Agenda Item:

Cabinet

Insert Item No.

Dorset County Council

Date of Meeting	28 September 2016
Cabinet Member(s) Councillor Peter Finney Lead Director(s) Director for Environment and Economy, Mike Harries	
Subject of Report	**Dorset County Council Environmental performance, policies and greenhouse gas emissions 2015/16**
Executive Summary	This paper provides an annual snap shot of the County Council's performance against our environmental policies and targets for energy, water, waste, and transport for the financial year 2015-16, including our 2015/6 County Council greenhouse gas emissions report.
Impact Assessment:	Equalities Impact Assessment: Individual carbon management projects are subject to EqIA.
	Use of Evidence: Data gathering and analysis exercise undertaken annually for Carbon Management Programme and use of greenhouse gas data report.
	Budget: There are no budget implications to this progress report. However, the report notes the significant rising costs incurred by the County Council for fuel, transport and energy and notes that carbon reduction provides the opportunity to reduce these costs. As noted in the report there are also a number of areas where greater effort is likely to be required in order to meet our agreed targets. Where this is expected to require additional resources the relevant business case will be developed.

	Risk Assessment: Failure to improve the County Council's environmental performance and meet carbon reduction targets will result in unbudgeted costs from energy, fuel, travel and waste. Improving the County Council's environmental performance and 'getting our house in order' through better resource efficiency, is necessary to reduce reputational risk. Having considered the risks associated with this report using the County Council's approved risk management methodology, the level of risk has been identified as: Current Risk: MEDIUM Residual Risk: MEDIUM
	Other Implications: Sustainability: reducing our carbon footprint is a key method for the County Council to reduce its use of natural resources, particularly fossil fuels, and to show leadership in reducing its environmental impacts. Property & Assets: the use of energy in our buildings accounts for over 50% of the County Council's carbon footprint. Improvements in energy efficiency and use of renewable energy in buildings will reduce their running costs in future and are a key element of the County Council's agreed asset reduction strategy.
Recommendation	That the Cabinet: i) notes the County Council's progress in improving its environmental performance, and reducing greenhouse gas emissions ii) Supports officers in pursuing the opportunities noted in section 5
Reason for Recommendation	The recommendations support the County Council's key outcomes of 'healthy and prosperous', set out in its Corporate Plan, by supporting an energy efficient, low carbon economy, tackling global environmental change and ensuring good management of our property, environmental and historic assets.
Appendices	Appendix 1 - DCC Greenhouse Gas emissions report 2009–16
Background Papers	None
Officer Contact	Antony Littlechild, Corporate Sustainability Officer Tel: 01305 224802 Email: a.g.littlechild@dorsetcc.gov.uk

1. Background

1.1 The County Council established a set of environmental policies in 2006 setting out commitments for reducing the impacts of its use of energy, water, transport and production and disposal of waste. In 2009, as part of these commitments, the County Council also set out plans to reduce carbon emissions by 30% by 2020. This Carbon Management Plan aims to not only reduce emissions but also reduce the financial risk of escalating fuel costs, enable the County Council to show leadership in tackling environmental issues and support growth in a low carbon economy.

1.2 This report provides a 2016 environmental performance update, focusing on the County Council's greenhouse gas emissions and offers recommendations for the continued development of its environmental policies and carbon management programme.

2. Progress and performance

2.1 For the past seven years the County Council has produced and published a greenhouse gas report in line with government guidance. A copy of the 2009-2016 Greenhouse Gas report is attached, at Appendix 1, which will be published on www.dorsetforyou.com. This covers energy consumption for buildings (including schools), electricity used for street lighting, staff business travel and commuting, fuel consumption from fleet vehicles and our business waste disposal. Data is collected annually in line with government reporting standards.

2.2 The report shows progress against the 2008/9 base year and highlights that the County Council continues to make good progress in improving its environmental performance and reducing its carbon footprint. **Overall Carbon emissions** show a decrease of about 13% since the base year of 2008/9 and 3% since last year. This is showing good progress and a large drop this year brings emissions close to target levels for the first time. Key improvements include:

- **Street lighting**, excellent progress has been seen over recent years through the introduction of more efficient lighting technology and in particular 'part night burning' practices. Electricity consumption continues to reduce and is now 33% below 2009 levels.

- **Energy Consumption in buildings**, has reduced in all areas, electricity, gas and oil. Overall energy consumption has reduced by 16% since 2009. A large proportion of this may be related to reduction in assets and academisation of schools but the introduction of new efficient technologies plays a critical role.

  a. **Electricity** historically electricity consumption has risen by an average of 2% annually and due to the high cost and carbon footprint has been a significant area of concern. Figures this year indicate an overall reduction in consumption of 2% compared to the 2009 base year.

  b. **Gas consumption** is weather dependant and over the years has varied considerably. Current figures indicate a downward trend, compared to 2009 – gas consumption in 2015/16 was over 22% lower (possibly due to milder winters).

  c. **Heating oil** has significantly decreased by over 46% since 2009 largely due to switching to other fuels (gas and biomass).

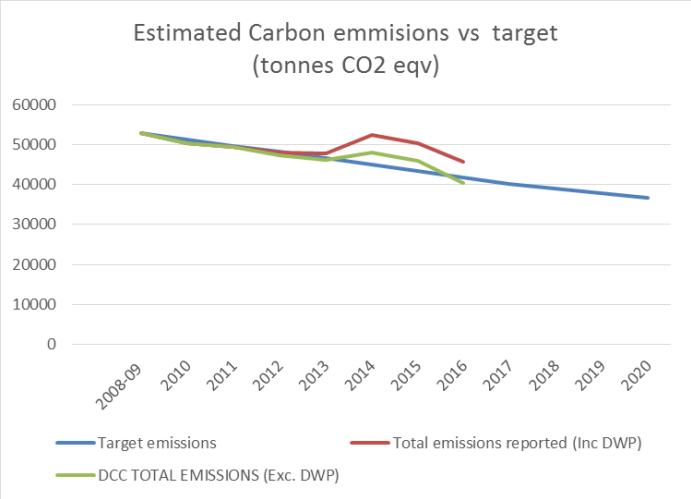
- **Business mileage** has seen a sustained drop year on year and we now travel 38% less miles compared to 2009. This is strongly affected by staff numbers which over recent years have decreased but figures also show over 30% reduction in business miles per FTE since 2009.

- **Office waste** overall we dispose of nearly 25% less waste compared to 2009. While sending less waste for disposal we have also increased the amount we recycle by about 25%.

- **Water** as noted last year water consumption is becoming difficult to assess. Figures show a marked decrease in consumption but this is largely as a result of incomplete data due to many academy schools no longer providing the County Council with water consumption data.

- **Fleet Fuel** use has increased significantly since the inclusion of the Dorset Waste Partnership in 2012. Excluding DWP, fuel consumption indicates that DCC core fleet fuel consumption has remained fairly constant at approximately 1 million litres of diesel per year. A newly introduced fuel management system will provide better management information in 2016/17.

2.3 The graph below shows the recorded County Councils greenhouse gas emissions from its operations against target emissions. Scenarios with and without DWP emissions are shown.



3. Data interpretation issues

3.1 Interpretation of carbon emission figures is not straight forward due to annual changes in the national picture, a range of factors affecting emissions year to year, such as weather, staff numbers, services provided as well as number/type of assets managed and even changes in data monitoring systems. Short term trends can therefore be misleading. Consideration of the longer term trend in performance data gives a more accurate picture of the direction of travel.

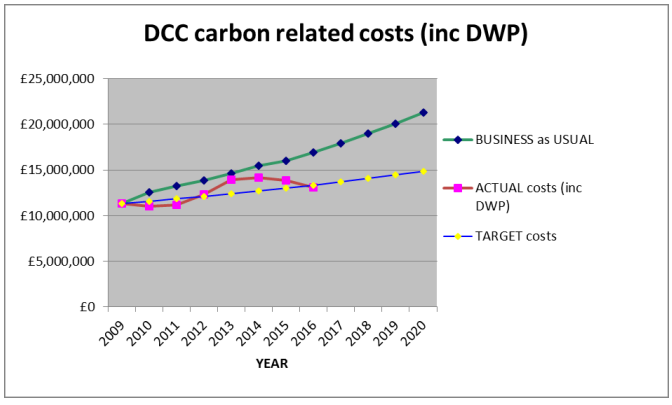
3.2 Some reductions in County Council emissions result from national changes. Consumption figures are converted to carbon emissions using conversion factors provided annually by Department for Energy & Climate Change. These factors can alter year on year, both up and down, to take account of improvements in carbon reduction at a national level, such as the introduction of low emission standards for vehicles or increases in renewable energy supply to the national grid.

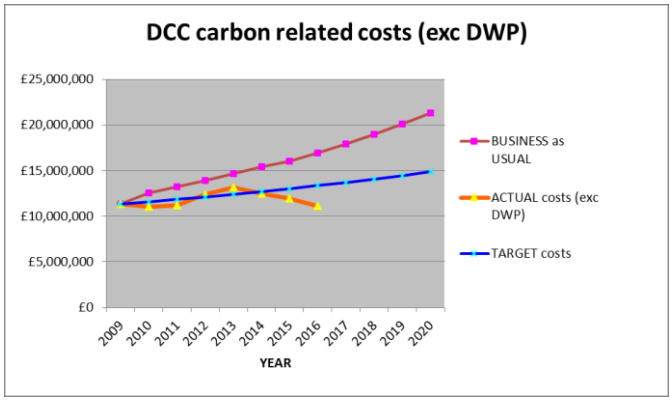
3.3 Significant changes have also been seen over recent years due to inclusion of Dorset Waste Partnership activities, previously reported by the District and Borough Councils, as well as changes in the schools and County Council estate and functions. Changes in adult services in particular will show in figures next year.

4. Costs and financial implications

4.1 In 2009 predictions were made of future costs based on expected trends in fuel prices and this indicated that a business as usual (do nothing) scenario could see DCC spending in excess of £20m on utilities, fuel and travel by 2020. It also indicated that although costs would continue to increase above 2009 levels, achieving the County Council carbon management target could offset some of this rise and reduce costs by £6m by 2020, achieving an estimated cumulative £36m saving between 2010 and 2020. The Carbon Management Programme 2009 indicated that this is the 'value at stake' of achieving a 30% reduction in carbon emissions**.**

4.2 The graphs below indicate the predicted and target utilities, fuel, travel and waste costs related to the county council greenhouse gas emissions between 2009 and 2020. These are shown with the actual costs recorded to date, both with and without estimated DWP costs included. Target costs are based on achieving the County Councils 30% carbon reduction target. Future costs are based on a business as usual scenario of 'do nothing' with price cost escalators applied in line with national predictions and taking account of past trends in growth. The area between Business as usual and Target costs is the 'value at stake' or potential cost savings of meeting carbon targets.





4.3 Over recent years utility prices have fluctuated but have primarily increased since 2009. Successful reduction of consumption has helped to counter these rises, costs to the County Council have risen less quickly than predicted and are starting to show a decline. Overall the costs of fuels, utilities, business mileage, office waste disposal in 2015/16 totalled £13.12m, compared to £11.4m in 2009. These figures are estimated to include approximately £2m of fuel cost relating to the Dorset Waste Partnership activities.

4.4 Savings have been shown across the board in recent years, particularly in key areas such as street lighting (electricity costs approximately £470k lower compared to 2009) and business mileage (costs approximately £1 million lower than 2009). In contrast we have seen significant rises in electricity costs of over 50% (£1.17m).

5. Key observations and next steps

5.1 The performance data for 2015-16 continues to be encouraging with some notable continued improvements. Progress over the past year in particular has been strong and target levels of CO_2 have nearly been reached for the first time since 2009. However the County Council must not be complacent, and continued effort is required to meet overall targets for carbon reduction by 2020 and realise the potential savings and cost avoidance available.

5.2 Although we appear to be doing well, a number of additional factors, beyond efficiency in fossil fuel use, have contributed to these gains. Changes to the size and scope of the County Council over recent years have had a significant impact by both reducing staff numbers and size of the buildings estate. In addition carbon conversion factors used for national reporting change annually and since 2009 have shown a significant decrease which can mask the actual level of carbon reduction. In some areas this could account for 8-12% of the reduction in emissions.

5.3 Previous reports have noted that continued effort is needed if the County Council is to fully realise potential environmental and financial savings. The need to identify all opportunities to utilise efficient technologies and working practices has been previously highlighted as well as the important role staff can have in reducing emissions. In addition there is a need to ensure that potential environmental costs and benefits are fully factored into the decision making for key programmes of activity and future plans, particularly for works to County Hall, the wider estate and Forward Together work streams.

Peter Moore
Service Director - Environment

September 2016

Appendix 1 - Dorset County Council Environmental performance, policies and greenhouse gas emissions 2015/16

Greenhouse Gas Emissions Report 2009-2015

Dorset County Council has produced this Greenhouse Gas Emissions Report in line with Government reporting standards. Dorset County Council is committed to reducing its carbon emissions and is currently implementing a Carbon Management Plan, which has a target of reducing carbon equivalent emissions by 30% by April 2020 from a 2008-09 baseline.

Dorset County Council Greenhouse Gas emissions are detailed in the Table 1.

Approach

This report has been prepared in accordance with 'Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions', DEFRA June 2016. DEFRA Greenhouse Gas Conversion Factors for Company Reporting, 2009 - 2016 together with the newly published Greenhouse Gas Conversion Factor Repository at **http://www.ukconversionfactorscarbonsmart.co.uk/** , have been used to collate this report.

The reporting periods are financial years - 1st April to 31st March for 2008 to 2016. The base year is financial year 2008-9. This report supersedes all previous greenhouse reports published by Dorset County Council.

Operational Scopes

Greenhouse gas emissions have been identified and categorised into the following three groups, known as scopes.

Scope 1 (direct emissions): Activities that release emissions straight into the atmosphere. This includes combustion from boilers and vehicles owned by Dorset County Council.

Scope 2 (energy indirect): Emissions released into the atmosphere associated with the consumption of electricity, heat, steam or cooling. These emissions are a consequence of Dorset County Council's energy consumption but occur at sources that the council does not own.

Scope 3 (other indirect): Emissions released into the atmosphere as a consequence of Dorset County Council's energy consumption which occur at sources that the council does not own and are not included under scope 2. This includes business travel by train and by private vehicles, commuting by car, bus and train, disposal of the council's waste and water consumption.

Out of scope: Outside of scope factors account for the direct CO_2 impact of burning biomass and biofuels. The emissions are labelled 'outside of scope' because the scope 1 impact of these fuels has been determined to be a net '0' (since the fuel source itself absorbs an equivalent amount of CO_2 during the growth phase as the that CO_2 is released through combustion). Full reporting of any fuel from a biogenic source has the 'outside of scopes' CO_2 value documented to ensure complete accounting for the emissions created

Appendix 1 - Dorset County Council Environmental performance, policies and greenhouse gas emissions 2015/16

Significant changes in this annual report

- The scope and scale of the County Council operations is changing significantly and this has been seen in the figures for recent years. These functional changes include: academisation of schools, outsourcing of Adult service functions, establishment and progressive expansion of a Dorset Waste Partnership and rationalisation of the County Council Estate. These changes will continue to impact on Carbon Emissions Figures over coming years and in many cases significantly aid the reduction of the County Councils direct carbon foot print. As a result of this organisational and functional change data becomes less comparable year on year and future long term trends are increasingly important.

Organisation contact details	**For further information please contact:**
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Approved by: Mike Harries
Director for Environment & Economy

Appendix 1 - Dorset County Council Environmental performance, policies and greenhouse gas emissions 2015/16

Scope	2008-09 (baseline year)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Scope 1								
Solid Fuel	-	-	-	-				
Liquid fuels	857	956	876	584	590	665	566	456
Gaseous fuels	10,512	8,705	9,853	8,930	9,458	8,949	8,013	7,386
Vehicle fleet	2,827	2,578	2,934	3,997[1]	4,766[1]	7,867[1]	9544	9,290
Refrigerant Gases				-				
Other				-				
Total scope 1	**14,197**	**12,239**	**13,663**	**13,511**	**14,813**	**17,480**	**18,123**	**17,132**
Scope 2								
Purchased electricity (Grid)	24,476	23,956	23,090	22,848	21,678	24,118	20,926	17,588
Purchased electricity (Other)				-				
Heat purchased				-				
Other				-				
Total scope 2	**24,476**	**23,956**	**23,090**	**22,848**	**21,678**	**24,118**	**20,926**	**17,588**
Scope 3								
Employee commuting[2]	8,281	8,219	7,843	7,118	6,456	6,295	7200	6,826
Business Travel	2,983	2,869	2,506	2,266	2,059	1,862	1,883	1,646
Outsourced Services				-				
Other	3,000	2,950	3,034	2,792	2,773	2,770	2,143	2,535
Total scope 3	**14,263**	**14,038**	**13,382**	**12,177**	**11,288**	**10,926**	**11,226**	**11,007**
Total emissions	**52,936**	**50,233**	**50,135**	**48,536**	**47,779**	**52,524**	**48,490**	**45,727**
Out of Scope emissions	**-**	**-**	**-**	**-**	**117[3]**	**190**	**319**	**296**

Dorset Waste Partnership[1] (Estimate)				**711**	**1,514**	**4,406**	**4,273 (Est.)**	**5,350 (Est.)**
DCC total emissions[1] (Exc DWP)	**52,936**	**50,342**	**49,531**	**47,286**	**47,776**	**48,118**	**44,084**	**40,377**

Table 1: - Dorset County Council Greenhouse Gas emissions 2008-2016 (Tonnes of Carbon Dioxide Equivalent)

[1] Figures from 2011-15 Include addition fleet vehicles now the responsibility of the Dorset Waste Partnership (DWP). Previously this was reported under the District/Borough Councils for North Dorset, Christchurch, East Dorset, West Dorset and Weymouth & Portland.

[2] Figures based on miles /FTE therefore vary with staff numbers, which have decreased since 2008/9

[3] Out of scope emissions account for the zero carbon elements of bio-fuels. Reported for the first time in 2013