

# Programme Intelligence Report

## Urban Environment (Updated 12<sup>th</sup> August 2016)

### Workstream: One Planet Cardiff

#### Energy

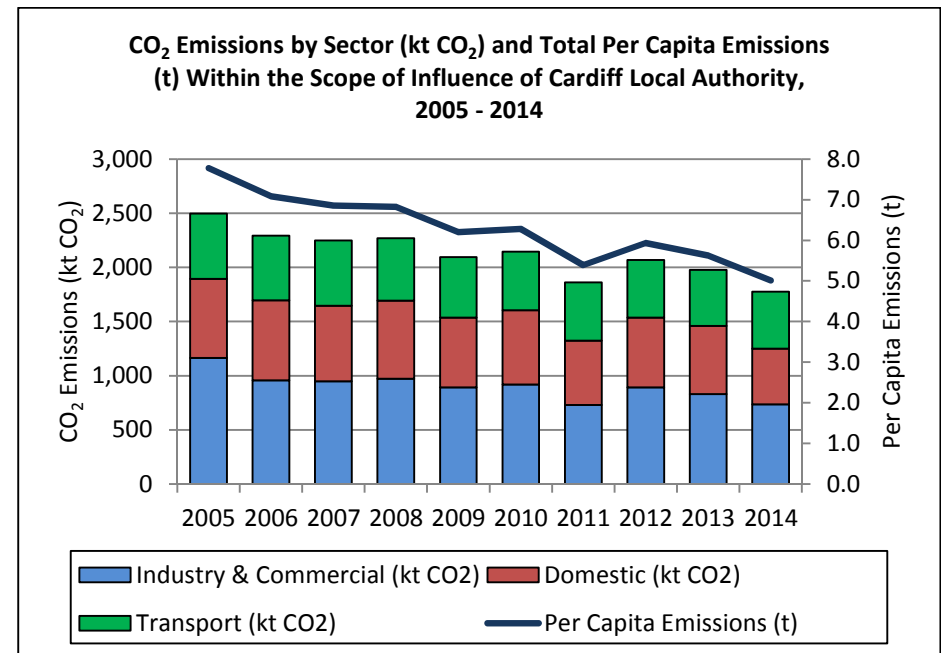
In 2014, the total CO<sub>2</sub> emissions within the scope of influence of Cardiff Local Authority<sup>1</sup> was 1,776.6kt. This represented a decrease of 10.2% over the previous year and an overall reduction of 28.8% since 2005, despite a large increase in 2012. In comparison, Wales had seen smaller declines of 8.5% between 2013 and 2014 and 24.0% between 2005 and 2014.

Per capita emissions in Cardiff have followed a similar pattern, falling from 7.8t in 2005 to 5.0t in 2014, despite a large rise in 2012. They were also consistently below the levels for Wales, which decreased from 8.3t to 6.0t between 2005 and 2014.

Over two-fifths of Cardiff's CO<sub>2</sub> emissions come from the Industry & Commercial sector, although this proportion has fallen from 46.7% in 2005 to 41.5% in 2014 (41.8% in Wales). The Domestic sector has also seen a reduction in its percentage share, from 29.2% to 28.8% over the period, although this is due to a large fall in emissions in 2014. In contrast, even though overall emissions in the Transport sector have fallen over the period, its proportion has risen from 24.1% in 2005 to 29.7% in 2014. The comparative

<sup>1</sup> Formerly National Indicator 186: Per capita CO<sub>2</sub> emissions in the LA area.

Domestic and Transport figures for Wales in 2014 were 30.3% and 27.9% respectively.



Source: DECC

Between 2013 and 2014, CO<sub>2</sub> emissions in Cardiff in both the Industry & Commercial (-11.3%) and Domestic (-18.4%) sectors decreased, whereas Transport emissions rose by 1.6%. In comparison, Wales saw changes of -8.5%, -16.0% and +1.2% respectively.

The total carbon emission equivalent from municipal waste<sup>2</sup> in Cardiff was 10,266.37 tonnes in the third quarter of 2013/14 (i.e. October to December). This was down 8.1% on the previous three months but up 22.9% on the same quarter in 2012. In addition, in 2014/15 there was a 5.9% contraction in carbon dioxide emissions in the non-domestic building stock<sup>3</sup>.

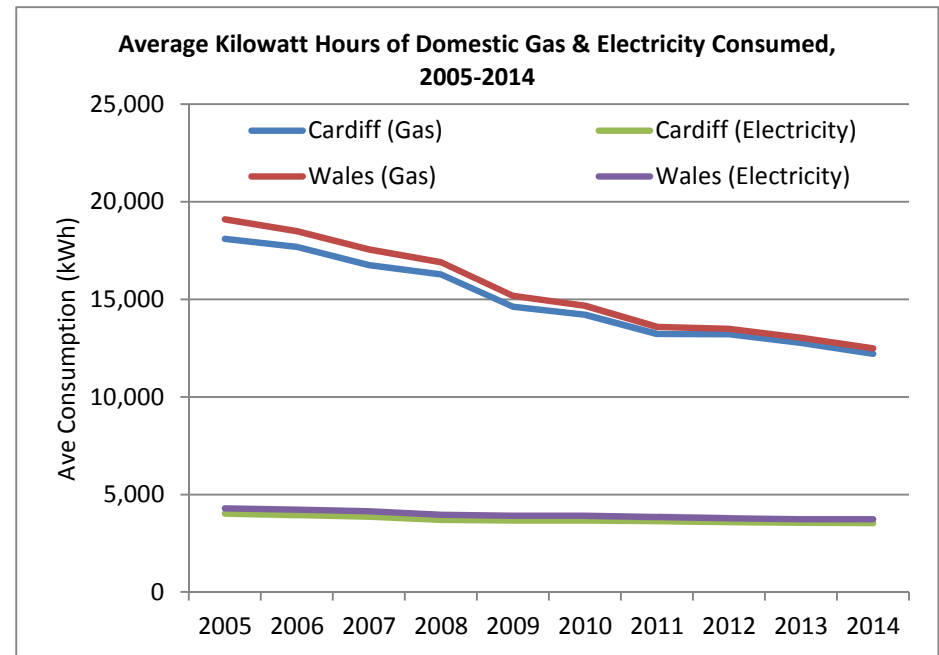
The average kilowatt hours of domestic gas and electricity consumed have followed similar patterns in Cardiff and Wales between 2005 and 2014, although Wales has consistently had the higher consumption levels for both types of energy. Average gas use has fallen by more almost a third in Cardiff (-32.5%) over the period, although this was below the reduction of 34.5% seen across the whole of Wales. Average electricity consumption has also followed a downward trend, but not to the same extent as for gas. This declined by 12.2% in Cardiff between 2005 and 2014; again below the decrease seen across Wales (-13.0%). Consequently, the difference between the average consumption levels in Cardiff and Wales has reduced over the period for both types of energy.

In 2014 the average domestic consumption of electricity in Cardiff was 3,539kWh. This was the 10<sup>th</sup> lowest local authority figure in Wales; down slightly from a ranking of 9<sup>th</sup> lowest in 2005, but below the national average of 3,735kWh.

The average domestic consumption of gas in Cardiff in 2014 was 12,212kWh. This was the joint-11<sup>th</sup> lowest figure in Wales but was again below the national average of 12,497kWh. However, its ranking in Wales had deteriorated since 2005 when it had the 5<sup>th</sup> lowest figure in Wales.

<sup>2</sup> Performance Indicator WM/KPI 001 (Total carbon emission equivalent [CO<sub>2</sub> equivalent in T/Y] from municipal waste)

<sup>3</sup> Performance Indicator EEF/002 (Percentage reduction in carbon dioxide emissions in the non-domestic public building stock)



Source: DECC

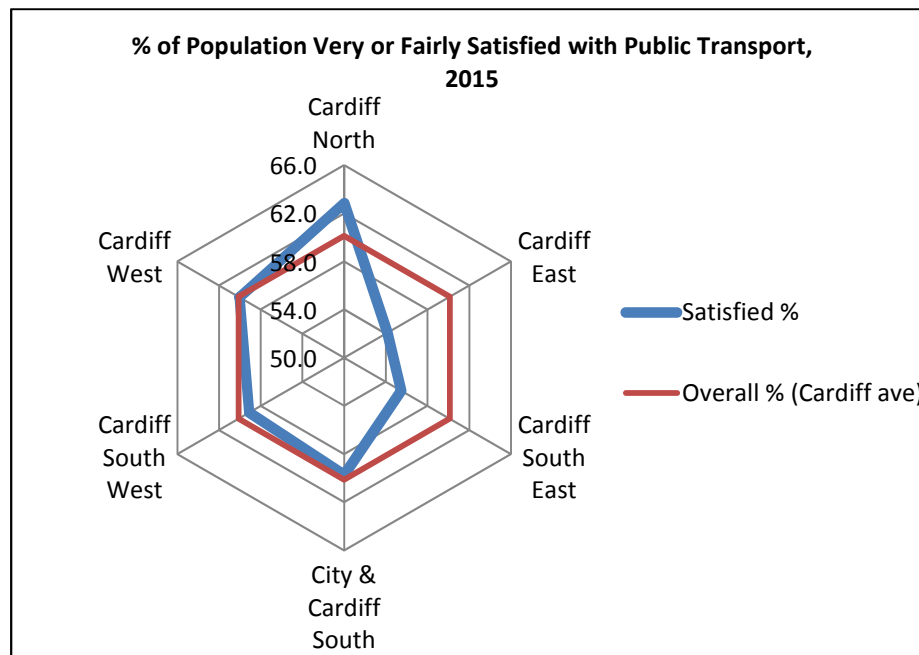
## Transport

During 2013-14, Cardiff was the destination of an estimated 7,733,550 rail passengers, representing almost two-fifths (39.1%) of all rail passenger journeys within Wales; up slightly from 39.0% for the previous year<sup>4</sup>. In addition, four of Cardiff's rail stations were in the top twenty busiest in Wales for 2014-15. These were Cardiff Central (11,939,360 entries/exits; ranked 1<sup>st</sup>), Cardiff Queen Street (2,523,314; ranked 2<sup>nd</sup>), Cardiff Bay (1,143,746; ranked 6<sup>th</sup>), and Cathays (860,502; ranked 10<sup>th</sup>). Since the previous year, numbers had risen by

<sup>4</sup> Source: Office of Rail Regulation (ORR), Welsh Government

12.2% at Cardiff Bay, 6.7% at Cathays, 2.5% at Cardiff Queen Street and 1.7% at Cardiff Central.

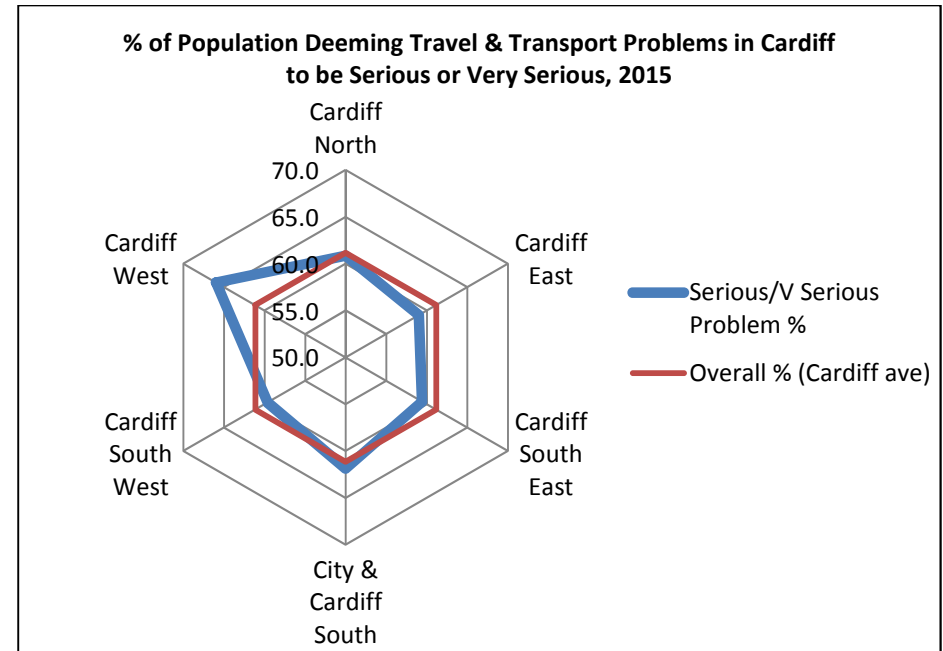
According to information from the 2015 Ask Cardiff survey, 60.1% of respondents were satisfied with public transport in the city, including 14.8% that were very satisfied. These were up slightly from 59.3% and 13.8%, respectively, in the previous year. Satisfaction levels for those respondents whose neighbourhood partnership area could be determined varied from 54.2% in Cardiff East to 62.8% in Cardiff North.



Source: Ask Cardiff, Cardiff Council

When asked about the severity of travel and transport problems in Cardiff, more than three-fifths (61.2%) of the respondents felt that they were either serious (47.1%) or very serious (14.1%). These proportions were very similar to 2014 when 61.0% thought they were serious (46.3%) or very

serious (14.7%). Within the city, residents were most concerned about this issue in Cardiff West (66.0%), while those living in Cardiff East (59.0%) were least likely to deem it to be a serious or very serious problem.



Source: Ask Cardiff, Cardiff Council

In 2014-15, 6.8% of Cardiff's roads were deemed to be in poor condition; down slightly from 6.9% in the previous year<sup>5</sup>. This compared favourably with the Welsh average of 11.9%.

In 2014 the volume of traffic on all roads in Cardiff was 2.89 billion vehicle kilometres<sup>6</sup>. This was the largest figure since 2008 and represented increases of 4.2% on the previous year and 2.0% since 2009. In comparison, Wales experienced

<sup>5</sup> Source: Data Unit, Infobasecymru

<sup>6</sup> Source: Welsh Government

slower growth of 1.3% since 2009 and 3.1% since 2013. Just over half (54.5%) of the traffic in Cardiff was on major roads in 2014; up from 53.8% in the previous year, but well below the comparative figure for the whole of Wales (64.4%).

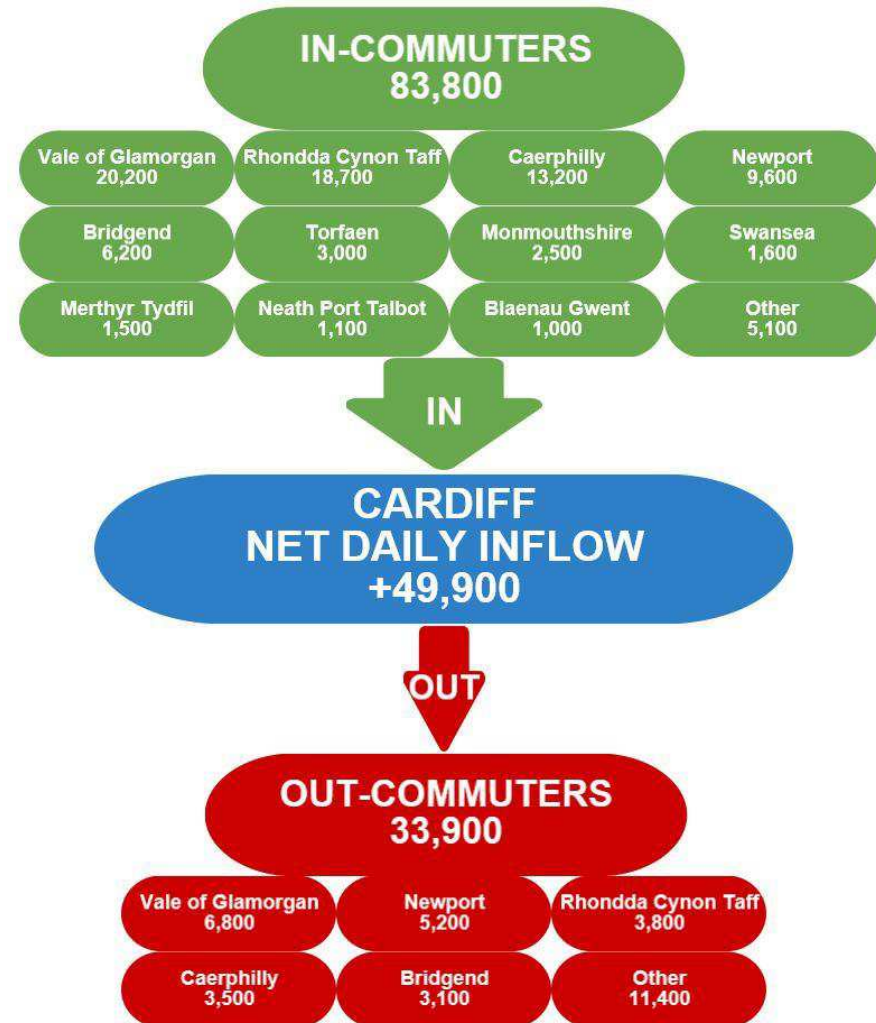
Figures from Welsh Government's National Survey for Wales for April 2013 to March 2014 indicated that 40% of people in Cardiff thought that their local area was free from heavy traffic; below the national average of 48%. However, 6.1% of those within the local authority stated that they were satisfied with the state of the transport system in Wales, compared to the Welsh average of 5.9%.

The latest statistics available on commuting from the Welsh Government show the large numbers of in-commuters to Cardiff from outside its local authority boundaries<sup>7</sup>. An estimated 61,700 commute in to Cardiff from the neighbouring local authority areas of the Vale of Glamorgan, Rhondda Cynon Taff, Caerphilly and Newport alone, while a further 22,100 commute to the city daily from further afield.

As expected, out-commuting from Cardiff by those residing in the city is less pronounced. It is estimated that there are a total of 33,900 daily out-commuters, including approximately 6,800 who work in the Vale of Glamorgan, 5,200 in Newport, 3,800 in Rhondda Cynon Taff, 3,500 in Caerphilly, and 3,100 in Bridgend. Consequently, there is a net daily inflow of around 50,000 people to Cardiff.

<sup>7</sup> These workplace statistics cover those in employment and are based solely on a person's main job. All commuting data rounded to the nearest 100, therefore the sum of the parts may not equal the total.

### Cardiff's Daily Commuting Pattern 2015



Source: Annual Population Survey/ONS/Welsh Government/StatsWales

Figures from the 2011 Census show the average distance travelled to work by Cardiff residents aged 16-74 was 12.7km. This was the lowest figure in Wales and compared with a Welsh average of 16.7km.

The 2011 Census also indicated that less than two-thirds (62.0%) of Cardiff's working residents aged 16-74 usually travelled to work by car/van; the lowest figure in Wales and below the Welsh average of 74.2%. Cardiff also had the largest proportions using a bus/minibus/coach (10.2%) and bicycle (3.7%), as well as the second highest percentage travelling on foot (15.4%), and the fourth greatest share travelling by train/underground/metro/light rail/tram (3.5%).

However, according to information Cardiff Council's Highways, Traffic & Transport department (Performance Indicator LTPPI/011), 43.9% of people in the authority used sustainable transport to travel to work over the five-year period of 2011-15; up from 43.1% for 2010-14.

Meanwhile, for 2011-15, cycling was used by 9.2% of those travelling to work (LTPPI/011C) and 3.1% of those travelling to school (LTPPI/011S). These were up from 8.4% and 2.7% respectively for 2010-14.

ONS's '2011 Census Analysis – Cycling to Work' report showed that the number of working residents in Cardiff aged 16-74 that cycle to work had risen by 64.8% from 3,514 in 2001 to 5,791 in 2011. This was the sixth highest percentage increase in England and Wales (excluding London). In addition, the proportion of Cardiff's working residents aged 16-74 that cycle to work had grown by 0.9 percentage points from 2.7% in 2001 to 3.6% in 2011; the joint-seventh largest percentage point increase in England & Wales (excluding London).

The number of road casualties in Cardiff fell from 859 in 2014 to 816 in 2015; a decrease of 5.0%<sup>8</sup>. Of the sixteen local

---

<sup>8</sup> Source: Infobasecymru, Welsh Government

authorities in Wales to see a reduction, this was the fourth smallest and compared with a decline of 6.4% across Wales as a whole.

However, in 2015 Cardiff had the highest proportion of road casualties that were pedal cyclists (12.7%) and the third highest that were pedestrians (15.1%). These compared with Wales figures of 6.6% and 11.0% respectively. However, both proportions had fallen in Cardiff over the year – from 13.0% for pedal cyclists and from 17.0% for pedestrians, with the latter also improving from being the highest rate in Wales in 2014.

## **Water**

In 2014, just over a fifth (20.4%) of the properties in Cardiff were at risk of flooding; unchanged from the previous year<sup>9</sup>. This was the fourth highest proportion in Wales and almost twice the Welsh average of 10.5%.

The 20.4% of properties in Cardiff in danger of flooding comprised 0.3% with a high risk, 1.3% with a medium risk, 18.6% with a low risk, and 0.1% with a very low risk. This shows that over nine-tenths (91.7%) of the properties in danger of flooding had only been categorised as either low or very low risk; the highest proportion in Wales where the average was 70.5%.

---

<sup>9</sup> Source: Infobasecymru

## Waste

The proportion of Cardiff's municipal waste that is sent for reuse, recycling or composting<sup>10</sup> was 53.4% in 2014-15; the sixth lowest proportion in Wales and below the all-Wales figure of 56.2%. However, the increase from 49.7% in the previous year has resulted in it rising above the statutory target of 52%.

Information from the Keep Wales Tidy LEAMS Reports shows that the Cleanliness Index for Cardiff has increased slightly over the past five years from 65.5 in 2010-11 to 66.4 in 2015-16, although it has fallen from a peak of 67.4 in 2013-14 and has consistently been below the all-Wales figure during the period. In 2015-16 the local authority had the 4<sup>th</sup> lowest figure in Wales, where it ranged from 62.1 in Blaenau Gwent to 75.8 in Ceredigion, and compared with an all-Wales figure of 68.4. In addition, Cardiff (94.7%) had the 6<sup>th</sup> lowest percentage of streets rated Grade B and above<sup>11</sup> in Wales.

According to the 2011-12 LEAMS report, glass was found on 17.8% of streets in Cardiff; the third highest figure across Wales. Meanwhile, in terms of the type of litter, 88.5% (8<sup>th</sup> highest figure in Wales) of the areas surveyed in Cardiff in 2011-12 had smoking-related litter, 43.1% (7<sup>th</sup> highest) had drinks-related litter, 42.4% (all-Wales low) had sweets/crisps wrappers, and 23.8% (2<sup>nd</sup> highest) had fast food litter.

Keep Wales Tidy also looked at several Adverse Environmental Quality Indicators (AEQIs) in its 2011-12 report, including dog fouling (looked at on the next page), graffiti, vandalism and fly-posting. Graffiti was found on 26.0%

of Cardiff's streets; the highest figure in Wales and well above the average of 6.8% for all streets in Wales. Vandalism (1.9%) and fly-posting were also most prevalent in Cardiff and compared with averages of 0.4% and 2.7% respectively.

According to figures from Welsh Government's National Survey for Wales for April 2013 to March 2014, 70% of people in Cardiff thought that their local area was well-maintained; the same as the national average. However, only 58% believed it was free from litter and rubbish, and 66% felt it was free from graffiti and vandalism. These were below the Welsh averages of 62%, and 77% respectively.

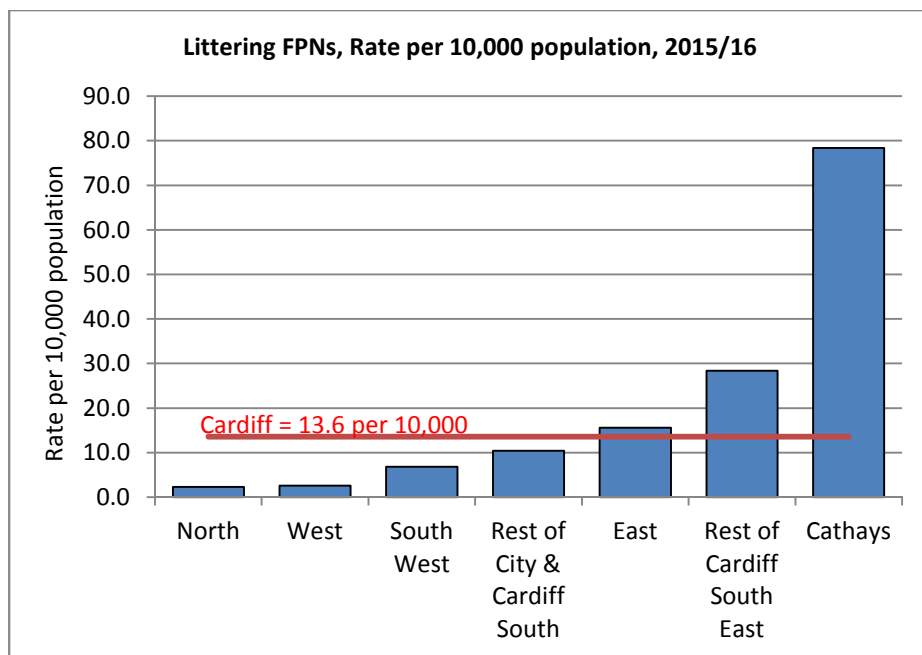
There were 481 fixed penalty notices (FPNs) issued for littering in 2015/16, according to information from Cardiff Council's Waste Education & Enforcement team. Over a third (34.7%) were in Cathays, while three-tenths (30.6%) occurred in Cardiff South East (excluding Cathays), and more than a tenth (11.9%) were in Cardiff East.

In terms of the rate of FPNs issued for littering per 10,000 resident population, Cathays had by far the highest figure for the period of 78.4 per 10,000 for the year. However, much of this is likely to involve non-residents of the area during visits to the city centre, causing the figure to be somewhat skewed. Two other areas exceeded the Cardiff rate of 13.6 per 10,000. These were Cardiff South East (excluding Cathays) and Cardiff East with 28.4 and 15.6 per 10,000 population respectively.

---

<sup>10</sup> Source: Welsh Government

<sup>11</sup> Defined as "streets at an acceptable level of cleanliness to members of the public".



Source: Waste Education and Enforcement, Cardiff Council

In 2014-15 there were 3,905 fly-tipping incidents in Cardiff<sup>12</sup>. This signified significant declines of 36.0% over the previous year and 82.1% since 2006-07. This compared with smaller contractions of 3.7% and 42.2% respectively for the whole of Wales over the same periods.

In addition, the clearance costs within the local authority of £238,950 in 2014-15<sup>13</sup> had fallen by more around three-tenths (-29.6%) over the previous year and by more than three-quarters since 2006-07 (-76.8%). In comparison, Wales again experienced smaller reductions of 6.6% over the year and 39.9% since 2006-07.

<sup>12</sup> Source: StatsWales, Welsh Government

<sup>13</sup> NB. Cardiff local authority was unable to provide data for June 2014

Almost all (97.91%) of the fly-tipping incidents reported to Cardiff Council were cleared within 5 working days<sup>14</sup> for the period April to June 2016. This was down slightly from 98.30% in the previous quarter but up from 96.29% for the same period in 2015.

For the period April to June 2016, more than nine-tenths (95.30%) of fly-tipping incidents reported to Cardiff Council led to enforcement activity<sup>15</sup>. This represented an improvement from both the previous quarter (93.37%) and the same period in 2015 (88.36%).

According to the Keep Wales Tidy LEAMS Report for 2011-12, dog fouling was recorded on 7.1% of streets in Cardiff. This was the seventh lowest figure in Wales and was below the average figure of 10.2% for all Welsh local authorities.

In 2015/16 C2C received 617 requests requiring activity by the Parks Service in relation to dog fouling/dog nuisance. The majority of these (58.8%) were street cleaning requests, while 19.3% were sticker requests, 11.0% related to dog litter bins or dog nuisance, and 10.9% provided details of an offender. The most common location (where known) was Grangetown (79 requests) in City & Cardiff South, followed by Plasnewydd in Cardiff South East (50) and Canton in Cardiff South West (44).

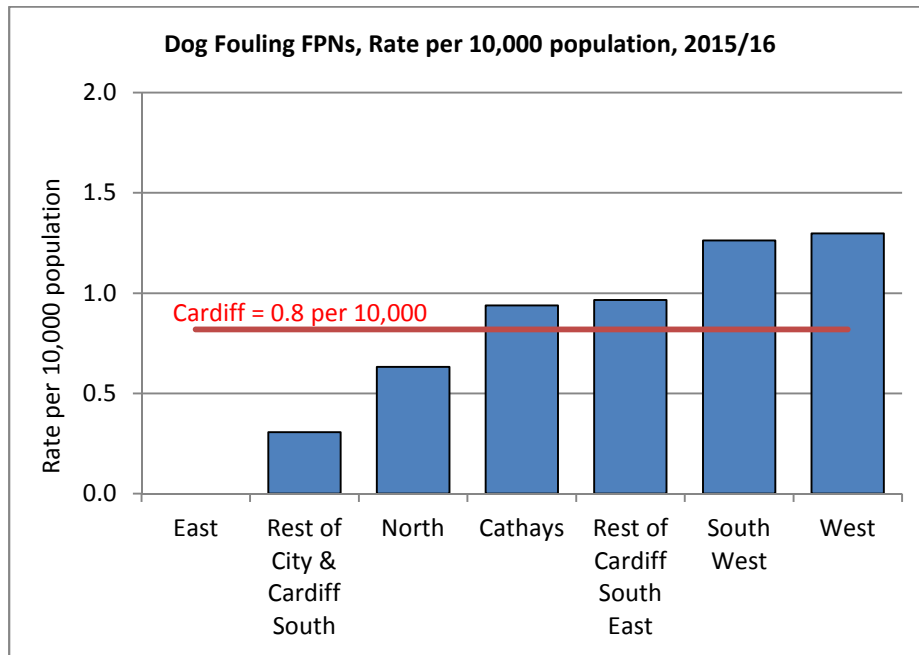
According to Cardiff Council's Waste Education & Enforcement team, there were 29 fixed penalty notices (FPNs) issued for dog fouling in the city in 2015/16, with over a quarter (27.6%) of these occurring in Cardiff West and more

<sup>14</sup> Performance Indicator STS/006 (The percentage of reported fly-tipping incidents cleared within 5 working days)

<sup>15</sup> Performance Indicator STS/007 (The percentage of reported fly-tipping incidents which lead to enforcement activity)

than a fifth being found in both Cardiff South West (24.1%) and Cardiff North (20.7%).

Over this time the rate of FPNs issued for dog fouling in Cardiff was 0.8 per 10,000 population, with the NPA figures ranging from 0.0 per 10,000 in Cardiff East to 1.3 per 10,000 in both Cardiff South West and Cardiff West.



Source: Waste Education and Enforcement, Cardiff Council