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| SUSTAINABLE GROWTH AND ENVIRONMENT CAPITAL SCRUTINY COMMITTEE | Agenda Item No. 5 |
| 12 NOVEMBER 2015 | Public Report |

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| Report of the Director of Growth and Regeneration | | |
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UPDATE ON PETERBOROUGH CITY COUNCIL'S 2014/15 CARBON EMISSIONS AS SUBMITTED UNDER DIFFERENT REPORTING REQUIREMENTS

1. PURPOSE

- 1.1 In line with previous years, this report provides an update on Peterborough City Council's 2014/15 carbon dioxide emissions. These emissions are reported as part of its mandatory participation in the Carbon Reduction Commitment Energy Efficiency Scheme, the local authorities Greenhouse Gas Report (formerly NI 185) and to assess progress under the city council's Carbon Management Action Plan.

2. RECOMMENDATIONS

- 2.1 The contents of this report are noted and comments invited accordingly.
- 2.2 That future updates remain an annual scrutiny item in November, following the annual reporting deadlines at the end of July.

3. LINKS TO THE SUSTAINABLE COMMUNITY STRATEGY

- 3.1 The council's carbon emissions directly relate to two priorities of the Sustainable Community Strategy: creating the UK's Environment Capital and delivering substantial and truly sustainable growth. As a key partner in the Environment Capital aspiration the council is in a position to lead by example on reducing its climate change impact and ensuring that growth in the city is environmentally sustainable.

4. BACKGROUND

- 4.1 The three similar but slightly different carbon emission reports are described in detail below. Table 1 below summarises the differences in scope, conversion factors and method.
- 4.2 **Carbon Reduction Commitment Energy Efficiency Scheme (CRC):** The participants in this mandatory scheme (including 198 other Local Authorities in its first phase) are required to report annual carbon emissions and purchase allowances at a fixed price per tonne of CO₂ emitted, which can be purchased at a cheaper rate in a forecast sale that takes place in April each year. 2014/15 is the first year of Phase 2 of the scheme and this phase incorporates some changes which effect the reporting scope. An annual report is published which includes information about the participants organisation type, CO₂ emissions and renewable energy use.

- 4.3 **Carbon Management Action Plan (CMAP):** The CMAP is the result of a programme of work that the council undertook with the Carbon Trust in 2009 to ensure the organisation was well placed to make progress towards reducing its environmental impact. The plan committed the council to achieve a 35% reduction in carbon dioxide emissions from its own buildings and operations by 2013/14 (extended to 2016) relative to 2008/9 baseline. It was presented to Environment Capital Scrutiny in February 2010 and adopted by Full Council in April 2010.
- 4.4 **Greenhouse Gas Report (GHG):** Local Authorities are asked to report their GHG emissions formerly, known as NI 185, for the Department of Communities and Local Government's Single Data List. There are no financial implications or targets associated with this report.

Table 1:

| Report | Scope (for 14/15) | Conversion factors | Method notes |
|-------------|--|--|--|
| CRC | Buildings where PCC pays the energy bills (including Vivacity and rental units). Also includes street lighting and unmetered supplies. Excludes emission from schools, academies, transport and where energy is part of the rent e.g. Stuart House. | Factors specific to the scheme published by DECC, which in phase 2 are the same ones provided by Defra. | CO ₂ emissions only. Excludes non-core supplies such as oil and LPG Estimated emissions subject to 10% uplift. Reports renewable electricity using same conversion factor as electricity imported from the grid. |
| CMAP | Includes building, street lighting, fleet transport and business transport emissions. Also includes significant outsourced services which were originally part of the city council – i.e. Amey. | Original factors provided by the Carbon Trust. Going forward GHG Report scope 1 and 2 factors published by Defra used. | CO ₂ emissions only. Reports renewable electricity as zero emissions. |
| GHG | Essentially same as CMAP but the sources are treated differently. Reporting outsourced services and business travel is discretionary, and they are reported as scope 3. | Factors revised and published by Defra annually. Use both scope 1, 2 and 3 factors. | Requires report to include all main greenhouse gases converted into CO ₂ equivalent. Scope 3 emissions are reported using scope 3 conversion factors. |

5. KEY ISSUES

- 5.1 The headline conclusion is that emissions have increased in 2014/15. This is mainly due to a significant change to the conversion factors used in relation to electricity and new assets operating throughout the year including, for example, Hampton Leisure Centre, Hampton Premiere Leisure and Fitness Centre and the City of Peterborough Academy.

In addition, whilst all reports show an overall decrease in emissions from the baseline year (2008/09) it should be noted that the figures are positively and negatively affected by a range of factors including outsourcing of services, an increase in the number of children in the city's schools, variability of corporate assets, changeable weather and energy efficiency improvement works.

Please note, the figures are different for each report due to their different scopes as shown in Table 1.

5.2 **CRC:** The council successfully prepared and submitted the fifth annual CRC report in July 2015, which was the first reporting year for Phase 2 and due to accurate forecasting, savings were achieved. Internal Audit has approved the process used this year. The key points are:

- Annual report emissions = 13,605 tonnes of CO₂
- Annual cost of allowances = £196,645
- Savings made from purchasing allowances in the forecast sale: £10,084
- Street lighting proportion = 42% of emissions equating to approximately £83k

5.3 **CMAF:** 2014/15 is the penultimate reporting year where progress against the 35% reduction target will be monitored. The data presented in Table 2 shows a reduction of 20.2% since the baseline year (2008/09). Whilst this does not equate to the full 35% reduction that the council committed to it still represents a significant reduction.

Table 2:

| Emission source | Carbon Dioxide Emissions (tonnes) | | | | | | |
|------------------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2008/9 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 |
| Council buildings | 8,046 | 9,976 | 8,766 | 7,241 | 8,315 | 7,631 | 7,424 |
| Schools | 21,850 | 14,215 | 14,392 | 12,919 | 14,930 | 13,107 | 14,460 |
| Street lighting | 4,391 | 4,517 | 4,497 | 4,233 | 5,823 | 4,978 | 5,313 |
| Fleet vehicles | 2,375 | 2,478 | 2,117 | - | - | - | - |
| Business transport | 618 | 507 | 477 | 365 | 430 | 398 | 371 |
| Outsourced services | - | - | - | 2,593 | 2,632 | 2,131 | 2,196 |
| Total emissions | 37,280 | 31,694 | 30,250 | 27,351 | 32,130 | 28,245 | 29,765 |

Figure 1 shows the evolution of each emission source over the CMAF period. This shows that the schools are the largest emitters and their performance has improved over the last five years. The corporate estate is the second largest emitter and this also shows an overall improvement, though to a lesser extent. A corporate review of the council's street lighting assets has resulted in this source becoming the third largest source of emissions. The emissions generated from fleet vehicles is now classed as outsourced services.

Figure 1:

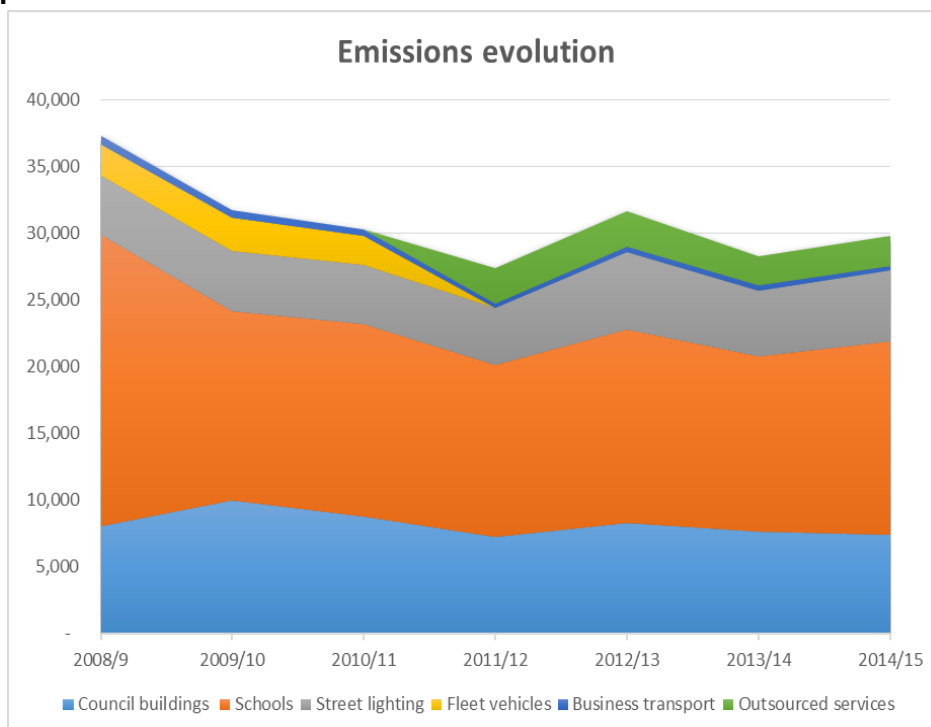


Table 3 shows normalised CO₂ emissions figures during the CMAP against different metrics. The assessment includes the total emissions and the individual sources of emissions assessed against the relevant factors such as revenue turnover, per habitant (estimated figure by the planning department based on population trends as there is no data available for 2015) or pupils from primary and secondary schools. The data shows an overall reduction of 27.5% based on per £m revenue turnover and a 25.6% reduction based on per habitant. However, looking at the individual sources of emissions, a variance can be seen. This is mainly due to different variables like the comprehensive review of street lighting which has increased the associated emissions.

Table 3:

| Normalised emissions | Emissions (tons of CO ₂) | | % Reduction |
|--|--------------------------------------|---------|-------------|
| | 2008/9 | 2013/14 | |
| Total emissions | | | |
| Per £m revenue turnover | 77.8 | 56.4 | 27.5% |
| Per habitant | 0.208 | 0.155 | 25.6% |
| Individual sources emissions | | | |
| Schools emissions per pupil | 0.76 | 0.43 | 43.0% |
| Street lighting emissions per habitant | 0.025 | 0.028 | -12.7% |

- 5.4 As part of the Environment Capital Action Plan a commitment was made to collate water data consumption for both corporate assets and schools from 2011 up to 2014. The results can be seen in Table 4 and the associated emissions in Table 5. Please note that due to data availability, the water monitoring is reported in calendar years and not in financial years.

Table 4:

| | Water consumption (m ³) | | | |
|--------------|-------------------------------------|------------------|------------------|------------------|
| | 2011 | 2012 | 2013 | 2014 |
| Corporate | 92,417.1 | 93,818.9 | 106,664.7 | 114,590.0 |
| Schools | 127,058.4 | 123,351.6 | 166,584.8 | 142,355.5 |
| Total | 219,475.5 | 217,170.4 | 273,249.5 | 256,945.5 |

Table 5:

| | Water supply and treatment emissions (tons of CO ₂) | | | |
|--------------|---|--------------|--------------|--------------|
| | 2011 | 2012 | 2013 | 2014 |
| Corporate | 97.3 | 98.8 | 112.3 | 120.6 |
| Schools | 133.7 | 129.8 | 175.3 | 149.8 |
| Total | 231.0 | 228.6 | 287.6 | 270.5 |

- 5.5 An audit has also been undertaken to monitor the waste consumption for both corporate assets and schools. This audit will help to baseline the waste consumption as well as recycling rates and will help towards the development of specific targets and plans for reduction in consumption and increase in recycling rates in the near future.
- 5.6 **GHG report:** The council has published reports annually from 2009/10 to 2014/15 on its website. The figures are in line with the other reports and includes the emissions in both CO₂ equivalent (CO_{2e}) and CO₂ (Tables 6 and 7 respectively) for information purposes. They show an overall reduction of 25% from the baseline year.

Table 6:

| GHG emissions data for period 1 April 2008 to 31 March 2015 | | | | | | | |
|---|----------------------------|---------|---------|---------|---------|---------|---------|
| | Tonnes of CO _{2e} | | | | | | |
| | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 |
| Scope one | 16,525 | 12,139 | 11,521 | 7,960 | 10,380 | 8,374 | 8,014 |
| Scope two | 18,930 | 17,826 | 17,048 | 15,263 | 17,458 | 16,105 | 17,802 |
| Scope three | 2,097 | 1,923 | 1,853 | 2,183 | 2,468 | 2,229 | 2,390 |
| Total gross emissions | 37,552 | 31,888 | 30,422 | 25,406 | 30,306 | 26,709 | 28,207 |
| Carbon offsets | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Green tariff | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total net emissions | 37,552 | 31,888 | 30,422 | 25,406 | 30,306 | 26,709 | 28,207 |
| Intensity measurement (kg CO _{2e} per gross revenue expenditure) | £0.08 | £0.07 | £0.06 | £0.05 | £0.05 | £0.05 | £0.05 |

Table 7:

| GHG emissions data for period 1 April 2008 to 31 March 2015 | | | | | | | |
|---|---------------------------|---------|---------|---------|---------|---------|---------|
| | Tonnes of CO ₂ | | | | | | |
| | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 |
| Scope one | 16,402 | 12,076 | 11,470 | 7,931 | 10,353 | 8,355 | 7,996 |
| Scope two | 18,798 | 17,708 | 16,938 | 15,166 | 17,346 | 15,993 | 17,657 |
| Scope three | 2,080 | 1,909 | 1,841 | 2,168 | 2,363 | 2,218 | 1,916 |
| Total gross emissions | 37,280 | 31,694 | 30,250 | 25,266 | 30,061 | 26,566 | 27,569 |
| Carbon offsets | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Green tariff | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total net emissions | 37,280 | 31,694 | 30,250 | 25,266 | 30,061 | 26,566 | 27,569 |
| Intensity measurement (kg CO _{2e} per gross revenue expenditure) | £0.08 | £0.07 | £0.06 | £0.05 | £0.05 | £0.05 | £0.05 |

6. IMPLICATIONS

6.1 **CRC:** The changes in the new Phase of the CRC in terms of the emissions scope has reduced the cost of the allowances from £267,612 in 2013/14 to £196,645 in 2014/15.

6.2 **CMAF:** Whilst the conditions listed in 5.1 such as the weather variability resulted in a slight variability in emissions in some years, over the 6 years since the baseline year, the trend shows a reduction in emissions. However, the latest result shows a 20.2% reduction in the last year of CMAF, which is behind target to hit the ambitious 35% reduction target. It is worth noting that the benefits as a result of the upcoming energy efficiency works as part of the Energy Performance Contract with Honeywell have started to be felt but it will likely impact, in a positive way, the figures significantly at a later date. Collectively, the results from these actions will help the council continue to reduce emissions towards the 35% target although it will probably take longer than originally anticipated. Therefore, it is intended to continue monitoring the original 35% reduction target to 2016, as stated in the Environment Capital Action Plan to realise the effects of the above mentioned actions.

6.2 **Water:** None

6.3 **Waste:** None

6.4 **GHG:** None

7. CONSULTATION

7.1 No further consultation on the CMAP has taken place since it was approved at Full Council in April 2010. No consultation is needed on the CRC or GHG report.

8. NEXT STEPS

8.1 Officers will continue to monitor carbon emissions annually for the delivery of upcoming energy efficiency and renewable energy projects.

8.2 Key water consumers and trends will be identified to develop a specific target for water reduction within the council.

8.3 Waste consumption will continue to be monitored to identify patterns and trends with the aim to develop a target specific for waste reduction within the council in the future.

8.4 Annual reports on 2015/16 emissions will be compiled for each reporting requirement in summer 2016. It should be noted that government is consulting on amendments to the CRC scheme. If this has implications it will be reported to scrutiny as appropriate.

It is recommended that this remains a regular item for this scrutiny board to ensure continued progress.

9. BACKGROUND DOCUMENTS

9.1 Information about the CRC scheme can be obtained from the Environment Agency's website: <https://www.gov.uk/guidance/crc-energy-efficiency-scheme>

9.2 The council's Carbon Management Action Plan is available from:
<https://www.peterborough.gov.uk/upload/www.peterborough.gov.uk/residents/leisure-and-culture/Council-Campaigns-ClimateChange-CarbonManagementPlan.pdf?inline=true>

9.3 The council's Greenhouse Gas Emissions Report is available at:
<https://www.peterborough.gov.uk/upload/www.peterborough.gov.uk/residents/leisure-and-culture/ClimateChange-GreenhouseGasEmissionsReport-201415.pdf?inline=true>

10. APPENDICIES

10.1 None