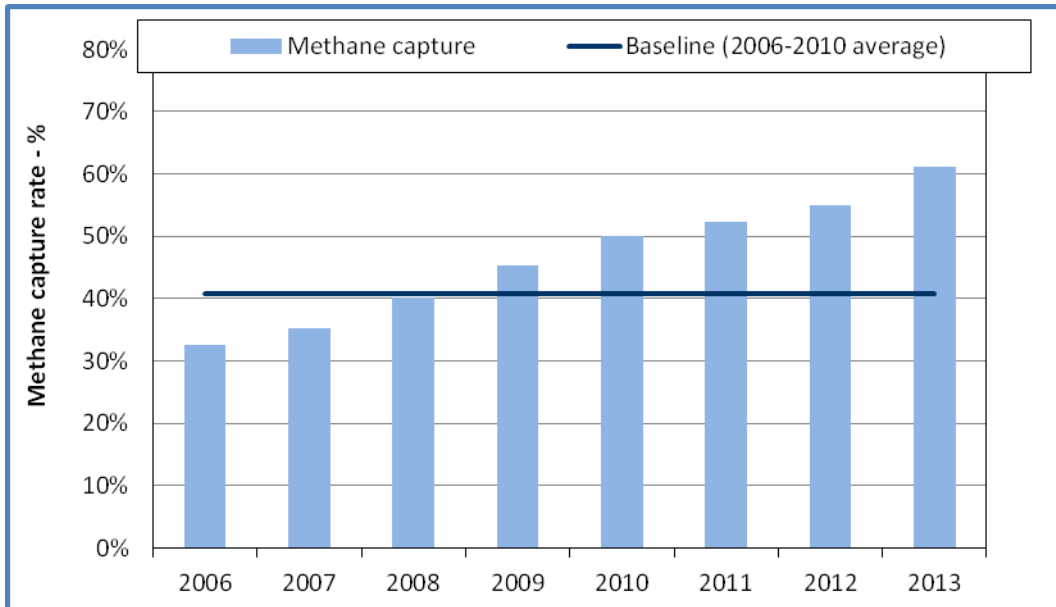
**Trend:** Waste and resource efficiency sector GHG emissions have reduced against the baseline period. Note that data availability changed in 2014 and data is now estimated based on percentage waste not diverted to reuse/recycling/compositing.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2015 WW11

**Waste and resource efficiency sector Indicator 3 - Landfill methane capture rate**



**Indicator:** Landfill methane capture rate  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WW2

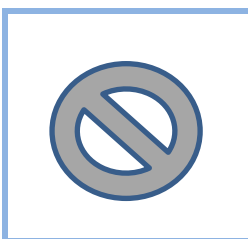


Landfill methane capture rate	Baseline (Average 2006-2010)	2011	2012	2013
Percentage	41%	52%	55%	61%

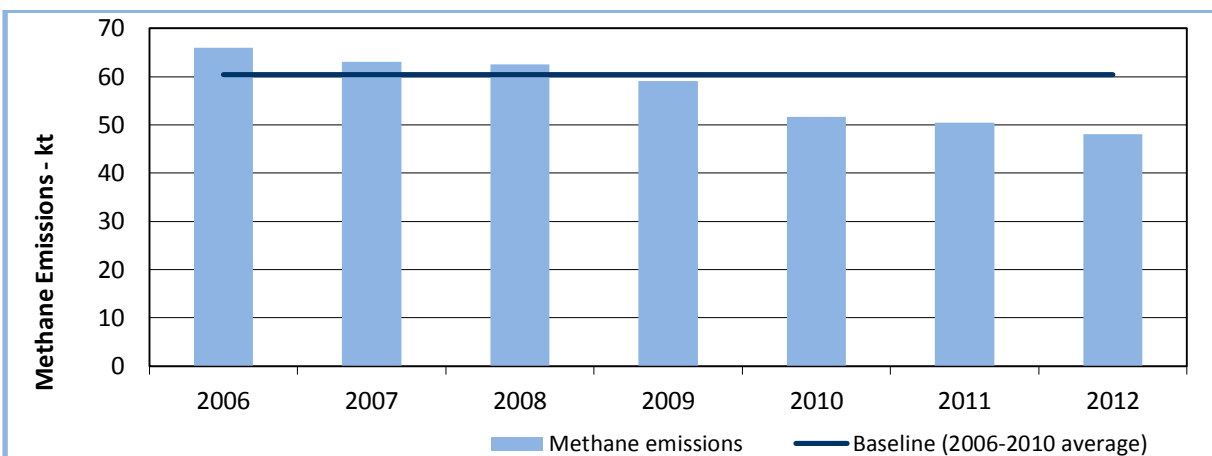
**Trend:** Methane capture rate increased in 2013. Methane capture rate has increased steadily since 2006.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2015 WWI3

**Waste and resource efficiency sector Indicator 4 - GHG emissions from operational and closed landfill sites**



**Indicator:** GHG emissions from operational and closed landfill sites  
**Tier:** 2  
**Status:** Baseline or insufficient data  
**Policy indicator:** WW1



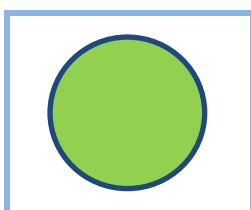


Methane emissions from operational and closed landfill sites	Baseline (2006-2010 average)	2011	2012
kilotonnes	60.46	50.51	48.08

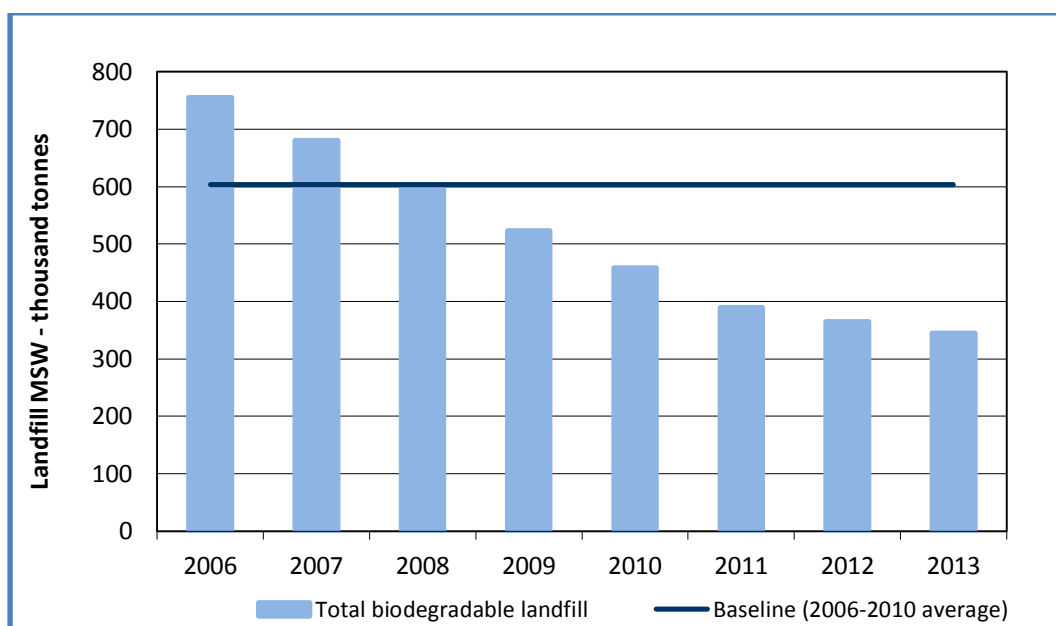
**Trend:** Methane emissions from operational and closed landfill sites. Information could not be updated for 2013.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2014 WWI4

**Waste and resource efficiency sector Indicator 5 - Volume of biodegradable MSW to landfill**



**Indicator:** Volume of biodegradable MSW to landfill  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WW1

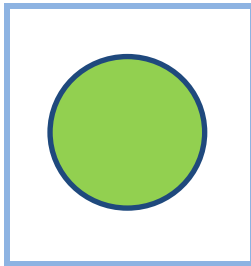


Volume of biodegradable MSW to landfill	Baseline (2006-2010 average)	2011	2012	2013
thousand tonnes	603	390	365	345

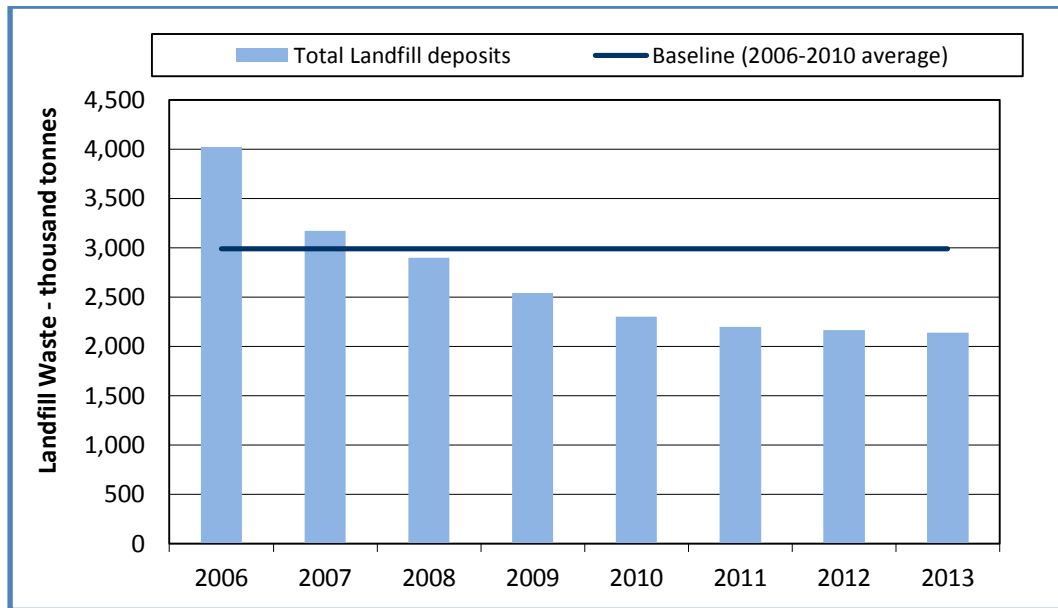
**Trend:** Volume of biodegradable MSW to landfill decreased in 2013 against the baseline period. Volume of biodegradable MSW to landfill has decreased steadily between 2006 and 2013.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2015 WWI5

**Waste and resource efficiency sector Indicator 6 - Volume of total waste to landfill**



**Indicator:** Volume of total waste to landfill  
**Tier:** 2  
**Status:** Clear improvement  
**Policy indicator:** WW2



Total Landfill deposits	Baseline (2006-2010 average)	2011	2012	2013
Kilotonnes	2,986	2,200	2,163	2,138

**Trend:** Volume of total waste to landfill decreased significantly in 2013. The total landfill deposits in Wales have been declining year on year since 2006.

**Indicator spread sheet reference:** Waste and resource efficiency Indicators 2015 WW16







## 7. Public Service Sector

This spreadsheet contains the indicators for the public service sector. The public service sector accounts for 3% of the total 3% target emissions in 2012 and have a baseline of 0.85 Mt CO<sub>2</sub>e. At this stage, the contribution of Welsh Government policies and actions to public sector emission reduction has not been quantified. It is estimated that UK action in the public sector will deliver 0.03 MtCO<sub>2</sub>e savings in Wales in 2020.





Indicators are grouped under the policies set out in the 2010 Climate Change Strategy for Wales, e.g. WPS1 and WPS2, as shown below. Indicators are typically cross-cutting and linked to more than one policy.

Policy number	Policy	Estimated Savings - MtCO <sub>2</sub> e in 2020
WPS1	Embedding action on climate change.	Not Quantified yet
WPS2	Reducing the carbon footprint of the Welsh Government estate.	Not Quantified yet
WPS3	Reducing the carbon footprint of the NHS.	Not Quantified yet
WPS4	Reducing the carbon footprint of education services.	Not Quantified yet
WPS5	Enabling wider contributions from others.	Not Quantified yet
WPS6	Land use planning.	Not Quantified yet
WPS7	Spatial Plan Low Carbon Regions work and Marine Spatial Planning	Not Quantified yet
UKPS1	Carbon Reduction Commitment Energy Efficiency Scheme	0.01
UKPS2	The Energy Service Directive (ESD)	Not Quantified yet
UKPS3	Energy Performance of Buildings Directive (EPBD)	Not Quantified yet

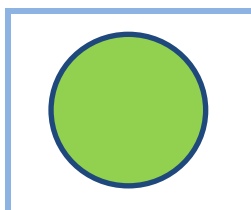
Policy number	Indicator	Indicator number	Tier	Status
WPS1-7	Public sector GHG emissions	<a href="#">PS11</a>	1	

WPS1-7	Public sector fuel consumption	<a href="#">PSI2</a>	2	
WPS1-7	NHS GHG Emissions	<a href="#">PSI3</a>	3	
WPS2	Welsh Government CRC Emissions	<a href="#">PSI4</a>	3	
WPS3	Education sector CRC emissions	<a href="#">PSI5</a>	3	
WPS4	Local Authority CRC emissions	<a href="#">PSI6</a>	3	
UKPS1	Public sector CRC emissions	<a href="#">UKPS1</a>	3	

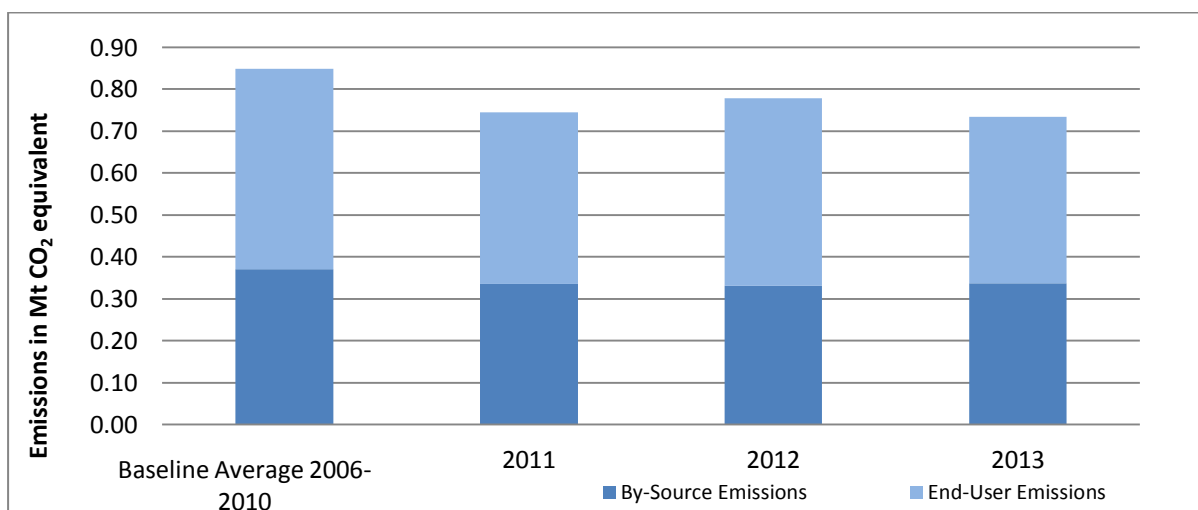
  

 Clear improvement	 Stable or no clear trend	 Clear deterioration	 Baseline insufficient data	or
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#### Welsh Public Sector Indicator 1: Public sector GHG emissions



**Indicator:** Public sector GHG emissions  
**Tier:** 1  
**Status:** Clear improvement  
**Policy indicator:** WP1-7

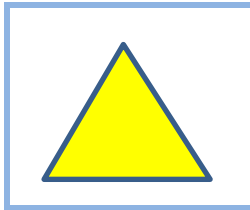


Public sector GHG emissions	Baseline (2006-2010 average)	2011	2012	2013
Mt CO <sub>2</sub> equivalent	0.85	0.74	0.78	0.73

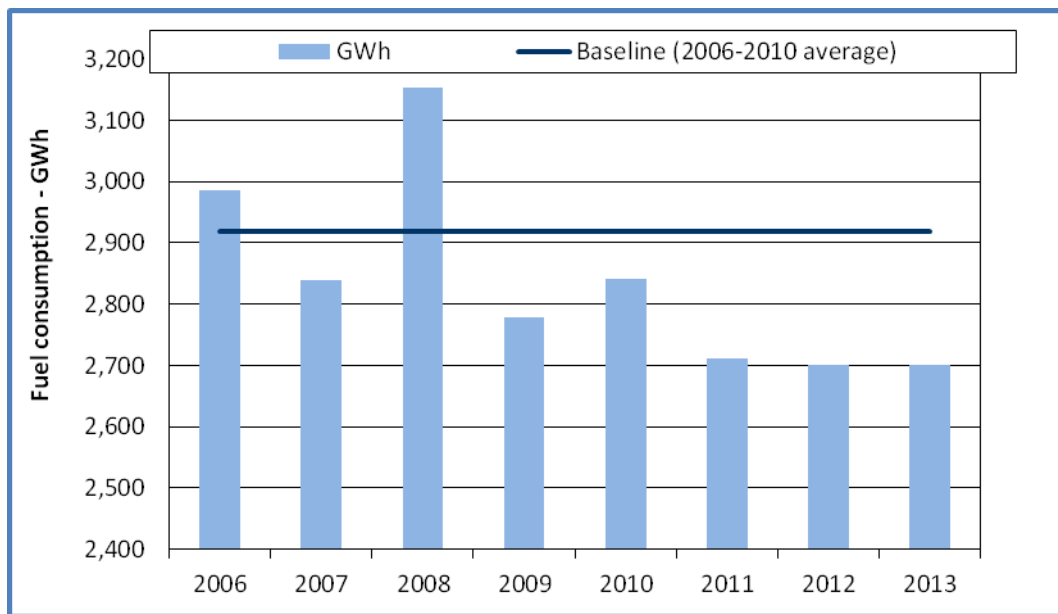
**Trend:** Emissions in the public sector decreased in 2013 and are currently below the baseline.

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2015 WPI1

**Welsh Public Sector Indicator 2: Public sector fuel consumption**



**Indicator:** Public sector fuel consumption  
**Tier:** 2  
**Status:** Stable or no clear trend  
**Policy indicator:** WPI1-7

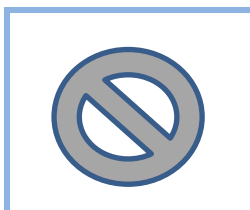


Fuel consumption	Baseline (2006-2010 average)	2011	2012	2013
GWh	2,919	2,711	2,701	2,701

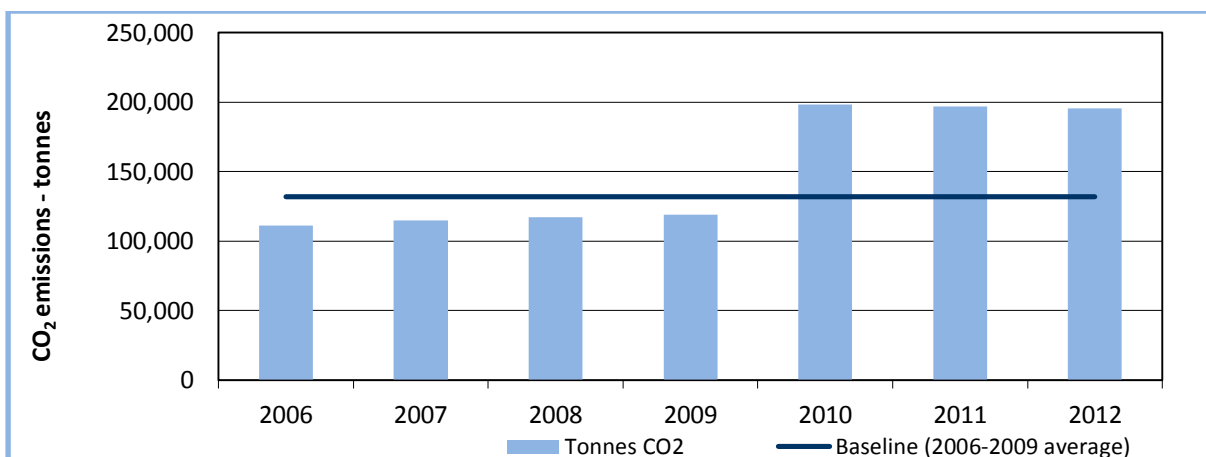
**Trend:** Fuel consumption in the public sector was unchanged between 2012 and 2013. Public sector fuel consumption remains substantially below the baseline

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2014 WPI2

**Welsh Public Sector Indicator 3: NHS GHG Emissions**



**Indicator:** NHS GHG Emissions  
**Tier:** 3  
**Status:** Baseline or insufficient data  
**Policy indicator:** WP1-7

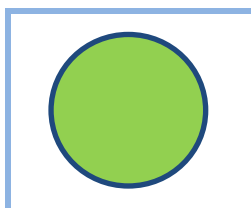


NHS GHG Emissions	Baseline (2006-2010 average)	2011	2012
Tonnes CO <sub>2</sub>	132,093	196,758	195,736

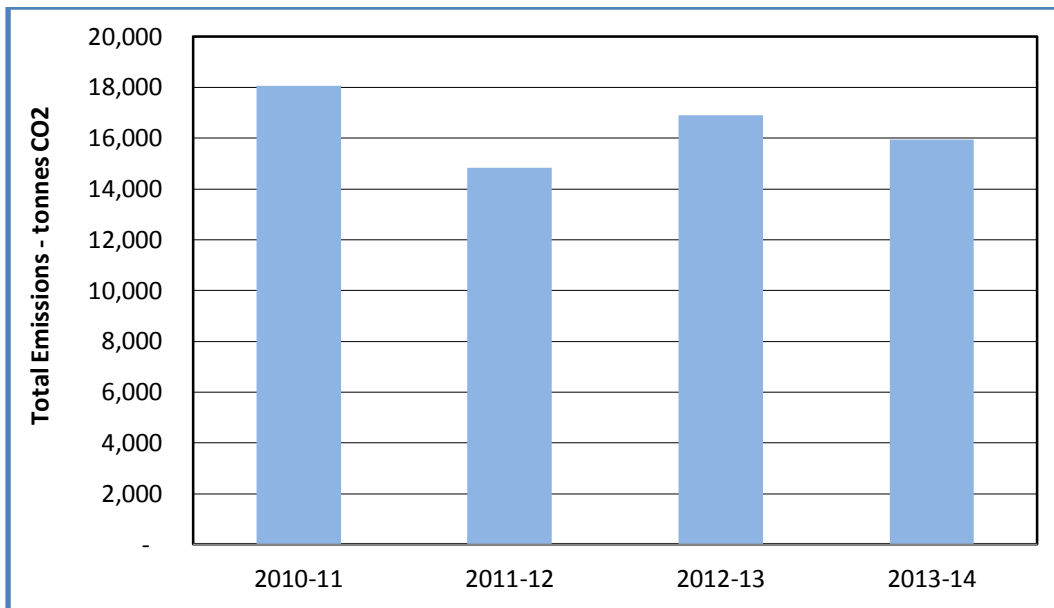
**Trend:** NHS GHG emissions decreased in 2012. Increases between 2009/10 and 2010/11 reporting years are due to change in calculation method. In line with Defra guidelines all “green electricity” is now treated as standard grid electricity and is not zero rated for carbon. Additionally, the carbon conversion factors used have been brought in line with those used for the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES) which accounts for the increase. **No new data for 2013 available.**

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2015 WPI3

**Welsh Public Sector Indicator 4: Welsh Government CRC Emissions**



**Indicator:** Welsh Government CRC Emissions  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WP1-7

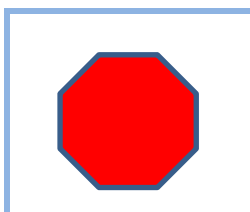


Welsh Government CRC emissions	2010	2011	2012	2013
Tonnes CO <sub>2</sub>	18,056	14,837	16,909	15,948

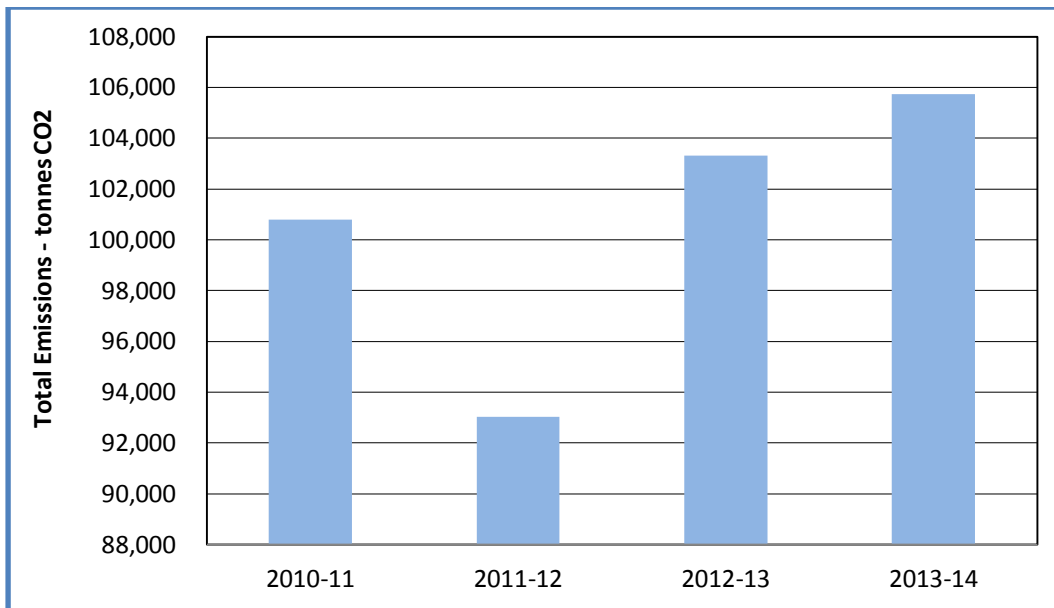
**Trend:** Welsh Government Carbon Reduction Commitment CO<sub>2</sub> emissions decreased in 2013. Please note that simplification of the CRC scheme introduced a number of changes to the information that participants must include in their annual reports. These changes mean that the information reported after 2012/13 is not directly comparable with that from 2010/11 and 2011/12.

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2015 WPI4

**Welsh Public Sector Indicator 5: Education sector CRC emissions**



**Indicator:** Education sector CRC emissions  
**Tier:** 3  
**Status:** Clear deterioration  
**Policy indicator:** WP1-7

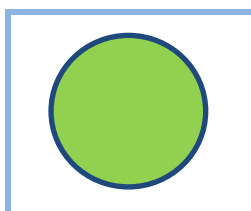


CRC emissions	2010	2011	2012	2013
Total emissions tonnes CO <sub>2</sub>	100,802	93,037	103,323	105,730

**Trend:** Education sector Carbon Reduction Commitment CO<sub>2</sub> emissions continued to increase in 2013 compared to 2012 and remain higher than the 2010 emissions. Please note that simplification of the CRC scheme introduced a number of changes to the information that participants must include in their annual reports. These changes mean that the information reported after 2012/13 is not directly comparable with that from 2010/11 and 2011/12.

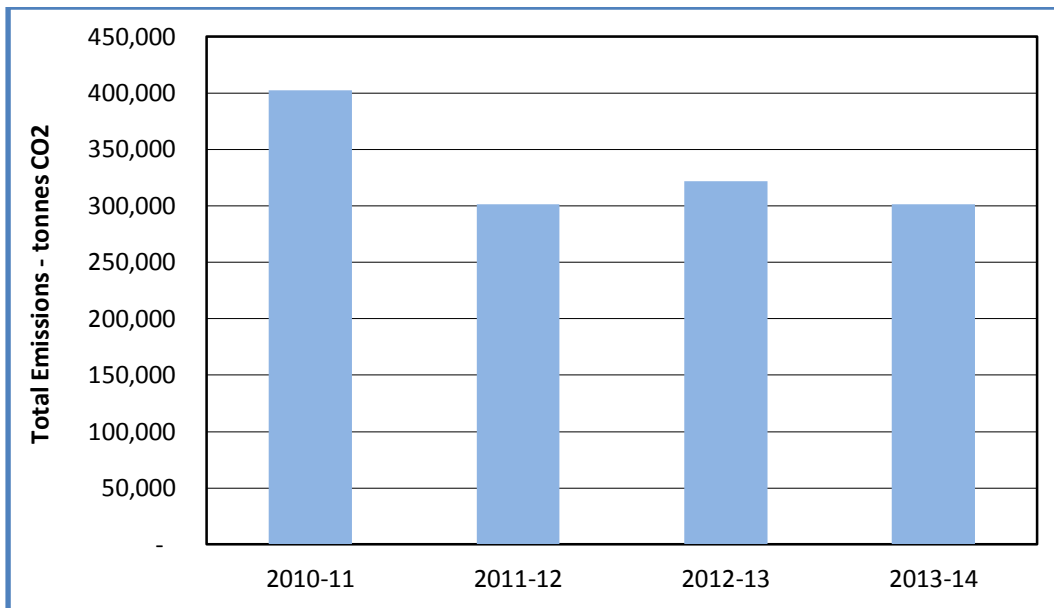
**Indicator spread sheet reference:** Welsh Public Sector Indicators 2015 WPI5

#### Welsh Public Sector Indicator 6 - Local Authority CRC emissions



**Indicator:** Local Authority CRC emissions  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WP1-7



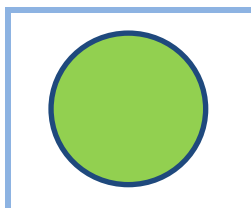


Welsh Government CRC emissions	2010	2011	2012	2013
Tonnes CO <sub>2</sub>	402,223	301,542	322,196	301,454

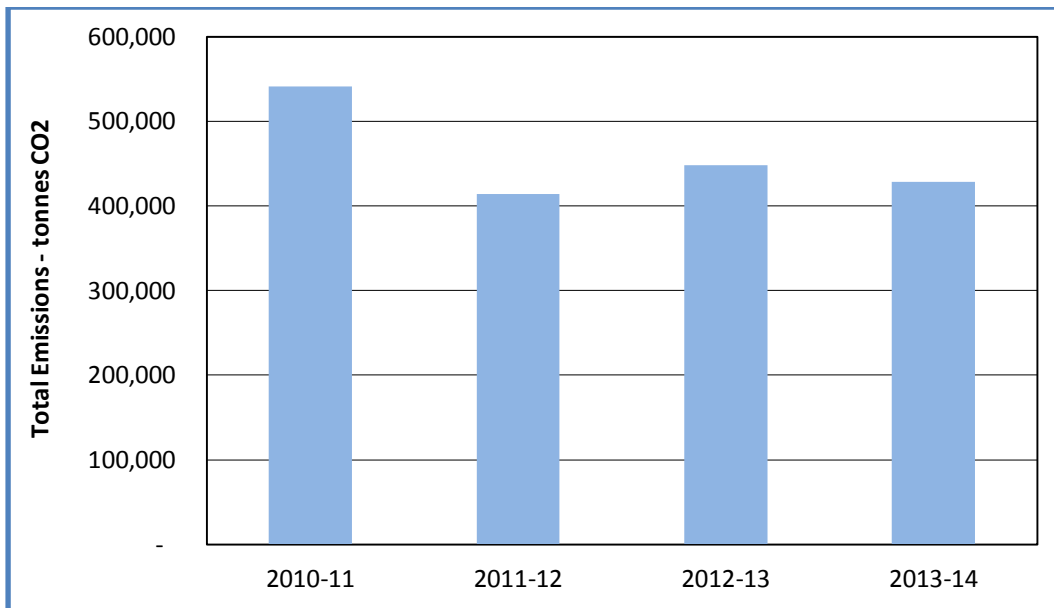
**Trend:** Local Authority Carbon Reduction Commitment CO<sub>2</sub> emissions reduced in 2011-2012 compared to 2010-11. Please note that simplification of the CRC scheme introduced a number of changes to the information that participants must include in their annual reports. These changes mean that the information reported for 2012/13 is not directly comparable with that from 2010/11 and 2011/12.

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2014 WPI6

**UK Public Sector Indicator 1 – Total public sector CRC emissions in Wales**



**Indicator:** Total public sector CRC emissions in Wales  
**Tier:** 3  
**Status:** Clear improvement  
**Policy indicator:** WP1-7



CRC emission		2010	2011	2012	2013
Total Emissions tonnes CO <sub>2</sub>	540,961		414,350	447,956	428,131

**Trend:** Total public sector Carbon Reduction CO<sub>2</sub> emissions Commitment in Wales decreased in 2013. Please note that simplification of the CRC scheme introduced a number of changes to the information that participants must include in their annual reports. These changes mean that the information reported for 2012/13 is not directly comparable with that from 2010/11 and 2011/12.

**Indicator spread sheet reference:** Welsh Public Sector Indicators 2015 UKPSI1

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